Faculty of Economics

Economics

at Faculty of Economics, 6 Kamenička, 11000 Belgrade, www.ekof.bg.ac.rs

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

Study program content

The purpose of the study program "Economics" of doctoral studies is to contribute to the further development of scientific economics, as well as training scientists who will be able to engage in scientific research in the fields of economics: economic theory, macroeconomics and micro-economics, economic development, finance and banking, fiscal economics and public finance, labor economics, public sector economics, international economics.

The structure and content of PhD programs provide training of students - future scientists for independent scientific research, the development of critical thinking among students of doctoral studies, including the work on national and international projects and to enable students to independently manage scientific research in the field of economics. PhD studies contribute to the creation of scientific youth who may be involved in scientific research in the field of economics, including a critical assessment of scientific and research work of others.

Study program goals

The aims of the Ph.D. program "Economics" are:

- Further training of PhD students (who already possess certain skills and competencies, and capabilities for analytical and scientific research in the field of Economic Sciences) for research in the field of economics;
- 2. Providing adequate knowledge and academic skills to PhD students, which are necessary for their research work;
- A PhD student making his/her PhD thesis as an independent and original scientific work in the field of economic sciences;
- 4. Qualifying the PhD students for independent research, public communication of research results, preparation of studies, articles and other contributions and public defense of research results;
- 5. PhD student through the preparation and defense of the doctoral thesis presented independently solves practical and theoretical problems in economics, in accordance

with global trends of development of scientific disciplines in economics, and

- 6. To train a PhD student for the management of research projects (both domestic and international) in the field of economics;
- That through the activities of doctoral studies encourage scientific research in economics;
- 8. To affect the expansion of the general fund of knowledge through PhD studies, as well as maintain and increase the overall scientific and research potential in the country (scientific staff and research infrastructure), establishment of international scientific cooperation, to raise the general level of knowledge in economy and society and application of knowledge in all areas of social life in order to encourage the economic development and overall social development;
- 9. That the activities of doctoral studies encourage faster integration into the global scientific, economic, social and cultural trends, as well as directing the society to innovate and create the environment for joining the European Research Area.

Study program outcomes

PhD degree program "Economics" allows students to gain appropriate skills, academic skills, abilities and competencies that will help them successfully engage in research work in economics, not only in the realization of scientific projects, but also in their formulation, management and evaluation, as well as the activities of managing science and research activities at different levels of decision-making (in research institutions, companies, government agencies and organizations, and international organizations).

Admission requirements

The admission at the PhD studies is possible if the applicant: a) has completed master studies of total 300 ECTS, and thus gained the title of Master of Science in Economics, with a minimum average grade of 8 at primary, as well as at master studies and having knowledge of at least one foreign language relevant to the scientific field in which the PhD dissertation is to be proposed; b) has, according to the old academic system, obtained the title of "Magistar" in the fields of Economic Sciences, Business Administration, Statistical Sciences and Demographic Science, when up to 60 ECTS is recognized as part of a PhD study program already achieved, which is decided by the Council of PhD studies on the suggestion of mentor Commission, depending on the program of the course the applicant had completed; c) has completed other master studies and acquired the title of Master of Arts or Master of Science, if the requirements in terms of ECTS and the average grade are met, provided that during the first semester they pass certain examinations from the primary and/or master studies of the Faculty, determined by the Academic-Scientific Council on the proposal of the Council of PhD studies.

Contact

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Business Management

at Faculty of Economics, 6 Kamenička, 11000 Belgrade, www.ekof.bg.ac.rs

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

Study program content

The purpose of the study program of doctoral studies "Business Management" is to contribute to the further development of scientific fields of business management, and training scientists who will be able to engage in science-research work in the field of business administration: management, marketing, organization, trade, financial management, management of certain activities.

The structure and content of the PhD programs provide training students - the future scientists for independent scientific and research work, development of critical thinking among students of doctoral studies, including the work on national and international projects and to enable students to independently manage scientific research in the field of business management. PhD studies contribute to the creation scientific youth who may be involved in research work in the field of business management, including a critical assessment scientific and research work of others.

Study program goals

The aims of the PhD program "Business Management" are:

- 1. Further training of PhD students for research in the field of business management;
- 2. Providing adequate knowledge and academic skills to PhD students, which are necessary for their research work;
- 3. A PhD student making his/her PhD thesis as an independent and original scientific work in the field of business management;
- 4. Qualifying the PhD students for independent research, public communication of research results, preparation of studies, articles and other contributions and public defense of research results;
- PhD student through the preparation and defense of the doctoral thesis presented independently solves practical and theoretical problems in economics, in accordance with global trends of development of scientific disciplines in economics;
- 6. To train a PhD student for the management

of research projects (both domestic and international) in the field of business management;

- That through the activities of doctoral studies encourage scientific research in business management;
- 8. To affect the expansion of the general fund of knowledge through PhD studies, as well as maintain and increase the overall scientific and research potential in the country (scientific staff and research infrastructure), establishment of international scientific cooperation, to raise the general level of knowledge in economy and society and application of knowledge in all areas of social life in order to encourage the economic development and overall social development;
- 9. That the activities of doctoral studies encourage faster integration into the global scientific, economic, social and cultural trends, as well as directing the society to innovate and create the environment for joining the European Research Area.

Study program outcomes

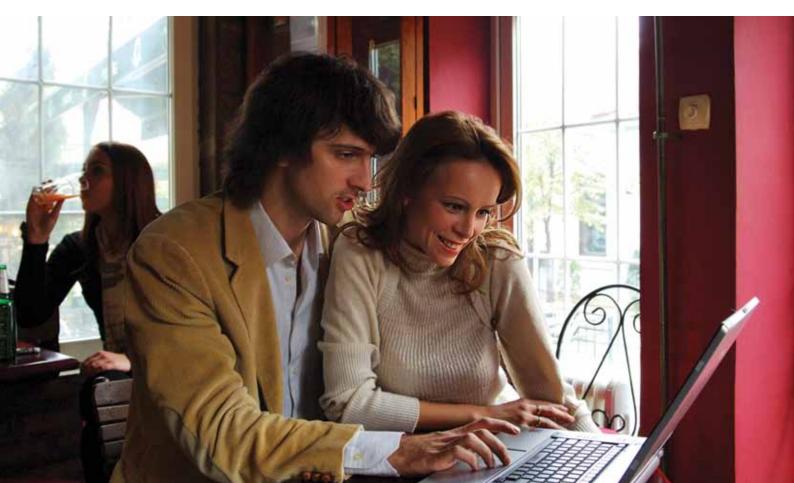
PhD degree program "Business Management" allows students to gain appropriate skills, academic skills, abilities and competencies that will help them successfully engage in research work in the field of business management, not only in the realization of scientific projects, but also in their formulation, management and evaluation, as well as the activities of managing science and research activities at different levels of decisionmaking (in research institutions, companies, government agencies and organizations, and international organizations).

Admission requirements

The admission at the PhD studies is possible if the applicant: a) has completed master studies of total 300 ECTS, and thus gained the title of Master of Science in Economics, with a minimum average grade of 8 at primary, as well as at master studies and having knowledge of at least one foreign language relevant to the scientific field in which the PhD dissertation is to be proposed; b) has, according to the old academic system, obtained the title of "Magistar" in the fields of Economic Sciences, Business Administration, Statistical Sciences and Demographic Science, when up to 60 ECTS is recognized as part of a PhD study program already achieved, which is decided by the Council of PhD studies on the suggestion of mentor Commission, depending on the program of the course the applicant had completed; c) has completed other master studies and acquired the title of Master of Arts or Master of Science, if the requirements in terms of ECTS and the average grade are met, provided that during the first semester they pass certain examinations from the primary and/or master studies of the Faculty, determined by the Academic-Scientific Council on the proposal of the Council of PhD studies.

Contact

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11

Statistics

at Faculty of Economics, 6 Kamenička, 11000 Belgrade, www.ekof.bg.ac.rs

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

Study program content

The purpose of the study program of doctoral studies "Statistics" is to contribute to the further development of scientific fields of statistics, as well as training scientists who will be able to engage in scientific research in the field of statistical science: statistical analysis, econometrics, operational research, information systems, economic statistics and actuarial.

The structure and content of the PhD programs provide training of students - future scientists for independent research work, development of critical thinking among students of doctoral studies, including the work on national and international projects and enables the students to independently manage scientific research in the field of statistics and its application in the economy. PhD studies contribute to the creation of scientific offspring that can be included in scientific and research work in the field of statistics, by including a critical assessment of scientific research of others.

Study program goals

The aims of the PhD program "Statistics" are:

- Further training of PhD students (who already possess certain skills and competencies, and capabilities for analytical and scientific research in the field of statistics and quantitative economic analysis) for research in the field of statistics;
- 2. Providing adequate knowledge and academic skills to PhD students, which are necessary for their research work;
- A PhD student making his/her PhD thesis as an independent and original scientific work in the field of statistical sciences;
- 4. Qualifying the PhD students for independent research, public communication of research results, preparation of studies, articles and other contributions and public defense of research results;
- PhD student through the preparation and defense of the doctoral thesis presented independently solves practical and theoretical problems in statistics, in accordance with global trends of development of scientific

disciplines in statistical science disciplines;

- 6. To train a PhD student for the management of research projects (both domestic and international) in the field of statistics;
- 7. That through the activities of doctoral studies encourage scientific research in statistics;
- 8. To affect the expansion of the general fund of knowledge through PhD studies, as well as maintain and increase the overall scientific and research potential in the country (scientific staff and research infrastructure), establishment of international scientific cooperation, to raise the general level of knowledge in economy and society and application of knowledge in all areas of social life in order to encourage the economic development and overall social development;
- That the activities of doctoral studies encourage faster integration into the global scientific, economic, social and cultural trends, as well as directing the society to innovate and create the environment for joining the European Research Area.

Study program outcomes

PhD degree program "Statistics" allows students to gain appropriate skills, academic skills, abilities and competencies that will help them successfully engage in research work in the field of statistics, not only in the realization of science projects, but also in their formulation, management and evaluation, as well as the activities of managing science and research activities at different levels of decision-making (in research institutions, companies, government agencies and organizations, and international organizations).

Admission requirements

The admission at the PhD studies is possible if the applicant: a) has completed master studies of total 300 ECTS, and thus gained the title of Master of Science in Economics, with a minimum average grade of 8 at primary, as well as at master studies and having knowledge of at least one foreign language relevant to the scientific field in which the PhD dissertation is to be proposed; b) has, according to the old academic system, obtained the title of "Magistar" in the fields of Economic Sciences, Business Administration, Statistical Sciences and Demographic Science, when up to 60 ECTS is recognized as part of a PhD study program already achieved, which is decided by the Council of PhD studies on the suggestion of mentor Commission, depending on the program of the course the applicant had completed; c) has completed other master studies and acquired the title of Master of Arts or Master of Science, if the requirements in terms of ECTS and the average grade are met, provided that during the first semester they pass certain examinations from the primary and/or master studies of the Faculty, determined by the Academic-Scientific Council on the proposal of the Council of PhD studies.

Contact

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Faculty of Law

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ITPABER ARVATET

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at Faculty of Law, 67 Bulevar kralja Aleksandra, 11000 Belgrade, www.ius.bg.ac.rs

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

Study program content

Doctorate degrees at the Faculty of Law, University of Belgrade are unique for all specialized scientific fields for which the Faculty is master, they are six semesters in length and bear 180 ECTS points. Upon enrollment into the first semester of doctorate studies the candidate selects a specialized scientific field in which s/he wishes to complete a doctoral dissertation and elective courses from that same specialized scientific field, or related scientific field, which are in direct relation to the writing of the doctoral dissertation. Classes are held in the first and second semester, and include:

- Methodology of scientific research work and skills (oral presentations, computer aided technology, legal internet sources, communication in a group, debates, etc.);
- Two electives from the specialized scientific field in which the candidate had chosen to write his doctoral dissertation, or from a related specialized scientific field.

Methodology of scientific research and skills and one elective are usually held, as a rule, in the first semester, and the other elective in the second semester. In the second semester, in collaboration with the professor which was appointed by the Head of Doctoral Studies, the candidate prepares a project of his/her doctoral dissertation. In the third and fourth semester a term paper is prepared and defended and scientific papers are written. During the third and fourth semester the candidate must participate in at least two international scientific conferences in which s/ he must have at least one paper accepted and at the other s/he can have an announcement. In the fifth and sixth semester, that are intended exclusively for doctoral research, the candidate is obliged to update a committee of at least two professors, appointed by the Head of Doctoral Studies, about the progress s/he is making in the preparation of his/her thesis. The defense of the doctoral dissertation takes place upon enrollment into the sixth semester. A doctoral dissertation should represent a genuine and independent scientific work which contributes to the development of scientific thought, and which is in the methodology of preparation and level of contribution to science suitable for establishing the capability of the candidate to act within the area of expertise for which the Faculty is master, as an independent researcher.

Study program goals

The goals of doctoral studies are:

- 1. To train students, enrolled in the doctoral studies program, for scientific research work;
- 2. To make his/her knowledge become more in-depth and broader, especially within the area of expertise in which s/he will complete his scientific research;
- 3. To improve knowledge of the candidates for preparing a doctoral dissertation, as an independent, monographic analysis of a certain topic, which is a genuine and independent scientific work, which contributes to the development of scientific thought and which is, in the methodology of preparation and level of contribution to science, suitable for establishing the capability of the candidate to act within the area of expertise for which the Faculty is master, as an independent researcher.

Modules

Scientific fields:

- 1. Administrative Law
- 2. Labor Law
- 3. Law & History
- 4. Business Law
- 5. International Private Law
- 6. Civil Law
- 7. Criminal Law
- 8. Public Finance and Financial Law
- 9. Economic Analysis of Law, Micro-Economy and Macro Economy
- 10. International Law
- 11. Constitutional Law
- 12. The Theory of State And Law, Sociology of Law and Philosophy of Law

Study program outcomes

In obtaining the scientific degree of doctor of science it is expected that the candidate is capable of preparing genuine and independent scientific work which represents a contribution to the development of scientific though in the specialized field in which s/he obtained the degree of a doctor.

Admission requirements

For enrollment into the Doctoral degree program the candidate must have completed:

- Undergraduate degree and have obtained the rank of a graduated jurist (VII-1 level), with at least an average grade of 8(eight) and knowledge of at least two foreign languages relevant for the scientific field in which they are enrolling for their doctoral dissertation, to an extent where they can make use of foreign literature;
- Graduate academic studies (Master) and have obtained the rank of a master jurist, with at least an average grade of 8 (eight) in the undergraduate and graduate academic studies and knowledge of at least two

foreign languages relevant for the scientific field in which they are enrolling for their doctoral dissertation, to an extent where they can make use of foreign literature;

In exceptional cases, persons who have completed other University undergraduate studies or graduate academic studies (Master) in the area of social sciences and humanities and other sciences can be enrolled into the doctoral studies, if they fulfil the above given conditions and in which case, they must pass certain exams from the law studies program, as established by the Teaching-Scientific Council, at the proposal of the applicable Department.

Contact

Head of the study program: **Prof. Dr. Zoran Stojanović** Telephone: +381 11 302 76 80 Contact email: <u>zorans@ius.bg.ac.rs</u>



Faculty of Orthodox Theology

FEFE

Theology

at Faculty of Orthodox Theology, 11b Mije Kovačevića, 11060 Belgrade, www.bfspc.bg.ac.rs

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

Study program content

Doctoral studies represent the follow up to Master academic studies and they entail, along with the aims embraced by the previous level of academic education, a more profound synthetic and a specialized education in Theology, which allows doctors of Theology to exercise independent theoretical and critical deliberation on relevant theological issues, and to apply theological knowledge both in the area of research of relevant theological and interdisciplinary phenomena and problems and in the area of the transfer of the achievements of Theology, contact and complementary disciplines into ecclesial and social practice. They last three years and consist of six study semesters.

Study program goals

Goals of these studies is to develop critical thinking of the candidates regarding theological phenomena and theological issues; to enable the students to perform comparative analysis of the phenomena and issues relevant to Theology which are studied and interpreted by other, primarily complementary, scientific disciplines; to develop the capability to analyze the influence of other, contact scientific disciplines relative to theological phenomena and theological issues; to enable the doctor of Theology to perform theoretical and applicative research which is practiced by complementary and contact scientific disciplines; to enable him to carry out a profound theological analysis of concrete problems and their application in the domain of social and ecclesial practice, and within appropriate institutions and organizations.

Study program outcomes

Upon completing Doctoral studies of Theology the candidate acquires the following general abilities:

 Ability to perform an analysis, a synthesis, and to predict solutions and their consequences in the domain of Theology, contact and complementary disciplines;

- Ability to apply adequate methods and procedures as well as the ability to carry out the process of scholarly research;
- Ability to apply the acquired knowledge in practice;
- Fundamental cognizance and understanding of theological and relevant contact and complementary disciplines within the specialized field of research;
- Ability to solve concrete problems by employing scientific methods and procedures;
- Ability to connect to relevant knowledge found within domains complementary to theology, and the ability to apply this knowledge;
- Ability to monitor and apply novelties in science;
- Ability to further develop skills and competences in using knowledge within the domain of Theology;

Admission requirements

Doctoral studies of Theology are open to candidates who have already gained the title of Master Theologian (at least 300 ECTS).

Contact

Head of the study program: **Prof. Dr. Vladan Perišić** Telephone: +381 11 276 27 32 Contact email: vperisic@bfspc.bg.ac.rs

Teacher Training Faculty

UNERCRA VENTELECRA LURUNA REPAIENLE MAFALE

11

Primary Class Teaching Methodology

at Teacher Training Faculty, 43 Kraljice Natalije, 11000 Belgrade, www.uf.bg.ac.rs

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

Study program content

The doctoral studies at the Faculty of Education in Belgrade are outlined to provide for program flexibility, based on an array of elective subjects/ modules and a more personalized guidance of doctoral candidates towards an early doctoral thesis orientation.

The concept of a wide range of elective subjects/modules, without the determination of compulsory subjects, is designed to satisfy the widest possible array of thematic interest in the study of certain methodological approaches, issues, concepts and thematic clusters in different scientific disciplines.

Early student orientation towards thematically focused research in a particular area of interest, through the choice of groups of elective courses, preparation of respective seminar papers, presentation and publication of such papers aimed at profiling their studies, is in the function of integrated implementation of all preparatory scientific and research activities for a quality approach to doctoral dissertation writing.

Study program goals

The objectives of the program, which are consistent with contemporary developmental trends in relevant scientific disciplines in the world, include acquiring scientific and academic skills, developing creative skills, critical thinking, and active reflection necessary for research and promotion of didactic-methodological theory and practice.

They contribute to fostering scientific openness and the didactic-methodical responsibilities, developing research curiosity, freedom, criticism and love of scientific truth. The objectives are realized in a single program which integrates various scientific disciplines necessary for the implementation of the teaching process in modern conditions.

Study program outcomes

Mastering the study program, the student receives the following subject-specific competencies:

- Thorough knowledge and understanding of the subject-specific teaching methodology and area of education;
- Ability to solve problems using scientific methods and procedures;
- Integrating basic knowledge from various fields and its application;
- Ability to follow modern trends in the profession;
- Development of skills and application of knowledge in the field of the subject-specific teaching methodology and area of education;
- Use of information and communication technologies in gaining knowledge in the respective area of interest.

Admission requirements

A precondition for enrollment is completed fiveyear academic studies (300 ECTS of which: 240 at bachelor academic studies and 60 at graduate academic studies) in the area of humanities with the lowest average mark 8,00 during the studies and the lowest average mark 9.00 in teaching methodologies.

Contact

Head of the study program: **Prof. Dr. Aleksandar Jovanović** Telephone: +381 11 361 52 25 +381 11 268 67 87 Contact email: <u>dekanat@uf.bg.ac.rs</u>

Faculty of Security Studies

ΕΤ Υ БΕΟΓΡΑ

F

BELGRADE

DIES

Security Studies

at Faculty of Security Studies, 50 Gopodara Vučića, 11000 Belgrade, www.fb.bg.ac.rs

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

Study program content

The PhD program consists of the following components: three compulsory courses, four optional modules where students choose one of the two offered courses, a special optional modular course which is individual and tailored to the topic of the dissertation, dissertation project writing and defence, and dissertation writing and defence as the last part of the program. The workload of the PhD program is 180 ECTS credits.

Study program goals

The general goals of the PhD program are for the students to:

- To explore contemporary developments in security studies;
- To acquire a broadened knowledge of current theoretical and research work in order to enable students to objectively, systematically and critically examine security phenomena and issues;
- To become acquainted with the applied research methodology of security issues and processes;
- To gain practical expertise in the application of adequate approaches and methods in the examination of specific security processes and phenomena;
- To enable students to write and individually conduct complex research projects;
- To enable PhD graduates to successfully plan and conduct different forms of pedagogical and educational activities in the field of security studies.

The goals of the PhD program are attained through a continuous and comprehensive process of studying contemporary theoretical developments in the field of security studies, through the critical analysis of current research and through the development of skills necessary to formulate specific research approaches.

Study program outcomes

Upon the successful completion of the PhD studies program at the Faculty of Security Studies, students will have the competence to conduct independent research in the field of security processes and issues, to work in education at various levels of educational and pedagogical activities in this field, as well as to both theoretically and practically address all contemporary security issues.

Doctors of Philosophy in Security Studies develop the competence to do the most demanding jobs in the system of national security and therefore work in institutions for national security. The up-to-date character of the program and its methods (using the latest interactive methods and IT-supported educational practices) promote a critical and creative approach to current security issues and enable individual, innovative and expert work in all areas of security studies.

Admission requirements

Holders of a bachelor's and master's degree with an average grade of 8 (eight) or above.

Contact

Head of the study program: **Prof. Dr. Slađana Đurić** Telephone: +381 11 645 18 58 Contact email: <u>sdjuric@eunet.rs</u>

УЧИВЕРЗИТЕТ У БЕОГРАЛУ УШЕГЗА СПЕЦИЈАЛНУ ЕЛУКАЦИ И РЕХАБИЛИТАЦИЈУ

Faculty of Special Education and Rehabilitation

Special Education and Rehabilitation

at Faculty of Special Education and Rehabilitation, 2 Visokog Stevana, 11000 Belgrade, www.fasper.bg.ac.rs

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

Study program content

Doctoral academic studies last for three academic years (6 semesters), granting 60 ECTS points for each academic year, which makes the total of 180 ECTS points. The study program includes active teaching and writing a PhD thesis. Active teaching is performed through lectures and research study in the first and second year of doctoral academic studies, and only research study in the third year. First year program consists of 1 two-semester compulsory course, and 4 one-semester elective courses (2 elective courses in each semester). Upon completion of the first year of studies and passing all required exams, students enroll in the second year. Second year program consists of 1 two-semester compulsory course, and 4 one-semester elective courses (2 elective courses in each semester). Upon completion of the second year of studies and passing all required exams, students enroll in the third year of doctoral academic studies. In the third year, students conduct a research study with a mentor, for the purpose of writing a PhD thesis.

Study program goals

Doctoral academic studies are a postgraduate program which leads to acquiring the scientific title of a Doctor of Philosophy in Special Education and Rehabilitation (PhD Degree). The main goal of doctoral studies is to train students who will, upon their completion and public defending of a PhD thesis, be able to independently plan and conduct scientific research in the field of special education and rehabilitation; analyze and present obtained results in accordance with the highest scientific standards; perform horizontal and vertical dissemination of results of scientific research; critically evaluate scientific research of other authors; understand and apply the basic principles of evidence-based rehabilitation in everyday research; understand and honor ethical postulates in research based on the code of good scientific practice, especially in the field of assessing persons with special needs.

PhD students fully master the methodology of scientific work, and conduct scientific research which represents a foundation for writing a PhD thesis. PhD thesis is based on original scientific papers, printed in extenso in international journals, leading national journals, or national journals (minimum one paper published or accepted for publication).

Study program outcomes

Upon the completion of doctoral academic studies at the Faculty of Special Education and Rehabilitation, the graduates are able to independently conduct scientific research. They possess knowledge, skills and abilities necessary for

- Independent solving of practical and theoretical problems in the field of special education and rehabilitation;
- Planning, organizing and implementing fundamental and developmental scientific projects;
- Participating in the implementation of international projects;
- Creating and evaluating new rehabilitation procedures;
- Creative and independent acting based on critical thinking and honoring the ethical code of good scientific practice;
- Reporting scientific results in scientific journals and at international conferences;
- Permanently contributing further development of special education and rehabilitation, and tangent scientific fields.

Admission requirements

Completion of relevant undergraduate and master academic studies with the average grade above 8.00

Contact

Head of the study program: **Prof. Dr. Jasmina Kovačević** Telephone: +381 64 205 27 71 Contact email: kovacjasmina@gmail.com

Faculty of Political Sciences

Political Science

at Faculty of Political Sciences, 165 Jove Ilića, 11000 Belgrade, www.fpn.bg.ac.rs

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

Study program content

Doctoral studies of Political Science are a threeyear study program bearing 180 ECTS founded upon and deepening the knowledge obtained at undergraduate and academic graduate studies in the field of political science.

The structure of the syllabus stipulates a number of compulsory courses of theoretical-methodological and scientific-professional nature aimed at acquisition of the highest forms of knowledge in the field of theoretical and methodological bases of political science and studies of contemporary political theory and political systems, as well as a large number of courses necessary for obtaining the most recent knowledge of theoretical and practical aspects of the study program's subject matter. The program also contains thorough theoretical-methdological bases and practical aspects of research of political problems, directions of their changes and effects of these processes.

A compulsory part of doctoral studies in the field of political science is writing of the final PhD dissertation which confirms the student's capacity for creative application of the obtained scientific, methodological and professional knowledge in direct and research-analytical practice and development of the scientific field.

Study program goals

The main aims of the study program of doctoral studies of Political Science are:

- Improvement of the existing and acquisition of new theoretical and practical knowledge and skills in the fields: theories of politics and methodology, political theories and political culture, political sociology, political system and institutions, political system and economic development, politics and religion;
- 2. Acquisition of advanced knowledge of political phenomena and processes and principles and manners of explanation of social development and changes, for criti-

cal understanding and action approach in influencing systemic, structural and organizational aspects of functioning of political institutions and processes;

- 3. Acquisition of knowledge of local, regional, supranational and global dimensions of politics, political relations, political processes and political institutions;
- Training for specific professional knowledge enabling professional dealing with the tasks of scientists and researchers, analysts and organizers in public authorities, political parties, local self-governance, public services and corporations;
- 5. Training of experts for tasks of political decision-making and management, organization of activities in various fields of political action, increase of political culture and formation of democratic public.

Modules

Theory of Politics and Methodology, Political Theory and Political Culture, Political Sociology, Political System and Institutions, Political Systems and Economic Development and Politics and Religion.

Study program outcomes

By completion of the doctoral study program of Political Science, candidates should obtain the following capacities:

- Mastering of theoretical-methodological knowledge and skills of critical thinking and critical analysis of the achieved level of theoretical studies of political science in our country and in the most developed regions of the world;
- 2. Developed scientific-research capacities, critical attitudes and scientific arguments pertaining to the subject matter of studies of political science; recognition of their controversies, characteristics and disadvantages; understanding of the basics and of strategic developments in future; capacity to apply that knowledge on case studies;

integration of the obtained knowledge in practice and realization of scientific and applicative research;

- 3. Mastering of methodological knowledge and practical skills for a competent approach to analysis, research, problem solution and foundation of actions at different levels of actual practice;
- Training to apply their knowledge in a professional manner in understanding of persons and interactive patterns of behavior in specific environment;
- 5. Training for independent theoretical-methdological research and deepened scientific analysis, based on creative and critical revealing of facts and their causative-consequential relations.

Admission requirements

Eligible candidates should have completed relevant undergraduate and master academic studies with average grade above 8.00/10.00.

Contact

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International and European Studies

at Faculty of Political Sciences, 165 Jove Ilića, 11000 Belgrade, www.fpn.bg.ac.rs

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

Study program content

Doctoral International Studies are a three-year study program bearing 180 ECTS, founded upon and deepening the knowledge obtained at undergraduate and master academic studies in the field of international studies.

The program offers to students a possibility for further development of theoretical-methodological and professional knowledge and trains them for its critical application in several fields of international studies - International Politics, European Integration, Security Studies and Peace Studies. The program contains two elective fields, the field of International Politics (including the courses of international security and peace studies) and the field of European Integration.

The structure of syllabus stipulates a number of compulsory courses of theoretical-methodological and scientific-professional nature, pertaining to acquisition of the highest forms of knowledge in the field of theoretical and methodological bases of political science and studies of contemporary international relations and European integration, as well as a large number of elective courses necessary for acquisition of the most recent knowledge of theoretical and practical aspects of the study program's subject matter. The program also contains profound theoreticalmethodological bases and practical aspects of research of international problems, directions of their changes and effects of these processes. A compulsory part of doctoral studies in the field of international studies is writing of the final PhD dissertation which confirms the student's capacity for creative application of the obtained scientific, methodological and professional knowledge in direct and research-analytical practice and development of the scientific field.

Study program goals

The main aims of this study program of doctoral studies are in compliance with the main educational goals at our Faculty and include:

 Obtaining of scientific knowledge of key disciplines of international studies in accordance with the development of these disciplines in the world;

- Obtaining of knowledge of contemporary tendencies of social development at national, regional and international level;
- Development of capacities for critical insight to actual achievements of contemporary theories from several narrow areas of international studies;
- Obtaining knowledge and critical comparison of contemporary theoretical-methodological bases, approaches and concepts related to important fields of international studies encompassed by the program (international relations, European integration, security studies and peace studies) and development of capacities for solving actual problems by combining the knowledge;
- Training for independent solving of social problems after the end of studies, in the practice of international relations by implementation of scientific methods and procedures.

Modules

International Politics and European Integration.

Study program outcomes

By completion of study program of doctoral International Studies, the candidates should obtain the following capacities:

- Mastering theoretical-methodological knowledge and capacities of critical thinking and critical analysis of the achieved level of theoretical studies related to international issues in our country and in the most developed regions of the world;
- Developed scientific-research capacities, critical attitudes and scientific arguments related to subject matter of international studies; recognition of their controversies, characteristics and weaknesses; understanding of basics and strategic directions of future development; capacity to obtain the knowledge on case studies of countries which are the key actors in contemporary international relations, integration of the obtained knowledge in practice and realization of scientific and applied research;

- 3. Mastering methodological knowledge and practical skills for a competent approach to analysis, research, problem solution and foundation of action at various practical levels of our state, other states or groups of states in international relations;
- Training to apply their knowledge in a professional manner in understanding of persons and interactive patterns of behavior in specific environment;
- 5. Training for independent theoretical-methodological research and profound scientific analysis of important international problems, based on creative and critical revealing of facts and their causative-consequential relations.

Admission requirements

Eligible candidates should have completed relevant undergraduate and master academic studies with average grade above 8.00/10.00.

Contact

Head of the study program: **Prof. Dr. Jelica Stefanović - Štambuk** Telephone: +381 11 309 28 53 Contact email: jelica.stefanovic@fpn.bg.ac.rs



Social Policy and Social Work

at Faculty of Political Sciences, 165 Jove Ilića, 11000 Belgrade, www.fpn.bg.ac.rs

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

Study program content

The study program consists of two elective fields - Social Policy and Social Work. Within the elective field of Social Policy, European Social Models are studied as a compulsory course, together with Theory and Analysis of Social Policy, International organizations and Social Policy and Prevention of Social Problems, with students choosing two out of these three courses.

Besides, during the 1st year of studies students can in the first semester choose one course from some other module of doctoral studies at the Faculty, and one from the European Studies elective field.

Another elective field is Social Work where students, besides compulsory Social Development and Methodical Complex of Social Work, have an option to choose among Theories of Social Work, Human Behavior in Social Environment and Prevention of Social Problems, while also choosing one course from one of the modules at the Faculty.

Study program goals

The main aims of the study program of doctoral studies of Social Policy and Social Work are:

- Obtaining knowledge of etiology, development and consequences of social problems at various systemic levels, of kinds of preventive programmes and practical skills for creation and evaluation of outcomes of preventive programmes;
- Obtaining knowledge of contemporary tendencies and achieved values of social dimension of social development at national and international level;
- 3. Obtaining knowledge and development of capacities for comprehending actual assumptions of classification of European social models. Starting assumptions of studying pertain to tradition, historical development and actual reformative changes of national systems. Studying of "European Social Model" is comprehended in the

context of general integration developments and demand for critical reconsideration of changes at global plan;

- 4. Acquisition of knowledge and critical comparison of contemporary theoretical-methodological bases, approaches and methods of practice in social work at various levels of the system: ontogenetic, microsystemic, exo- and macrosystemic;
- At the profound level of criticism, consideration of epistemological nature of different, controversial theoretical concepts of the science of social work;
- 6. Apart from adoption of theoretical knowledge, the primary goal is training of students for research of the main characteristics of social policy of contemporary world, following the intensive changes of role of social actors which create social policies and realize social programmes besides the state, learning of importance, capacities, advantages and problems of international organizations in realization of international cooperation in the field of social policy.

Modules

Social Policy and Social Work.

Study program outcomes

By completion of doctoral studies of Social Policy and Social Work, the student acquires the following general capacities:

- Mastering of methodological knowledge and capacities of critical thinking and critical analysis of the achieved level of social development in our country and in certain regions of the world;
- Development of scientific-research capacities, critical attitudes and arguments of candidates in relation to the subject matter of European social models; recognition of their controversies, advantages and weaknesses; understanding of bases and strategic directions of future developments; case studies of typical countries - representatives of models; integration of the obtained knowledge in

practice and realization of scientific and applicative research;

- Training for foundation of preventive programmes in community, usage of methodology for assessment of efficiency of preventive programmes in community;
- 4. Mastering methodological knowledge and practical skills for complementary approach in analysis, research, problem solution and establishment of interventions at various levels of practice with individuals, families, groups and communities and capacity for theoretical conceptualization of experience from social work practice;
- Training to apply their knowledge in professional manner in understanding persons and interactive patterns of behavior in specific environment;
- 6. Training for independent theoretical-

methodological research and actualization of crucial gnoseological problems, based on creative revealing of numerous doubts of "contemporary" science of social work.

Admission requirements

Eligible candidates should have completed relevant undergraduate and master academic studies with average grade above 8.00/10.00.

Contact

Head of the study program: **Prof. Dr. Mira Lakićević** Telephone: +381 11 309 28 16 Contact email: <u>mira.lakicevic@fpn.bg.ac.rs</u>



Cultural and Media Studies

at Faculty of Political Sciences, 165 Jove Ilića, 11000 Belgrade, www.fpn.bg.ac.rs

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

Study program content

The study program of the common doctoral studies consists of two modules: Theory of Culture and Media and Communication Studies. Within the module Theory of Culture, The Image of World In European Culture is the common course for both programmes of Cultural and Media Studies and compulsory course only for former module. The elective field is represented through research of political anthropology of the Balkans, intercultural communication, intercultural value studies, historic legacy and modernization and gender theories and policies.

The structure of another module, Media and Communication Studies, has the compulsory course Communication Theories besides the common course. The elective field encompasses studies of European media policies, public spheres and media, rhetorics and public discourse and theories of journalistic genres.

Study program goals

The aim of the study program is training for scientific-research and pedagogical institutions dealing with these disciplines as well as for the scientific and pedagogical institutions which demand these high academic titles for multidisciplinary scientific research and pedagogical purposes. Also, the goal is to develop scientific disciplines and scientific research dealing with culture, communication studies, media and gender through these highest academic titles.

Modules

Theory of Culture and Media and Communication Studies.

Study program outcomes

Upon completion of doctoral studies, graduates shall be trained for scientific disciplines, pedagogical demands of faculties, institutes, centres, media, media and expert research institutions and public authorities specialized in studies and research of culture, communication, media and gender.

Admission requirements

Eligible candidates should have completed relevant undergraduate and master academic studies with average grade above 8.00/10.00.

Contact

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FACULTY OF SPORT AND PHYSICAL EDUCATION

Faculty of Sport and Physical Education

Experimental Methods of Human Locomotion Researches

at Faculty of Sport and Physical Education, 156 Blagoja Parovića, 11000 Belgrade, www.dif.bg.ac.rs

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

Study program content

The doctoral studies last three years. In the first year the students attend four compulsory and two elective courses. The elective courses are to be chosen from the list of subjects in consultation with the mentor. The mentor selects the students upon the completion of the first semester according to the needs of the managed research. After that the students are involved in research activities in laboratory, initiating thus the preparation for doctoral thesis.

In the second year of studies, upon the completion of the requirements defined in the Regulations on Doctoral Studies, two seminars are chose, again in consultation with the mentor and in compliance with the PhD thesis title. Simultaneously, they participate in research activities, which result firstly in the doctoral thesis project and afterwards the doctoral thesis itself. The last year of studies is predicted only for research activities and completion of doctoral thesis.

Study program goals

The aim of doctoral academic studies is to enable comprehensive consideration and understanding of the research process, especially of experimental methods of human locomotion research, to train the attendants for independent and critical reviewing of literature, interpretation of the obtained results as well as for successful and responsible further independent scientific work in compliance with the highest professional and ethnic standards.

Study program outcomes

Upon completion of doctoral studies the attendants should be qualified for successful independent scientific research in the field of human locomotion, biomechanics, physiology of physical activity, motor control and motor behavior included.

Admission requirements

The right to apply for admission to doctoral studies is given to the persons who completed graduate academic studies with the minimum of 300 ECTS points and general average mark of minimum 8 at basic academic and master academic studies.

Contact

Head of the study program: **Prof. Dr. Dušan Mitić** Telephone: +381 11 353 10 11 +381 64 136 17 36 Contact email: <u>dusan.mitic@dif.bg.ac.rs</u>



Faculty of Philosophy

Andragogy

at Faculty of Philosophy, 18-20 Čika Ljubina, 11000 Belgrade, www.f.bg.ac.rs

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

Study program content

Some of the major principles of the Doctoral degree program in Andragogy include the following:

- To develop and connect fundamental and practical scientific Andragogy disciplines within the interdisciplinary context with related scientific disciplines and contemporary science-research trends. The final objective is to promote and encourage the theoretical and practical education of adults on all levels, starting with an individual, organization, local community, to overall society;
- To increase competencies for individually, scientifically and socially relevant researches and the appliance of the same in practice and education of adults;
- To acquire experts and qualify them for the highest level of scientific Andragogy culture that requires abilities for critical thinking and analysis, creativity, originality, inventive and innovative skillfulness in different spheres of professional interactions.

Study program goals

The focal objectives of the Doctoral degree program in Andragogy are:

- To acquire a graduated student with proficiency in critical analysis, positioning and researching the domain itself, authority and accountability of Andragogy the science and Andragogy within the practical segment that encourages the education of adults towards developing the concept and establishing the lifelong educational system and social studying model;
- To develop scientific research, expertise and academic proficiency within the interdisciplinary approach and critical analysis, and within the areas of the field study concerning fundamental problems of Andragogy as the scientific discipline based on contemporary models, and concerning practical portions of adult education;
- To widen critical thinking and increase dynamic reflections necessary for the

development, conceptualization and realization of educational politics, strategies and educational interventions into social, cultural, economical and educational context in Serbia, and critical approach to abilities of implementing contemporary Andragogy research achievements in both theory and practice within the local context;

- To acquire a graduated student with abilities to individually organize, supervise and conduct scientific researches, including local and international research projects and provide sufficient research results;
- To expand proficiency in connecting, promoting and specializing the acquired knowledge, and developing consciousness about the necessitate for continuous professional development.

Study program outcomes

A graduate student with a Doctoral degree in Andragogy will be qualified and will have adequate competence to perform the following:

- To critically think and analyze basic issues of theoretical and practical sections of a lifelong educational process;
- To evaluate and examine exploring and practical values of different theories, concepts and strategies within adult education;
- To examine and evaluate possibilities of applying different methodological and epistemological approaches in researching basic issues of adult education;
- To combine interdisciplinary and integrative approaches while examining basic issues within adult educational process;
- To create and accomplish various fundamental research study works concerning adult education, and to present the results at domestic and international conventions;
- To understand co-independence among global and national issues and perspectives concerning adult education;
- To utilize research results for shaping systematical solutions, overcoming concrete problems and improving practice of adult education;
- To introduce research results and global ten-

dencies of existing issues and practical solutions to intellectual community;

- To recognize the adult education as a process of educating adults as independent and social phenomena, and to comprehend the philosophical, historically-comparative, socio-economical, psychological, and organizationally-didactic dimensions of Andragogy;
- To critically evaluate the possibility of potential applying of different models and forms of preventive education and intervention within complex social contexts and domains, such as: family, work, social environment, free time, etc.

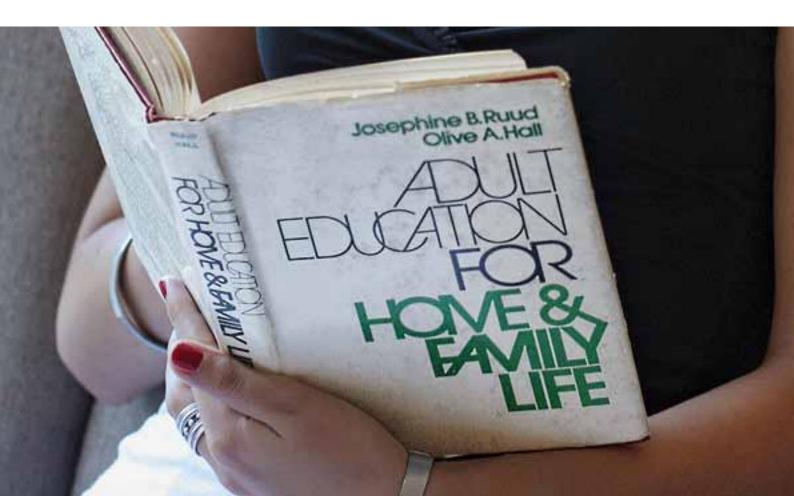
ECTS credits), the average grade of 8.00 during Bachelor and Master's study programs, or at least five published research studies in magazines of national and international recognition. The knowledge of at least one foreign language is mandatory as well. Rules for entrance examinations and admission are set in connection with the Faculty of Philosophy Statute. A student applying for a Doctoral study program with a Master's degree from a different study group will have to take the differential exam if necessary.

Contact

Head of the study program: **Prof. Dr. Nada Kačavenda - Radić** Telephone: +381 11 247 11 89 Contact email: <u>nkacaven@f.bg.ac.rs</u>

Admission requirements

An entrance conditions for enrollment in a follow-up Doctoral study program are the completion of study in a Master's study program (300



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Archaeology

at Faculty of Philosophy, 18-20 Čika Ljubina, 11000 Belgrade, www.f.bg.ac.rs

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

Study program content

The Doctorate degree program in Archaeology remains to be the last level of the scientific development of the candidate, and it is oriented towards enabling the candidate with abilities for conducting individual research work. The major intention of the program is to create many experts capable of expanding theoretical, methodical and practical areas of the discipline based on the authentic and reliable research work.

The program is created so that acquires the most excellent proficiency from the candidates concerning their theoretical knowledge, abilities and skills, and the program is conducted based on exploring theoretical and methodical issues, and individual research work. The structure of the Doctoral program in Archaeology is formed so that, besides the theoretical knowledge, allows a candidate different aspects for gaining various levels of expertise thanks to large list of offered elective courses.

The program's main objective is to qualify candidates for working in research institutes or teaching at the universities and other educational institutions. The level of acquired academic knowledge and skills will qualify a candidate for working out these areas as well, especially in areas of public and private sectors.

Study program goals

The goals of the Doctoral degree program in Archaeology are based on social and personnel necessities. Including the contemporary research trends and tendencies, the major study goals of the program are the following:

- To extend creativity and develop analytical techniques for researching past;
- To acquire candidates with academic and professional knowledge and proficiency;
- To increase the consciousness about the necessity of continuous professional development and to increase the interest in the spheres of scientific research;

- To support joining national and international research projects;
- To develop candidate's abilities to supervise and conduct research work;
- To apply interdisciplinary methods in researching and interpreting past.

Study program outcomes

The Doctoral study program in Archaeology will acquire the graduate student with knowledge, proficiency, expertise and skills to perform the following:

- To independently resolve practical and theoretical matters and issues in particular areas of Archaeology, and to accomplish developmental and scientific research work;
- To assist in conducting international scientific research projects;
- To develop innovative and original archaeological research methods;
- To think critically, and to execute creatively and independently;
- To respect the principles of working ethics;
- To present scientific research projects' results in public, presenting them at the conventions and public lectures, and publishing them in scientific periodicals and magazines;
- To increase and intensify consciousness about the significance of archaeological scientific research projects and national heritage protection programs;
- To acquire exhaustive knowledge in particular areas of archaeological research;
- To attain meticulous expertise in comprehending and utilizing theoretical and methodological approaches in archaeological research;
- To promote abilities of multi and interdisciplinary approaches in solving scientific research issues and matters;
- To support creative engagement in following modern trends and tendencies in Archaeology;
- To independently create, plan and conduct complex scientific research projects in Archaeology.

Admission requirements

An entrance conditions for enrollment in a follow-up Doctoral study program are the completion of study in a Master's study program (300 ECTS credits), the average grade of 8.00 during Bachelor and Master's study programs, or at least five published research studies in magazines of national and international recognition. The knowledge of at least one foreign language is mandatory as well. Rules for entrance examinations and admission are set in connection with the Faculty of Philosophy Statute. A student applying for a Doctoral study program with a Master's degree from a different study group will have to take the differential exam if necessary.

Contact

Head of the study program: **Prof. Dr. Staša Babić** Contact email: <u>sbabic@eunet.rs</u>



Ethnology and Anthropology

at Faculty of Philosophy, 18-20 Čika Ljubina, 11000 Belgrade, www.f.bg.ac.rs

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

Study program content

The Doctoral degree study program in Ethnology and Anthropology is designed in order to qualify experts for individual, team, institutional, consulting and project work within the wide spectrum of the discipline, starting from academic to applied researches. Having in mind the size ad the character of the academic community of ethnologists and anthropologist, their existing business niches and terms of professional arrangements, the Doctoral study program is designed around the idea of preserving scientific resources with gradual distribution of competencies and socially recognizable discipline.

Besides this, the program also rests on the idea that newly qualified scientists choose the character of their own vocation on their won – whether it concerns academics, scientific research, applied knowledge or consulting, or active or culturally critical engagements, and this is exactly why the Doctoral study program in Ethnology and Anthropology includes all of the above mentioned, standard elements of a profession of an ethnologist and anthropologist.

Concerning that the idea for individual and personal research work that is outside of the team or institutions is long time surpassed even in Serbia, the purpose of this program is to qualify future scientists and researchers to fit within contemporary trends of discipline development on global level, and to conduct research work, teach at the institutions of higher education and actively partake in social transformations, not as lonely individuals but as citizens that nourish public virtues.

Study program goals

Creative thinking, ability to question obvious and evident, capability to triangulate methods, researching techniques, theoretical approaches and observations, and ideological concepts of the discipline, are some of the main characteristics of a superior anthropologist on a global level. With this in mind, the Doctoral degree study program in Ethnology and Anthropology is designed as a way of parallel acquirement of contemporary theoretical and methodological knowledge within the discipline itself and related social and humanistic disciplines, while continuously training candidates for conducting individual and team research projects.

The objective of the program is to enable candidates, despite the constant questioning of disciplines' own purpose and social role, to actively apply acquired academic knowledge onto sociocultural phenomena that include, but not limit the following activities such as: designing research works, conducting research, describe and interpret the research results, disseminating research results, actively pursuing trends in the discipline itself and related disciplines, and translating disciplinary specific knowledge into language understandable to administration, population and related disciplines.

Study program outcomes

A graduate student with a Doctoral degree in Ethnology and Anthropology will be competent for performing the following activities:

- Independently or with a team create scientific research projects;
- Independently or with a team accomplish scientific research projects;
- Independently describe, analyze, publish and promote research results;
- Independently or with a team actively apply acquired knowledge;
- Independently or with a team amend the research results and the dissemination language of the results to different sub-disciplines and general population;
- Independently perform controlling or recurring research work concerning relevant research phenomena;
- Participate in interdisciplinary projects;
- Evaluate scientific research results of different authors and project instigators;
- Evaluate scientific, artistic, administrative and other research projects that are maneuvered by sociocultural analysis;
- Consult clients and research associates within the wide spectrum of activities. Ranging from administrative to commercial;

 Conduct lectures and instructions within the academic or professional context of the specialized discipline or sub-discipline in Ethnology and Anthropology.

Admission requirements

An entrance conditions for enrollment in a follow-up Doctoral study program are the completion of study in a Master's study program (300 ECTS credits), the average grade of 8.00 during Bachelor and Master's study programs, or at least five published research studies in magazines

Contact

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Philosophy

at Faculty of Philosophy, 18-20 Čika Ljubina, 11000 Belgrade, <u>www.f.bg.ac.rs</u>

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

Study program content

The Doctoral study program in Philosophy is designed to acquire candidates with theoretical and methodical knowledge in order of using them for individual research work in Philosophy. Since Philosophy as a scientific discipline that explores our overall interests in world, it also acquires candidates with knowledge and abilities to research the most universal issues concerning various scientific and social disciplines. Besides qualifying candidates for research work, the purpose of the Doctoral study program in Philosophy is to also expand critical thinking, and to acquire workforce capable of conducting authentic, scientifically and socially relevant research studies, so that the latest research results are to be used for developing science and society overall.

The Doctoral study program in Philosophy is oriented towards qualifying candidates for conducting individual research work. The program is designed to explore diverse and specific theoretical, methodological and practical philosophical issues and approaches with reference to the traditional and contemporary philosophy.

Study program goals

The main objectives of the Doctoral degree program in Philosophy are:

- To acquire candidates with fundamental knowledge in Philosophy;
- To qualify candidates to individually conduct and supervise research study works within the spheres of Philosophy, and within various associated disciplines;
- To expand critical abilities and to qualify candidates to individually resolve theoretical and practical issues concerning Philosophy;
- To rise the awareness of the importance of research work, critical approaches towards theoretical explanations and research results, exploring capabilities of Philosophy as a science, and searching the truth;
- To join national and international research projects;

To cultivate academic and professional workforce necessary for the growth and popularization of Philosophy.

Study program outcomes

After graduating from the Doctoral degree program in Philosophy, the candidate will be acquired with meticulous knowledge concerning the fundamentals of Philosophy, including the Final Paper Project, and shall receive a Ph.D. in Philosophy. The candidates will be qualified to individually conduct and supervise research work in not only spheres of Philosophy, but in other related disciplines as well. The candidate will also be competent for serving in competent educational institutions, schools, culture, administration, publishing, etc.

Admission requirements

An entrance conditions for enrollment in a follow-up Doctoral study program are the completion of study in a Master's study program (300 ECTS credits), the average grade of 8.00 during Bachelor and Master's study programs, or at least five published research studies in magazines of national and international recognition.

The knowledge of at least one foreign language is mandatory as well. Rules for entrance examinations and admission are set in connection with the Faculty of Philosophy Statute. A student applying for a Doctoral study program with a Master's degree from a different study group will have to take the differential exam if necessary.

Contact

Head of the study program: **Prof. Dr. Miloš Arsenijević** Telephone: +381 11 320 61 91 Contact email: <u>marsenij@f.bg.ac.rs</u>

History

at Faculty of Philosophy, 18-20 Čika Ljubina, 11000 Belgrade, www.f.bg.ac.rs

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

Study program content

The Doctoral study program in history is designed with purpose to educate and gualify competent experts and workforce for further researching chronological phenomena, structures and processes, and topics concerning political, social, economical and cultural issues by using theoretical, methodical and particular acquired knowledge. The candidate will also be competent and capable to analyze, understand, critically investigate, and systematically present arguments and results of research work in a form of a doctoral dissertation. The gained knowledge will be used towards developing and promoting History as a science. The Doctoral study program in History is shaped to obtain a candidate with the supreme level of professional and research competency.

The Doctoral study program in History is oriented towards qualifying candidates for individual research work. The program is conducted through various topic related courses and certain research study works.

The purpose of the Doctoral degree program in History is to develop and advance History as a science, to increase critical thinking and to educate and qualify workforce capable of individually conducting and supervising authentic research work in order of promoting scientific development and the development of the society overall.

Study program goals

The main objectives of a Doctoral degree program in History are:

- To acquire candidates with meticulous knowledge concerning particular scientific spheres of History using the entire available literature;
- To acquire candidates with theoretical knowledge with reference to History;
- To introduce contemporary world trends in various spheres of History;
- To consent to the appliance of acquired proficiency and methodical expertise in individual research work;

- To successfully resolve existing and defined scientific issues;
- To individually note down scientific and historical research papers and discussions;
- To propose doctoral dissertation in a form of a scientific monograph;
- To qualify candidates for individual work as History professors and lectures at the institutions of higher education;
- To reward a candidate a Ph.D. in History as the supreme academic rank of education in History.

Study program outcomes

A graduate student with a Doctoral degree in History will become capable of independently conducting research study works concerning complex historical events and occurrences and social conditions they took place in, as well as capable of correctly understanding and precisely and scientifically evaluating the same using modern methodological approaches and postulates.

The graduate student will become competent to independently perform research analysis, make appropriate conclusions and judgments, and present and publish the results within domestic and international scientific History related market. The Doctor of History will be enabled to independently assist in conducting domestic and international research projects offering proficient support while collaborating with History and History related experts, and to significantly provide towards the latest discoveries and findings in History, as well as towards greater understanding of different historical epochs, countries, societies, and cultures. The Doctor of History will become proficient in critically and independently analyzing and evaluating various historical phenomena, noticing possible methodological or professional errors and omissions, while asking numerous questions towards providing apposite scientifically based answers.

After accomplishing the Doctoral study program in History, the graduate student will become acquired with complete and extensive knowledge in particular History and History related disciplines, and the knowledge that will enable the graduate student to actively participate and contribute to: various scientific research projects, independent evaluation and solving scientifically-historical issues and concerns, independent formulation of research topics, and analysis of the same by means of the latest methodological postulates and tendencies utilized in History.

The Doctor of History will be utterly accomplished to comprehend and apply the most complex methodological and theoretical novices in specific areas of History, while observing and perceiving the general and detailed development of the science, especially the sections concerning the increase of specific competence in particular History disciplines and topics.

The graduate student will be competent to actively provide in most recent discoveries and findings pertaining to specific areas of interest, to independently utilize and share acquired knowledge and attained principles of scientific research work, and to make use of them and consume them within the wide spectrum of professional, educational and cultural activities and responsibilities.

Admission requirements

An entrance conditions for enrollment in a follow-up Doctoral study program are the completion of study in a Master's study program (300 ECTS credits), the average grade of 8.00 during Bachelor and Master's study programs, or at least five published research studies in magazines of national and international recognition. The knowledge of at least one foreign language is mandatory as well. Rules for entrance examinations and admission are set in connection with the Faculty of Philosophy Statute. A student applying for a Doctoral study program with a Master's degree from a different study group will have to take the differential exam if necessary.

Contact

Head of the study program: **Prof. Dr. Siniša Mišić** Telephone: +381 11 320 62 27 Contact email: <u>simisic@f.bg.ac.rs</u>



History of Art

at Faculty of Philosophy, 18-20 Čika Ljubina, 11000 Belgrade, www.f.bg.ac.rs

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

Study program content

The main intention of the Doctoral study program in History of Art is to develop experts capable of analyzing and understanding processes within the disciplines such as History of Art, Architecture, Museology and Heritage Protection, including their overall cultural, aesthetic, historical, civilized, and social dimensions, by using the acquired knowledge and proficiency. At the same time, the candidate will be competent to critically evaluate, develop and advance historically-artistic science and its particular utilizations, including contemporary research results, cultural and social necessities and trends.

The Doctoral study program in History of Art is designed to acquire candidates with the supreme level of professional competency, theoretical and practical knowledge, expertise and strategy for conducting research work. The Doctoral study program in History of Art is shaped to develop History of Art as a science, to expand critical thinking and to competently qualify workforce for conducting individual and authentic research work.

Study program goals

The main goal of a Doctoral study program in History of Art is to perfect the previously acquired knowledge and skills in following areas:

- Historical, theoretical, thematic, challenging, conceptual and visual understanding of particular artistic course, individual artist or phenomena pertaining to History of Art and Architecture in a period from ancient to modern and contemporary times;
- Understanding and critical evaluation of History of Art as a science, as well as practice of other related disciplines;
- Theoretical and practical application of knowledge and expertise concerning work within museums and national heritage protection programs;
- Methodology of History of Art as a science and humanistic discipline, with focus on contextual and interdisciplinary approach in studying particular topics, areas and contents of History of Art and Architecture;

- Creative abilities and independency during performing intellectual and professional activities;
- Research accountability, persistence and efficiency, inquisitiveness, intellectual flexibility, and professional and educational responsibilities at the highest level;
- Organizing and conducting scientific research project independently;
- Assisting in national and international scientific research projects;
- Intellectual and professional expertise necessary for development, advancement and popularization of History of Art.

Study program outcomes

A graduate student with a Doctoral degree in History of Art will be qualified and competent to perform the following:

- To independently, theoretically and practically perform in the particular area of expertise, such as: History of Art, History of Architecture, Theory, Museums and National Heritage Protection Programs;
- To apply cognitive, research and communicational skills, as well as the ability of autonomous intellectual and professional performance;
- To conduct lectures at the institutions of higher educations;
- To assist in conducting domestic and international scientific research projects;
- To execute independently and artistically;
- To respect principles of working ethics;
- To communicate at the professional level while presenting results of scientific research projects at the conventions or publishing the same in scientific periodicals and magazines; to complete original scientific research projects, monographs or independent interpretations of a pieces of art;
- To provide towards advancing History of Art as a science;
- To execute comprehensive knowledge and meticulous understanding of History of Art a scientific discipline;
- To be capable of solving existing problems utilizing scientific methods and techniques;
- To execute interdisciplinary knowledge;

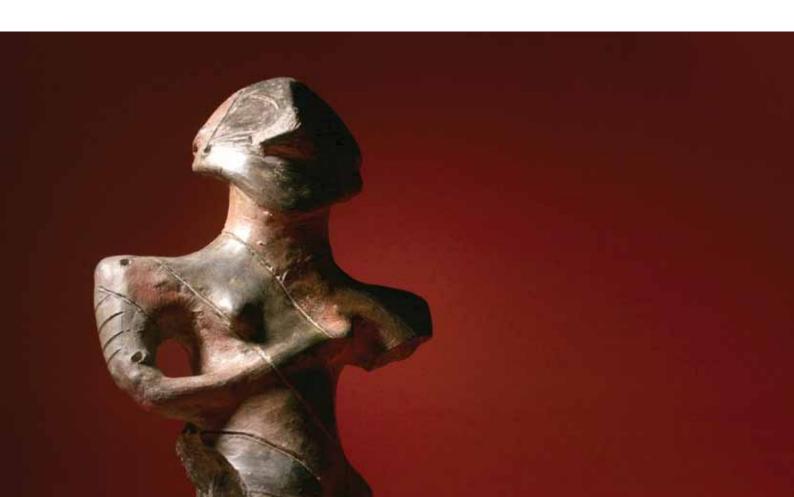
- To follow latest worldwide trends and tendencies in History of Art;
- To apply acquired knowledge and skills in particular area of expertise pertaining to History of Art;
- To utilize contemporary technologies while implementing and sharing acquired knowledge in History of Art and related disciplines.

Admission requirements

An entrance conditions for enrollment in a follow-up Doctoral study program are the completion of study in a Master's study program (300 ECTS credits), the average grade of 8.00 during Bachelor and Master's study programs, or at least five published research studies in magazines of national and international recognition. The knowledge of at least one foreign language is mandatory as well. Rules for entrance examinations and admission are set in connection with the Faculty of Philosophy Statute. A student applying for a Doctoral study program with a Master's degree from a different study group will have to take the differential exam if necessary.

Contact

Head of the study program: **Prof. Dr. Lidija Merenik** Telephone: +381 11 320 62 27 Contact email: <u>Imerenik@f.bg.ac.rs</u>



Classical Languages / Classics

at Faculty of Philosophy, 18-20 Čika Ljubina, 11000 Belgrade, <u>www.f.bg.ac.rs</u>

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

Study program content

The Doctoral study program in Classical Languages is designed in a form of a narrow professional and scientific specialized training in various spheres of Classical philology. The disciplines that offer Doctoral study programs are the following: Latin Linguistics (primarily Stylistics), Hellenic and Roman Literature, Ancient Drama and Theater, The Literature of Byzantine, Medieval Latin Philology, Early Christian Sources, The Function of Ancient Literature in Serbian Literature, etc. The Doctoral study program offered by the Department of Classical Languages also offers interactions with various related sciences and disciplines (such as: Epigraphic, Ancient History, World Literature, Linguistics, etc.) that require knowledge of classical languages and ancient culture. The purpose of the Doctoral study program in Classical Languages is to develop and advance young generations and the discipline itself in spheres of classical philology and its utilization in multiple other disciplines.

Study program goals

Some of the objectives of the Doctoral degree program in Classical Languages are to deepen candidates knowledge in some of the narrow disciplines, to improve and perfect research methods, to demonstrate creativity in approaching topics they have chosen as their doctoral dissertations, to introduce them with most recent research results, to acquire them with abilities to select and critically evaluate correlated literature, to enable the candidates of giving their own contribution to the development of the scientific discipline, and to present and utilize the research results - basically, the main objective is to acquire candidates with proficient knowledge in classical philology and enable them for further permanent specialized training and individual research work.

Study program outcomes

Upon the graduation from a Doctoral study program in Classical Languages, a graduate student has specialized in one of the particular areas of Classical Languages, and in accordance with this, a graduate student with a Doctoral degree in Classical Languages is qualified for conducting scientific research study work, primarily at the universities and within institutions of higher education, within research institutes, and other educational institutions involved in research work. Concerning the experience and meticulous knowledge of the profession, a graduate student with a Doctoral degree in Classical Languages is competent to translate and commentate, and publicly present ancient texts. A Doctor of Classical Languages, as a Professor of Classical Languages, is also expected to share the acquired knowledge and research experience with younger and future generations. Finally, the diverse nature of this discipline allows involvement with and contribution to interdisciplinary projects, and participation in working within educational institutions with reference to languages and culture of Ancient Times and Middle Century, such as: museums, archives, libraries, publishing centers, etc.

Admission requirements

An entrance conditions for enrollment in a follow-up Doctoral study program are the completion of study in a Master's study program (300 ECTS credits), the average grade of 8.00 during Bachelor and Master's study programs, or at least five published research studies in magazines of national and international recognition. The knowledge of at least one foreign language is mandatory as well. Rules for entrance examinations and admission are set in connection with the Faculty of Philosophy Statute. A student applying for a Doctoral study program with a Master's degree from a different study group will have to take the differential exam if necessary.

Contact

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Psychology

at Faculty of Philosophy, 18-20 Čika Ljubina, 11000 Belgrade, <u>www.f.bg.ac.rs</u>

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

Study program content

The main purpose of the Doctoral degree program in Psychology is actually dual. On one hand, the Doctoral program is designed for training professional workforce that would teach various psychological disciplines at the institutions of higher education across Serbia. On the other hand, the program is shaped to produce and qualify scientists that will further develop Psychology as a science via theoretical and research work. Both aspects of the program are based on previously acquired knowledge, proficiency and competence concerning the studies of Psychology.

However, the Doctoral degree study program in Psychology are committed to qualify experts at the highest theoretical, methodical and academic level, which embraces deepening their existing knowledge, methods and theoretical ideas within sufficient psychological disciplines, including abilities for critical evaluation of contemporary psychological knowledge and methods, multidisciplinary approaches within psychological occurrences, and evaluation of the same within the biological, cultural, historical, social and personal contexts.

The Doctoral degree study program in Psychology is shaped to qualify candidates to individually and creatively design, organize, conduct, and supervise scientific and different research projects, starting from the existing knowledge towards solving and answering various issues concerning Psychology of the present. The purpose of the program is also to train professional teaching workforce needed at the institutions of higher education, which includes proficiency in selecting, organizing and presenting the contents via modern teaching methods.

Study program goals

The main objectives of the Doctoral degree program in Psychology are:

- To develop scientific and theoretical thinking in candidates;
- To train candidates for profound, diverse and critical comprehension of existing

knowledge, theories and methods;

- To develop interdisciplinary and contextual approaches in researching psychological and developmental occurrences;
- To increase research interests, scientific openness and sensitivity for recognizing non-scientific approaches in psychological theories;
- To qualify candidates for individual solving of theoretical and practical issues concerning Psychology as a science and different spheres of applied Psychology;
- To increase creative abilities for emerging innovative knowledge in psychology;
- To qualify candidates for individual creation and conduct of research work, and utilization of sufficient scientific methods and data analysis techniques;
- To enable joining national and international research projects, as well as afford individual creation and supervision of research projects;
- To develop consciousness about the necessity for constant supervision of psychological scientific production and continuous specialized training;
- To expand academic and professional proficiency essential in selecting, organizing and presenting psychological contents in teaching various psychological disciplines;
- To increase professional expertise for presenting Psychology in public.

Study program outcomes

A graduate student with a Doctoral degree in Psychology will be qualified to perform the following:

- To individually resolve and explain practical and theoretical problems concerning general psychological matters;
- To think critically, creatively and independently;
- To individually create and conduct domestic and international research projects;
- To present the research projects' results at the domestic and international conventions and in scientific magazines in both written and oral form;
 - To create, organize and incorporate diverse

psychological contents in lectures;

- To understand and practice the principles of working ethics and act in accordance with rules of Law;
- To integrate different psychological ideas and perspectives;
- To create original and innovative psychological models and methodological practices in Psychology;
- To evaluate existing and create inventive standards for practicing Psychology;
- To evaluate existing and create innovative educational programs in accordance with the development of Psychology as a science and professional work.

Admission requirements

An entrance conditions for enrollment in a follow-up Doctoral study program are the completion of study in a Master's study program (300 ECTS credits), the average grade of 8.00 during Bachelor and Master's study programs, or at least five published research studies in magazines of national and international recognition. The knowledge of at least one foreign language is mandatory as well. Rules for entrance examinations and admission are set in connection with the Faculty of Philosophy Statute. A student applying for a Doctoral study program with a Master's degree from a different study group will have to take the differential exam if necessary.

Contact

Head of the study program: **Prof. Dr. Slobodan Marković** Telephone: +381 11 320 61 21 Contact email: <u>smarkov@f.bg.ac.rs</u>



Pedagogy

at Faculty of Philosophy, 18-20 Čika Ljubina, 11000 Belgrade, <u>www.f.bg.ac.rs</u>

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

Study program content

The Doctoral degree study program in Pedagogy is designed to educate and train experts competent to comprehend and analyze the processes and activities concerning the upbringing and education within the overall cultural, historical, civilized, social, individual and collective, and institutional dimension based on acquired theoretical knowledge and developed professional competencies.

The candidates will also be allowed to critically investigate, evaluate, develop and advance both pedagogic science and practice in various areas of professional work, including contemporary research results, social needs and trends, and individual potentials and rights. Starting with the above mentioned, the Doctoral degree program is created to secure the highest level of professional competencies: theoretical knowledge, techniques, skills and strategies of professional and research work.

The Doctoral degree study program in Pedagogy is oriented towards enabling and qualifying candidates for individual research work. The program explores specific theoretical, methodical and research issues via pedagogic theories, and practical and research work. The purpose of the program is the development of science and critical thinking, and training of candidates to individually conduct classified and public research studies in order of contributing to the progress of science and society in general.

Study program goals

The main objectives of the Doctoral degree program in Pedagogy are:

- To qualify candidates for critical comprehension and evaluation of Pedagogy as a science concerned with the upbringing and education as forms of social practice;
- To qualify candidates for applying contextual and interdisciplinary approaches in researching pedagogic phenomena;
- To develop creative abilities of candidates and enable them for individual process

solving of theoretical and practical issues in areas of upbringing and education;

- To expand research interests, scientific straight forwardness and openness, and critical approaches towards theoretical and research results; to increase readiness for continuous evaluation of opportunities, values and accomplishments of Pedagogy, while constantly searching for the scientific truth;
- To train candidates for conducting individual research work;
- To enable candidates in joining national and international research projects;
- To develop consciousness in candidates about the necessity of continuous professional growth;
- To extend academic and professional skills necessary for the development and popularization of Pedagogy and pedagogic practice.

Study program outcomes

A graduate student with a Doctoral degree in Pedagogy will be qualified and will have adequate competence to perform the following:

- To individually resolve and explain practical and theoretical problems concerning general matters concerning Pedagogy while developing and practicing educational systems and methods;
- To individually identify research questions and topics, define research problems, and plan and realize research studies using appropriate qualitative and quantitative methods and techniques;
- To initiate and engage in accomplishing domestic and international research projects concerning educational issues and matters;
- To critically analyze, evaluate and apply innovative pedagogic ideas and findings;
- To understand and practice the principles of working ethics and act in accordance with rules of Law;
- To communicate on professional level while presenting research results;
- To present achieved research results at domestic and international conventions, to publish the same in periodicals and

magazines, to promote knowledge and ideas in academic circles and in public significant for social and cultural growth;

- To work as a research team member;
- To accomplish original research works using results to expand the knowledge in Pedagogy;
- To recognize and understand in details theoretical and methodological issues concerning Pedagogy;
- To comprehend and apply various methodological and epistemological methods, and evaluate their efficiency in researching educational systems and programs;
- To realize and understand educational issues within social, cultural and institutional context;
- To comprehend theoretical and methodological basis of developing educational programs;
- To explore educational phenomena and develop educational approaches for integrating various discoveries within the areas of Pedagogy, and to critically analyze different pedagogic theories and movements;
- To relate and connect knowledge gained from studying Pedagogy with knowledge from other disciplines using it for solving existing educational issues;
- To understand and productively use modern findings of Pedagogy;

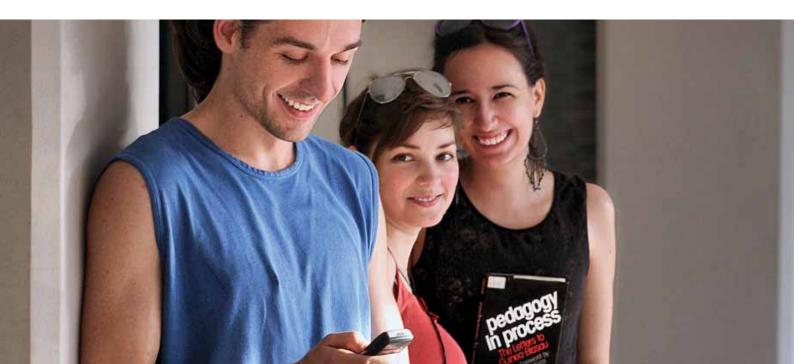
To utilize research projects' results for improving and promoting Pedagogy.

Admission requirements

An entrance conditions for enrollment in a follow-up Doctoral study program are the completion of study in a Master's study program (300 ECTS credits), the average grade of 8.00 during Bachelor and Master's study programs, or at least five published research studies in magazines of national and international recognition. The knowledge of at least one foreign language is mandatory as well. Rules for entrance examinations and admission are set in connection with the Faculty of Philosophy Statute. A student applying for a Doctoral study program with a Master's degree from a different study group will have to take the differential exam if necessary.

Contact

Head of the study program: **Prof. Dr. Ljubomir Kocić** Telephone: +381 11 267 10 80 Contact email: <u>ljkocic@f.bg.ac.rs</u>



Sociology

at Faculty of Philosophy, 18-20 Čika Ljubina, 11000 Belgrade, <u>www.f.bg.ac.rs</u>

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

Study program content

The Doctoral degree study program in Sociology is designed to simultaneously enable the following:

- To transmit the latest scientific results concerning specific scientific areas, which are in the interest of candidates;
- To orient students towards exploring similar scientific disciplines that will develop interdisciplinary approach in researching social occurrences, which necessary for successful research and scientific work;
- To acquire candidates with fundamental theoretical, epistemological and methodological knowledge, which qualify candidates for individual research work.

Therefore, on one hand, during the doctoral study program, the candidates will be enabled to accomplish the supreme academic and professional competence, and on the other hand, will acquire abilities to critically approach, evaluate and comprehend social occurrence throughout the conducted research work.

In other words, after graduating with a Doctoral degree in Sociology, the candidates will be qualified to individually conduct both personal and scientifically and socially relevant research work in order to completely contribute the development of Sociology as a science, and practical resolving of significant social issues. In order for the above mentioned to be achieved, the program is dedicated to acquire candidates with knowledge, competence and ability for individual scientific work, while rising consciousness about the social responsibilities of Sociology as a science. The practical consequence of gaining the Ph.D. in Sociology is the ability to teach at the research centers and institutions of higher education both in Serbia and abroad.

Study program goals

The main objective of the Doctoral degree study program in Sociology is to qualify candidates to, upon graduation, become involved in scientific society both in our country and abroad based on their competence in order to contribute the development of the discipline, overall scientific knowledge and society in general. To achieve this all-purpose and wide ranging objective, the program is oriented towards several more specific objectives. Concerning that contemporary, and primarily social sciences are characterized by the existence of alternative (mutually conflicted) theories, the special attention will be paid to introducing candidates with theories' advantages and disadvantages, in order to rise consciousness about the pluralism of scientific approaches, the necessity for tolerating theoretical differences, possible theoretical development that existing difference may stimulate, as well as for discovering the most relevant approaches for evaluating diverse social processes.

Finally, one particular objective of the Doctoral degree program must be the growth of consciousness about the social essentials of Sociology, concerning society to be a specific study field, not only because the theoretical and methodological segment of this discipline is socially and historically stipulated, but also because Sociology itself must maintain the awareness about its social responsibility in order to define explanations for relevant social issues, including propositions for potential solutions.

Study program outcomes

The concept of the Doctoral study program in Sociology has been created and designed with the intention to, once the educational process has ended, advance the development student's abilities to individually, systematically and critically understand and explore various theoretical, historical and empirical issues concerning social studies. In order to achieve this goal, the student will be trained to diagnose and differentiate hypothetical from practical and existent social matters, to position theoretical or empirical study program to research those same matters, to become skilled at adequate research methods and techniques as well as at data basis research methods, to discover to creatively interpret the results of the study, and to come across the ways of applying them to concrete matters. During the Doctoral study program, the graduate students will gain fundamental education in the area of Sociology as well as the essential understanding of major social and sociological issues. The students will also be introduced to sociological research methods and techniques, as well as to modern data research techniques. The special attention will be given on preparing students to, after the graduation, continue following modern sociological trends so they can access and maintain connections with international scientific society. Due to that, students will be capable of professional assisting in international research projects, and to present their works and achievements in books and magazines, and at conventions and public presentations. This will be one of the ways of enabling a graduate student to individually provide for the growth of Sociology as a science.

The special concept within Sociology as a science is a concept of Sociology being self reflexive science that reflects society. Therefore, with forming the conscious about the sociological research having to completely respect the principles of ethics, the Doctoral study program in Sociology develops the awareness in a graduate student of becoming responsible for the growth of the society and humanity.

Admission requirements

An entrance conditions for enrollment in a follow-up Doctoral study program are the completion of study in a Master's study program (300 ECTS credits), the average grade of 8.00 during Bachelor and Master's study programs, or at least five published research studies in magazines of national and international recognition. The knowledge of at least one foreign language is mandatory as well. Rules for entrance examinations and admission are set in connection with the Faculty of Philosophy Statute. A student applying for a Doctoral study program with a Master's degree from a different study group will have to take the differential exam if necessary.

Contact

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Faculty of Philology

<u>Omenen</u>

GANGADURAL MACALIT

10

Language, Literature, Culture

at Faculty of Philology, 3 Studentski trg, 11000 Belgrade, www.fil.bg.ac.rs

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

Study program content

Ph.D. studies in Language, Literature and Culture belong to the areas of social-humanistic sciences, linguistics, comparative literature and philology, and cultural studies, in the following narrow scientific fields: philological sciences, methodology of language teaching, methodology of literature teaching, applied linguistics, translation, cultural studies, communicology, library science and information technology, archivistics, as well as other narrow scientific fields in the area of philology. Ph.D. studies at the Faculty of Philology, University of Belgrade, last three years (six semesters). After the enrolment, students choose one of five modules. In each module, one course is obligatory in the first semester. All the other courses in Ph.D. study program are optional.

Study program goals

The main goal of the program Language, Literature and Culture, of Ph.D. studies at the Faculty of Philology, as the highest level of university studies, is to enable the students for development, advancement and application of scientific achievements in the areas of philology, literary science and linguistics, theory and history of language and literature, comparative literature, methodology of teaching of language and literature, culture and library science and information technology, as well as for thorough knowledge in relevant Serbian and foreign philological resources, so that the student could be enabled for complex methodological research and competent interpretation of acquired results, as well as for independent theoretical analyses and writing of scientific papers. Along with outstanding importance that Ph.D. studies in Serbian language and literature have in this academic and cultural environment, the programs contain and stress the role and function of studies of foreign literature, within the context of our academic environment, educational system, and Serbian culture in general. Conceived in this way, the program of doctoral studies reflects an openness towards the values of other literatures and cultures, so it should educate new professionals and ensure constant influx of teaching and research staff at the Faculty.

Modules

Faculty of Philology organizes Ph.D. studies in the following modules:

Serbian Language / Serbian Literature / Language / Literature / Culture.

Study program outcomes

The program of Ph.D. studies should enable the students to acquire knowledge and skills and develop scientific abilities so that they could take part in the scientific and research work as independent researchers within national and international projects, and also to independently organize and perform fundamental scientific research in the area of philological sciences, literary science and linguistics (theory and history of literature, comparative literature, methodology of teaching language, literature and culture) as well as in the area of library sciences and informative technology. Students should also be enabled for dealing independently with practical and theoretical problems in the areas of philological and library sciences; for critical thinking; for creative and independent work; for observing the principles of ethical code of proper scientific practice; for communicating on professional level in delivering their scientific and research results; for presenting those results in the national and international scientific conferences; for publishing them in the scientific journals; for contributing to the development of philological sciences and science in general.

Admission requirements

Average mark of at least 8 (eight) in relevant academic studies and at least 300 ECTS. Students who graduated at the Faculty of Philology, University of Belgrade, will have an advancement.

Contact

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School of Medicine

Medicine

at School of Medicine, 8 Doktora Subotića, 11000 Belgrade, www.med.bg.ac.rs

ECTS: 60/ LANGUAGE OF INSTRUCTION: SERBIAN/ DEGREE: SPECIALIST

Study program content

Specialist Academic Studies enable obtaining of knowledge for scientific research in the field of medicine. Study program lasts for two semesters.

During the first semester the basics of scientific research are taught through four compulsory subjects (of 3 ECTS) and 4 elective courses (3 ECTS), except for statistics, which brings 9 ECTS. During the second semester students continue to study the electoral areas-modules. Study program of specialist academic study consists of 37 modules. Each module consists of two compulsory subjects (of 5 ECTS credits) and one elective course (5 ECTS). Constituencies-modules are oriented to medical science as a whole, including basic science, clinical branches of medicine and public health. Knowledge from specific areas of medicine is obtained.

Students finish studies by presenting written paper, which brings 5 ECTS credits, which together with the compulsory and optional subjects makes 60 ECTS. Studies end with a public defense of this paper.

Study program goals

The main objective of the study program - specialist academic studies- is to prepare students for competent research in a particular area of medicine. Students are trained for research in basic medical sciences, clinical medicine and public health.

Study program outcomes

Mastering general scientific and methodological courses students gain knowledge relevant to medical science, such as: basis of scientific research, the methodology of the scientific research, statistics for the researchers in the fields of medicine and ethics. Subject-specific competencies provide specific skills for a larger number of electoral areas-modules that include pre-clinical-basic, clinical and public health disciplines. After completion of specialist academic studies of different modules, students will be able to successfully deal with the scientific work.

Graduate students will learn about the achievements of modern science and medicine that will be the basis for their further education at the PhD level.

Admission requirements

English - speaking and PC literate students who previously acquired 240 ECTS - obtained degree at the integrated studies of medicine at the accredited institution, can enroll at specialist academic studies.

Contact

Head of the study program: **Prof. Dr. Dragan Mićić, member of Serbian Academy of Sciences and Arts** Telephone: +381 11 363 63 00 Contact email: <u>dragan.micic@med.bg.ac.rs</u>

Medical Sciences

at School of Medicine, 8 Doktora Subotića, 11000 Belgrade, www.med.bg.ac.rs

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

Study program content

PhD programs in the field of Medical Sciences (in basic, internal, surgical and preventive medicine) are based on the European Credit Transfer System (ECTC) which is determined by the program of studies, and bring 180 ETCS points along with previously completed Integrated Academic Medical Studies in Medical Studies which bring 360 ECTS, or Graduate Academic Studies in appropriate areas which bring at least 300 ETCS points.

A doctoral student obtains:

- 30 ETCS points by acquiring knowledge and skills in fields of basic science, research ethics, methodology of science and in courses of importance to the doctoral dissertation;
- 2. 30 ETCS for individual effort in previously mentioned fields validated through essays, presentations and other means of public presentation of the student's performance;
- 3. 15 ETCS points for individual effort achieved through research in the field of the study program, the results of which should be presented in form of one original paper prepared for publishing and one paper representing a thorough review of historic development of a problem and analysis of the current status (last 5 years) of the problem which is of the student's research interest; the papers will be deposited in the Faculty's Library and will be available to the public after the doctoral dissertation has been defended;
- 4. 60 ETCS points through individual work which will be empirical basis for its doctoral dissertation;
- 5. 15 ETCS points by publishing the results achieved within the study program as original paper in scientific journals;
- 6. 30 ETCS points by writing and defending the doctoral dissertation.

Study program goals

The goals of the doctoral studies can be grouped into three categories:

- The development of theoretical concepts for solving current medical problems, or in other words mastering the quantitative approach to medical research, which will be achieved through education relating to design of experimental, clinical or epidemiological studies, their planning, conducting and evaluation, the development of a system of supervision, the implementation of statistical methods in the assessment and interpretation of study results, as well as the critical analysis of research studies;
- 2. Applying the results of experimental, clinical or epidemiological research in everyday practice, achieved through the development of practical skills required to organize research in the laboratory, clinical setting or population whether they consist of experimental animals, healthy subjects or patient groups;
- 3. Education of the stuff at universities, research institutes and other specialized institutions which have the need for conducting and application of different types of research.

Study program outcomes

After completing the doctoral studies in the field of Medical Sciences, researchers should be capable of designing and conducting various types of experimental, clinical or epidemiological types of research, database management, statistical analyses and research result interpretation, written or oral communication, research protocol development, including the preparation of a project proposal, critical analysis and interpretation of medical expert and scientific literature, and should become competent in a field of research which will be the subject of their research project or doctoral dissertation.

Modules

Skeletal Biology Physiological Sciences Public Health Endocrinology Neurology Surgery Cardiology

Admission requirements

Previously completed Integrated Academic Medical Studies as part of the undergraduate studies, with the total of 360 ECTS points, or Graduate Academic Studies in appropriate areas with minimum 300 ETCS points.

Contact

Head of the study program:

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Physiological Sciences - Prof. Dr. Dragan Đurić Telephone: +381 11 360 70 74 Contact email: <u>drdjuric@eunet.rs</u>

> Public Health - Prof. Dr. Snežana Simić Telephone: +381 11 264 38 30 Contact email: snezanas@eunet.rs

Endocrinology - Prof. Dr. Nebojša M. Lalić corresponding member of Serbian Academy of Sciences and Arts Telephone: +381 11 36 36 396 Contact email: <u>nebojsa.lalic@med.bg.ac.rs</u>

Neurology - Prof. Dr. Nadežda Šternić Telephone: +381 11 306 42 19 Contact email: <u>macasternic@yahoo.com</u>

Surgery - Prof. Dr. Predrag Peško Telephone: +381 11 306 59 76 Contact email: <u>peskop@yahoo.com</u>

Cardiology - Prof. Dr. Miodrag Ostojić member of Serbian Academy of Sciences and Arts Telephone: +381 11 361 36 53 Contact email: <u>mostojic2003@yahoo.com</u>



Molecular Medicine

at School of Medicine, 8 Doktora Subotića, 11000 Belgrade, www.med.bg.ac.rs

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

Study program content

Ph.D. programs in the field of Medical Sciences (molecular medicine, internal medicine, surgery and public health) are based on the European Credit Transfer System (ECTS) which is determined by the program of studies and bring 180 ETCS credits, with previously completed Integrated Academic Medical Studies which bring 360 ECTS credits or Graduate Academic Studies in appropriate areas which bring at least 300 ETCS credits. A doctoral student obtains:

- 30 ETCS credits by acquiring knowledge and skills in fields of basic science, scientific ethics, methodology of science and in courses of importance to the doctoral dissertation;
- 2. 30 ETCS credits for individual effort in previously mentioned fields validated through essays, presentations and other means of public presentation of the student's performance;
- 3. 15 ETCS credits for individual activities achieved through research in the field of the study program, the results of which should be presented in form of one original paper which is of the student's research interest; the papers will be deposited in the Faculty's Library and will be available to the public after the doctoral dissertation has been defended;
- 4. 60 ETCS credits through individual work which will be empirical basis for its doctoral dissertation;
- 5. 15 ETCS credits by publishing the results achieved within the study program as original article in scientific journals;
- 6. 30 ETCS credits by writing and defending the doctoral dissertation.

Study program goals

The goals of the doctoral studies can be grouped into three categories:

1. The development of theoretical concepts for solving current medical problems, or in other words mastering the quantitative approach to medical research, which will be achieved through education relating to design of experimental, clinical or epidemiological studies, their planning, conducting and evaluation, the development of a system of supervision, the implementation of statistical methods in the assessment and interpretation of study results, as well as the critical analysis of research studies;

- 2. Applying the results of experimental, clinical or epidemiological research in everyday practice, achieved through the development of practical skills required to organize research in the laboratory, clinical setting or population whether they consist of experimental animals, healthy subjects or patient groups;
- 3. Education of the stuff at universities, research institutes and other specialized institutions which have the need for conducting and application of different types of research.

Study program outcomes

After completing the doctoral studies in the field of Medical Sciences, researchers should be capable of designing and conducting various types of experimental, clinical or epidemiological types of research, database management, statistical analyses and research result interpretation, written or oral communication, research protocol development, including the preparation of a project proposal, critical analysis and interpretation of medical expert and scientific literature, and should become competent in a field of research which will be the subject of their research project or doctoral dissertation.

Modules

Molecular Medicine and Epidemiology.

Admission requirements

Previously completed Integrated Academic Medical Studies of Medicine or Graduate Academic Studies in appropriate areas with minimum 300 ETCS points achieved.

Contact

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Epidemiology - Prof. Dr. Tatjana Pekmezović Telephone: +381 11 360 71 20 Contact email: <u>pekmezovic@sezampro.rs</u>



Faculty of Dentistry

Dentistry

at Faculty of Dentistry, 8 Doktora Subotića, 11000 Belgrade, www.stomf.bg.ac.rs

ECTS: 60/ LANGUAGE OF INSTRUCTION: SERBIAN/ DEGREE: SPECIALIST

Study program content

Studies last one year; after completion of the studies 60 ECTS are gained. School year is divided into two semesters. The study program enables attendance of certain specialization programs. Academic specialist studies end by accomplishing and defense of professional thesis. Professional thesis is an independent work of a student, which is done scientifically, and which is structurally similar to the former MSc Thesis, but without obligatory scientific contribution. Student may accomplish the professional thesis after passing all the exams determined by curriculum.

Study program goals

Academic specialist studies are studies by which students meet new methods and procedures in order to enable monitoring of professional development and adjustment to latest, modern international standards. These studies are characterized by life-long learning, with the aim of renewing and extending knowledge and skills.

Study program outcomes

- Possibilities of further studying access: Admission to medical specialization;
- Average rating above 8: Admission to medical specialization, PhD studies in Dentistry;
- Professional status: These studies are characterized by life-long learning, with the aim of extension of knowledge and skills.

Admission requirements

In the first year of the academic specialist studies, a person who has finished integrated studies of dentistry, having achieved a minimum of 300 ECTS, may enroll.

Contact

Head of the study program: **Prof. Dr. Ljubomir Todorović** Telephone: +381 63 338 970 Contact email: <u>prodekan.nauka@stomf.bg.ac.rs</u>



Multidisciplinary Approach to Solving Basic and Clinical Problems in Dentistry

at Faculty of Dentistry, 8 Doktora Subotića, 11000 Belgrade, www.stomf.bg.ac.rs

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

Study program content

Study program corresponds to integrated model of multidisciplinary character, within which various activities are provided:

- 1. Courses, which include interactive lectures (mandatory subjects for all students, elective courses and directed teaching at the selected study programs) and obtaining of appropriate certificates, practical laboratory work and introducing of specific methods of research, as well as practical work with patients aimed at solving specific problems of oral health;
- 2. Scientific research with mentors, which includes analysis of relevant scientific literature, seminars, and active research (publication, participation in projects), as well as preparation of PhD Thesis.

The curriculum includes:

- Mutual lectures in the first semester concerning general principles of scientific research methodology (a total of 30 ECTS);
- 2. Integral theoretical and practical training in areas of specific research methods performed in the dental sciences, carried out in the second semester (total 30 ECTS);
- Targeted interactive classes within the selected study module in the third and fourth semester (60 ECTS), as well as work with a mentor who is determined, in consultation with the candidate, at the beginning of the third semester (depending on the choice of study modules and elective subjects);
- 4. Scientific research (with mentor), including publication of at least one scientific paper and PhD Thesis (in the fifth and sixth semester) a total of 60 ECTS.

Study program goals

The aim of the study program of PhD studies at the Faculty of Dentistry, University of Belgrade, is to educate competent researchers, capable to follow the latest developments in the profession and science, perceive scientific problems and apply appropriate scientific research methods in solving the identified problems, and to critically review and analyze the obtained results.

Study program outcomes

Mastering the PhD program will allow students to independently solve scientific and research tasks in the respective field of dental science and to plan basic and developmental research in a relevant field. By acquiring these skills, candidates will be able to successfully follow the latest developments in science in a relevant field of interest. Respecting ethical principles and principles of good scientific practice, the future holders of a PhD degree in dentistry will be able to critically solve the set up problems and to communicate successfully on a professional level, reporting the results of their research at scientific meetings.

Modules

Study modules of the PhD studies in dentistry are:

- 1. Cellular and molecular mechanisms of pathogenesis and treatment of oral diseases;
- 2. Clinical research based on basic sciences.

Admission requirements

General conditions of enrolment in the first year of PhD studies include the following: (1) completed integrated studies of dentistry, with a minimum of 300 ECTS, and the average grade of 8.0 or above; (2) completed a five-year study of dentistry (valid till 2012), and an average grade of 8.0 or above.

Contact

Head of the study program: **Prof. Dr. Ljubomir Todorović** Telephone: +381 11 268 52 88 Contact email: <u>prodekan.nauka@stomf.bg.ac.rs</u>

Faculty of Veterinary Medicine

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Academic Specialization in Veterinary Medicine

at Faculty of Veterinary Medicine, 18 Bulevar oslobođenja, 11000 Belgrade, www.vet.bg.ac.rs

ECTS: 60/ LANGUAGE OF INSTRUCTION: SERBIAN/ DEGREE: SPECIALIST

Study program content

The curriculum of Academic Specialization in Veterinary Medicine is designed upon Legislations and through compulsory and elective courses covers broad area of veterinary medicine. The classes are mentor guided in small groups of 1 to 5 students at the faculty or at extra/mural facilities.

The specialization is closely supervised by professors responsible for elective program or by tutor. The theoretical classes are interactive and use audiovisual and virtual computer techniques, internet bases and live animals, while practical studies are partly program-based training and partly includes clinical or laboratory training with additional professional work (clinical practice, etc.) not included in minimal fund of tutorial classes.

Study program goals

The aim of academic specialization is education of veterinarians in specific areas of veterinary medicine with goals to improve knowledge and skills within specialties: clinical pathology and therapy of animals, preventive veterinary medicine, reproductive biotechnologies and food hygiene and technology.

The outcomes and competences of academic specialization studies are defined by curriculum and are obtained through elective program,

which candidates enroll at the beginning of the 2nd semester.

Study program outcomes

The doctors of veterinary medicine - specialists can work and practice in public service and specialized practices, in veterinary clinics, scientific and diagnostic institutions, state services, industry of food of animal origin, etc.

Competent highly trained specialized professionals would improve quality of veterinary services, help implementation of national and European standards, and improve animal welfare and raise public health issues.

Admission requirements

The eligible candidates who has completed and graduated studies of veterinary medicine and obtained a minimum of 300 ESPB can enroll academic specialization as postgraduate course in veterinary medicine.

Contact

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Veterinary Medicine

at Faculty of Veterinary Medicine, 18 Bulevar oslobođenja, 11000 Belgrade, www.vet.bg.ac.rs

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

Study program content

Faculty of Veterinary Medicine in Belgrade is organizing academic doctoral studies as a part of unique program that lasts for three years and carry 180 ECTS. Study program of academic doctoral studies includes appropriate number of mandatory theoretical subjects and elective subjects in the area of completing doctoral thesis and scientific research in scientific areas of the studies. Doctoral thesis is final part of study program of academic doctoral studies. Academic doctoral studies program is unique and the candidates are, starting with fourth semester, obligated to choose elective subjects. Basic areas in study program are: morphology and physiology of animals; Clinical pathology and therapy of animals; Veterinary preventive medicine and Hygiene and technology of food originating from animals. In fourth and fifth semester, in agreement with mentor, students choose methodology subjects and elective subjects in the area of completing doctoral thesis. Sixth semester is intended for completing doctoral thesis.

Study program goals

Prime goal of study program of academic doctoral studies at Faculty of Veterinary Medicine is for students to adopt newest findings in veterinary and biomedical sciences that are significant for independent scientific-research work and consciousness of need for further perfection in these areas. Students should master experimental and analytical science methods which they will use in their work, and as well as that, they should expand their knowledge in specific areas of veterinary medicine through subjects. Goals of academic doctoral study program include gaining of scientific abilities and academic skills, development of creative and communicative skills and mastering specific practical skills that are needed for future development in career.

Study program outcomes

By mastering academic doctoral study program student gains general and specific knowledge and skills needed for high-quality performance of scientific and practical work. They will master principles and mechanisms of cell function on molecular level and gain knowledge in cell biology needed for mastering and research work in modern biomedicine. Students will be capable to perceive in details system of normal metabolic transformations in animal organism for better understanding of changes in tissue function during an illness. They will understand the role of nervous system in regulation and control of other organic systems function and they will be prepared for perceiving humeral regulation and control of organic system and tissue function. Beginners will adopt freshest findings in area of veterinary immunology. They will gain theoretical knowledge and skills that are necessary for independent scientific-research work with experimental animals. Students will gain knowledge that is necessary for conducting epidemiology research, design and analysis of clinical research in veterinary medicine. They will master their knowledge in influence of veterinary work and livestock production on local and global pollution of environment, in making action plans and strategies for environment protection. They will master adopted scientific methods, so that they can reach scientific truth, or solution to some scientific problems. They will be trained to conduct scientific work, describe results and publish them. In basic areas of program, students will gain specific knowledge and master appropriate laboratory, clinical and statistical methods. Student should be capable to participate competently in scientific-research projects, to follow and critically evaluate scientific literature, write scientific articles, communicate with researchers in country and world and participate in scientific-research processes in the area of completing thesis.

Admission requirements

Person who has graduated at integrated basic and master academic studies with average mark of least 8 (eight).

Contact

Head of the study program: **Prof. Dr. Miodrag Lazarević** Telephone: +381 11 262 52 61 Contact email: misha@vet.bg.ac.rs

Faculty of Pharmacy

Pharmacy

at Faculty of Pharmacy, 450 Vojvode Stepe, 11000 Belgrade, www.pharmacy.bg.ac.rs

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

Study program content

Study Program of PhD Studies in Pharmaceutical Sciences last 3 years and carries 180 ESPB points. The program includes 11 elective domains modules. All the modules comprise 3 compulsory, common courses. Each module has 5-6 compulsory courses and elective blocks (2-4). According to the practice at European Universities, doctoral academic studies are based on research work during all the period of three year study. Preparing the doctoral thesis is planned since the first year of doctoral studies. Within the compulsory courses (modules), a student will study the subjects that are important for given elective domain - module, while within the elective block of courses students have an advantage to choose the courses which he/she will study further and which are directly regarded to the topic of doctoral thesis. Teaching will be carried out through individual (mentoring) work with students or in small groups. Working methods are adequately customized to the conception of doctoral studies (consultations, seminars, analysis of papers from original scientific literature). The Program includes an extensive, individual work of a student in research on solving scientific problems resulting in scientific publications in the renowed international magazines from pharmaceutical sciences. Experimental work is complex and typically includes the applying of many complementary approaches, techniques and methods being realized in collaboration with laboratories (scientific teams) in domestic or foreign countries.

Study program goals

The primary goal of this Study Program of PhD Studies in pharmaceutical sciences is to provide for students the requested knowledge and to enable them to acquire the diploma that will be recognized by foreign European academic institutions as well as to give them an opportunity to be properly engaged in an academic environment as well as in the industry or to continue the postdoctoral studies from pharmaceutical or other familiar scientific disciplines at some domestic or European universities.

Study program outcomes

Students will be capable to perform individually and within team work many complex researches in order to solve important scientific problems from pharmaceutical and familiar scientific disciplines. They will be trained to work with the state-of-art instruments used in research laboratories in scientific and research institutions, as well as to apply their knowledge in practice, especially for solving specific problems or in finding out some concrete practical solutions. Also, students will be capable to set up a hypothesis and design experiments for their testing, as well as to analyze critically some issues. They will be able to realize the various aspects of scientific cooperation and scientific communication both in domestic and foreign country.

Modules

- Medical Biochemistry
- Pharmaceutical Chemistry
- Pharmaceutical Technology
- Cosmetology
- Pharmacognosy
- Pharmacology
- Pharmaceutical Microbiology
- Pharmacokinetics and Clinical Chemistry
- Bromatology
- Toxicological Chemistry
- Social Pharmacy and Research in Pharmaceutical Practice

Admission requirements

The right of enrollment is referred to the applicants who completed the elementary and academic (integrated) studies with an average grade point 8 (eight).

Contact

Head of the study program: **Prof. Dr. Mira Zečević** Telephone: +381 11 395 13 99 Contact email: <u>mzecevic@pharmacy.bg.ac.rs</u>

Faculty of Biology

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Genetics

at Faculty of Biology, 16 Studentski trg, 11000 Belgrade, www.bio.bg.ac.rs

ECTS: 60/ LANGUAGE OF INSTRUCTION: SERBIAN/ DEGREE: SPECIALIST

Study program content

The study program of Specialist academic studies in genetics is a 60 ECTS one-year academic program, dedicated to education and training of master students for professional and scientific work in the field of genetics. Upon completion of the study program, students gain the knowledge and skills necessary to work in institutions of medical, pharmaceutical, agricultural sciences and other industries.

The study program consists of compulsory and elective courses that deal with certain specific areas of genetics. The program is carried out through various forms of theoretical and practical instruction (lectures, labs), student research, mentoring, seminars, colloquia, and exams. The program envisages a final student thesis. Upon successful defence of this, the student acquires the rights provided by law for completion of specialist studies.

Study program goals

The aim of the Specialist academic studies in genetics study program is to provide a complete academic education, as well as specific knowledge and understanding of selected specialist areas in the field of genetics.

Study program outcomes

By completing the Specialist academic studies of genetics curriculum, the student obtains the following general and specific skills:

- Analysis and synthesis of specific knowledge of the genetic structure, organization and functions at the level of molecules, cells, individuals, populations;
- Mastering the complex and specific methods and processes of research in certain fields of genetics;
- The development of critical and self-critical thinking about genetic concepts and approaches to issues related to genetic phenomena; - application of the acquired knowledge of genetics in practice;

- Addressing specific technical problems of research in the field of genetics, using scientific methods and procedures, and understanding of specific tasks and responsibilities within the work;
- Development of professional skills, communication skills and responsibilities, individual and team work in a multidisciplinary environment; - effective professional communication skills, data collection and processing of relevant data in the field of genetics using information and communication technologies;
- Application of bioethics in genetics.

Admission requirements

Anyone who has completed academic studies of the second degree level, including passing an exam in genetics, and who has achieved at least 300 ECTS is eligible to enroll.

Contact

Head of the study program: Doc. Dr. Sofija Pavković-Lučić Contact email: <u>sofija@bio.bg.ac.rs</u>

Immunology with Microbiology

at Faculty of Biology, 16 Studentski trg, 11000 Belgrade, www.bio.bg.ac.rs

ECTS: 60/ LANGUAGE OF INSTRUCTION: SERBIAN/ DEGREE: SPECIALIST

Study program content

The study program of Specialist academic studies in immunology with microbiology is a 60 ECTS one-year academic program, dedicated to education and training of master students for professional and scientific work in the field of immunology and microbiology. Upon completion of the study program, students gain the knowledge and skills necessary to work in immunological / microbiological laboratories in medical, pharmaceutical, veterinary and other institutions that apply knowledge of Immunology and microbiology.

The study program consists of compulsory and elective courses that deal with certain specific areas immunology. The program is carried out through various forms of theoretical and practical instruction (lectures, labs), student research, mentoring, seminars, colloquia, exams. The program envisages a final student thesis. Upon successful defence of this, the student acquires the rights provided by law for completion of specialist studies.

Study program goals

The aim of the Specialist academic studies in Immunobiology with microbiology study program is to provide a complete academic education, as well as specific knowledge and understanding of selected specialist areas in Immunology.

Study program outcomes

By completing the Specialist academic studies in immunology with microbiology curriculum, the student obtains the following general and specific skills:

- Analysis and synthesis of specific knowledge about the organization and function of cells of microorganisms and the immune system and their interactions;
- Mastering the complex and specific methods and processes of research in certain areas of Immunology and microbiology;
- · Development of critical and self-critical

thinking about immunological and microbiological concepts and approaches to understanding of immunobiological phenomena;

- Application of acquired knowledge in practice;
- Solving concrete technical problems of research in the field of immunology / microbiology using scientific methods and procedures, and understanding of specific tasks and responsibilities within the work;
- Development of professional skills, communication skills and responsibilities, individual and team work in a multidisciplinary environment;
- Effective professional communication skills, data collection and processing of relevant data in the field of Immunology and microbiology using information and communication technologies;
- Application of bioethics in immunological and microbiological investigations.

Admission requirements

Anyone who has completed academic studies of the second degree level, including passing an exam in immunology and microbiology, and who has achieved at least 300 ECTS is eligible to enroll.

Contact

Head of the study program: **Doc. Dr. Biljana Božić** Contact email: <u>biljana@bio.bg.ac.rs</u>

Biology of Microorganisms

at Faculty of Biology, 16 Studentski trg, 11000 Belgrade, www.bio.bg.ac.rs

ECTS: 60/ LANGUAGE OF INSTRUCTION: SERBIAN/ DEGREE: SPECIALIST

Study program content

The study program of Specialist academic studies in Biology of microorganisms is a 60 ECTS one-year academic program, dedicated to education and training of master students for professional and scientific work in the field of microbiology. Upon completion of the study program, students gain the knowledge and skills necessary to work in microbiological laboratories in pharmaceutical, food and other industries that have research and development laboratories, and laboratories for microbiological quality control.

The study program consists of compulsory and elective courses that deal with certain specific areas of the biology of microorganisms. The program is carried out through various forms of theoretical and practical instruction (lectures, labs), student research, mentoring, seminars, colloquia, and exams. The program envisages a final student thesis. Upon successful defence of this, the student acquires the rights provided by law for completion of specialist studies.

Study program goals

The aim of the study program of Specialist academic studies in Biology of microorganisms is to provide a complete academic education, as well as specific knowledge and understanding of selected specialist areas in the field of biology of microorganisms.

Study program outcomes

By completing the Specialist academic studies in Biology of microorganisms curriculum, the student obtains the following general and specific skills:

- Analysis and synthesis of specific knowledge about the organization and function of prokaryotic and eukaryotic microorganisms and viruses and their interactions with other organisms and the environment;
- Mastering the complex and specific methods and processes of research in certain

areas of microbiology;

- The development of critical and self-critical thinking on microbiological concepts and approaches to understanding microbiological phenomena;
- Application of acquired knowledge in practice;
- Solving concrete technical research problems in the biology of microorganisms, using scientific methods and procedures, and understanding of the specific tasks and responsibilities within the work;
- Development of professional skills, communication skills and responsibilities, individual and team work in a multidisciplinary environment;
- Effective professional communication skills, data collection and processing of relevant data in the field of microbiology using information and communication technologies;
- Application of bioethics in microbiological research.

Admission requirements

Anyone who has completed academic studies of the second degree level, including passing an exam in microbiology, and who has achieved at least 300 ECTS is eligible to enroll.

Contact

Head of the study program: **Prof. Dr. Branka Vuković-Gačić** Contact email: <u>brankav@bio.bg.ac.rs</u>

Biology

at Faculty of Biology, 16 Studentski trg, 11000 Belgrade, www.bio.bg.ac.rs

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

Study program content

The Doctoral degree program in Biology is organized and implemented by the Faculty of Biology, University of Belgrade, in cooperation with experts from other relevant institutions. The Study program carries a total of 180 ECTS, lasting for 3 years and includes thirteen modules.

Classes are organized within each module in three compulsory and a larger number of elective subjects. Each student is monitored by mentors and tutors from the university for the Doctoral dissertation.

Study program goals

The program aims to provide an intellectual framework for the development of highly educated and creative young scientists who are expected to assume future leadership positions in scientific research, university teaching, and activities relevant to applied biology. The program provides students with high quality theoretical knowledge and experimental experience in the field of biology, as well as specific knowledge and experimental skills in the immediate area in which they do their own investigation.

Students learn contemporary views on current issues from a number of narrower research fields of biology, the latest experimental approaches to solving scientific problems and new technologies. The specific objectives of the PhD program in Biology are: further development and systematization of knowledge in the field of biology gained from previous levels of education, learning about topics that are currently the focus of scientists, especially those that were not, or not sufficiently, covered in primary and masters higher education studies.

Students will develop independent and critical thinking through interactive forms of instruction such as panel discussions, group analysis and interpretation of experimental data from the literature or personal study, analysis of key scientific papers for specific areas that are studied, and so on. Creativity, individuality and personal preferences are encouraged through activities such as writing essays on free themes, designing research project proposals and the like; mastering academic skills such as writing research papers and project proposals, and presentations of research results.

Modules

Algology, animal and human physiology, cell and tissue biology, developmental biology of animals, genetics, evolutionary biology, experimental and applied botany, experimental mycology, immunobiology, microbiology, morphology, systematics and phylogeny of animals, neuroscience and physiology and molecular biology of plants.

Study program outcomes

The concept, quality, goals and organization of the study program for biology are designed for students to acquire, after successful completion of doctoral studies, general and specific skills that qualify them for scientific research and give a solid basis for successful construction of a scientific and / or university career.

Along with the promotion of theoretical knowledge in more specialised fields of science, students will gain the capacity to use an integrative approach (from the level of molecules and cells to the level of the organism) in the assessment of fundamental problems in biology. Students will develop the intellectual and experimental skills and abilities needed for creative basic and applied research and further training in the field of biology and other related fields - medicine, veterinary medicine, agriculture, pharmacy, etc. Through mastering the curriculum, students will acquire the latest knowledge in various fields of biology, which will give them a good basis for designing experiments to work on their own scientific problems.

Through writing and public presentation of essays and test papers, students will gain valuable experience that helps them master the skills of writing scientific papers and oral communication with an audience. Experimental experience gained from working in different laboratories, will allow them to look at the complexity of experimental work, from planning and preparation of the experiment, and mastering a range of methods and experimental approaches to presenting and analyzing results using the latest software packages.

Admission requirements

Anyone who has completed the appropriate basic and master academic studies with an average mark above 8.00 is eligible to enroll.

Contact

Head of the study program: **Doc. Dr. Jasmina Krpo-Ćetković** Contact email: <u>jkrpo@bio.bg.ac.rs</u>

Ecology

at Faculty of Biology, 16 Studentski trg, 11000 Belgrade, www.bio.bg.ac.rs

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

Study program content

The Doctoral degree program in Ecology is organized and implemented by the Faculty of Biology, University of Belgrade, in cooperation with experts from other relevant institutions. The Study program carries a total of 180 ECTS, lasting for 3 years and includes four modules: the ecology of plants and phytogeography, ecology and biogeography, biodiversity protection and hydrobiology. Within each module, classes are organized in four compulsory subjects, three of which are common to all modules, and with a larger number of elective courses. In consultation with the mentor a student can choose elective courses from other academic programmes organized by the Faculty of Biology. The optional part of the program is planned according to the individual needs of candidates, depending on previous education and experience. The program is implemented through teaching that includes lectures and other forms of interactive teaching, the study of research work and individual work of students.

Study program goals

The program aims to provide a framework for the development of highly educated and creative young scientists who are expected to assume future leadership positions in scientific research, university teaching and activities in which ecology, biogeography and environmental protection and biodiversity are implemented. The program offers students high-guality theoretical knowledge and practical experience and specific knowledge and skills in the immediate area in which they do their own investigation. Given the complexity and importance of the phenomena studied, the study program covers both fundamental and applied aspects of research, monitoring, protection, conservation and sustainable use of the rich and diverse wildlife of the Balkan Peninsula.

Modules

Ecology of plants and phytogeography, ecology and biogeography, biodiversity protection and hydrobiology.

Study program outcomes

The program offers training for academic and scientific research outputs, and applied knowledge and skills in analysis, monitoring, management and protection of biodiversity of the Balkan Peninsula. Allows the profiling of the levels of environmental organizations (species, population and countryside-ecosystem levels), as well as the type of environment (terrestrial and aquatic ecosystems and habitats). Various forms of interactive teaching stimulate students to formulate and freely express independent opinions, to focus on the most important problems of certain specialist fields of ecology, biogeography and biodiversity protection and to formulate hypotheses for their solution, to learn how to develop arguments, to critically analyze and interpret their results and the results of other authors, hypotheses and theories encountered by studying the literature, to apply their knowledge and ideas to solving problems they encounter during their research project.

Through writing and public presentation of essays and test papers, students will gain valuable experiences for mastering the skills of writing scientific papers and oral communication with an audience. Students will get help and training from their supervisors and committee members for writing a proposal of their own research project, with training to define clearly and precisely their research objectives and to design appropriate experimental approaches in a manner that allows high-quality and biologically relevant research results to be obtained and project implementation monitored.

Admission requirements

Anyone who has completed the appropriate basic and master academic studies with an average mark above 8.00 is eligible to enroll.

Contact

Head of the study program: **Doc. Dr. Jasmina Krpo-Ćetković** Contact email: jkrpo@bio.bg.ac.rs

Molecular Biology

at Faculty of Biology, 16 Studentski trg, 11000 Belgrade, www.bio.bg.ac.rs

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

Study program content

The Doctoral degree program in Molecular Biology carries a total of 180 ECTS, lasting for 3 years and includes two modules: molecular biology of eukaryotesand molecular biology of prokaryotes. Each module is organized into four compulsory courses and a larger number of elective courses, and each student on the degree program will gain 22 ECTS for compulsory and 36 ECTS for elective courses. In consultation with the mentor a student can choose elective courses from other academic programmes organized by the Faculty of Biology.

The program is realized through:

- Teaching that includes lectures and other forms of interactive teaching and the theoretical study of research (experimental laboratory work is organized in the form of a "rotation", seminars, experimental production of a doctoral dissertation);
- 2. Individual work of students.

Monitoring of program implementation is the responsibility of the Program Council, which comprises the senior lecturers in all subjects. The Head of this body chairs the study program. A senior lecturer is responsible for organizing the teaching within their subject. As a rule, the senior lecturer hires more lecturers, each of which implements their relevant part of the subject. Guest speakers from home and abroad are engaged, depending on the circumstances. A three-member Advisory Panel, consisting of the mentor and two other members of the Program Council, supervises the preparation of the doctioral thesis. The role of these committees is to monitor the progress of students and assist in the implementation of their research programmes.

Study program goals

The program aims to provide an intellectual framework for the development of highly educated and creative young scientists who are expected to assume future leadership positions in scientific research, university teaching, and activities in which molecular biology is applied. The program offers students high-quality theoretical

knowledge and practical experience in the field of molecular biology, as well as specific knowledge and experimental skills in the immediate area in which they do their own investigation. To achieve this objective, the study program has brought together a number of speakers, including lecturers from the Faculty of Biology, scientists from IMGGE, the IBISS and other scientific and research institutes in the country, and visiting lecturers from abroad, in which our molecular biologists who have achieved notable scientific and university careers around the world predominate. Students learn contemporary views on current issues in the field of molecular biology, the latest experimental approaches in molecular biology and new biotechnology based on the achievements of molecular biology. As this study program is realized by two wellrespected institutes in addition to the Faculty of Biology, students have the opportunity during the PhD program to acquire valuable "first hand" experience of experimental work and, through contact with researchers working on a wide range of topics, the latest information on global trends in molecular biology research.

The specific objectives of the PhD program Molecular biology are:

- Further development and systematization of knowledge in the field of molecular biology gained from previous levels of education;
- Understanding the issues that are the current focus of research, especially those topics that were not, or not sufficiently, covered in primary and masters higher education studies;
- Developing independent and critical thinking through interactive forms of instruction such as roundtables, group analysis and interpretation of experimental data from the literature or personal study, analysis of key scientific papers for specific areas that are studied, and so on;
- Encouraging creativity, individuality and personal preferences, through activities such as writing essays on free themes, designing research project proposals and the like, mastering academic skills such as writing research papers and project proposals, and giving presentations on research results.

Modules

Molecular biology of prokaryotes and molecular biology of eukaryotes.

Study program outcomes

The concept, quality, goals and organization of the study program for Molecular Biology are designed so that students acquire, after successful completion of doctoral studies, general and specific skills that qualify them for scientific research and give a solid basis for successful construction of a scientific and / or university career. Students will acquire the latest knowledge in various fields of molecular biology, to provide them with a good basis for creating their own research programmes and designing experiments.

Various forms of interactive teaching, involving continuous communication between students and lecturers, will provide intellectual challenges for students, and encourage them to become independent and confident to express their opinions, to focus on the most important scientific problems in certain specialist areas of molecular biology and to formulate hypotheses for their solution, to learn how to develop arguments, to critically analyze and interpret their experimental results of those of other authors, hypotheses and theories encountered by studying the literature, to apply their knowledge and ideas to solving theoretical and experimental problems they encounter during their research project. Through writing and public presentation of essays and

test papers, students will gain valuable experiences for mastering the skills of writing scientific papers and oral communication with the audience. Experimental experience gained from working in different laboratories ("rotation") will allow them to look at the complexity of experimental work, from planning and preparation of the experiment, to mastering a range of methods and experimental approaches, to presenting and analyzing the results using the latest software packages. Students will get help and training from their supervisors and members of the Advisory Commission for writing a proposal of their own research project, with training to define clearly and precisely their research objectives and to design appropriate experimental approaches in a manner that allows high-guality and biologically relevant research results to be obtained and project implementation monitored.

Admission requirements

Anyone who has completed the appropriate basic and master academic studies with an average mark above 8.00 is eligible to enroll.

Contact

Head of the study program: **Prof. Dr. Gordana Matić** Telephone: +381 11 263 55 45 Contact email: gormatic@ibiss.bg.ac.rs

Faculty of Geography

Geo Sciences

at Faculty of Geography, 3 / III Studentski trg, 11000 Belgrade, www.gef.bg.ac.rs

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

Study program content

The program of doctoral studies consists of three years of courses upon whose completion a student gains 180 ECTS in total and a doctoral academic degree.

The program of doctoral studies consists of one compulsory course and three sets of elective courses in the first four semesters. Through selection of elective courses and the topic of doctoral dissertation, a student chooses one of four scientific fields that are provided.

Content of the compulsory course contains contemporary teaching units of core scientific fields upon whose completion a student acquires necessary basis for further scientific education that is realized through elective courses.

In the fifth and sixth semester a student conducts academic research, which is in close connection to their doctoral dissertation. A student is obliged to pass all exams in the first, second, third and fourth semester with an average mark of 8.50 (8.50 / 10.00) before defending their doctoral dissertation. In order to fulfill all necessary conditions, before defending their dissertation, a student is obliged to publish at least two papers in national or international scientific journals and to participate at two national or international scientific conferences, in the country or abroad. A student must be the only author of one of the presented papers, whereas the paper must be published in the conference proceedings publication, a scientific journal or similar publication. Teaching at the doctoral studies is organized as individual tuition through tutoring and consultations..

Study program goals

The primary goal of doctoral studies organized at the Faculty of Geography is to educate experts who will be capable of conducting individual and team research projects through which development of fundamental and applicative dimensions of the geographic and correlating sciences in Serbia will be continued. These experts will continue their education as future teachers or tutors. In this respect, concrete goals of this program of study are to provide high quality contemporary knowledge and corresponding skills which are in compliance with global standards, so that the doctoral degree obtained at this program could be recognized worldwide. It is of utmost importance to harmonize contents and formal procedures with the standards applied within the European education system, in order to enable students to continue or complete this program of study at universities around Europe, as well as to make them become competitive at labour market or when applying for grants for further specializations.

Study program outcomes

A student gains competences which are in accordance with the purpose and goals of this program:

- The most significant is the ability to conduct individual and team research; this ability is verified through publication of scientific papers and defending of the dissertation. It implies that a student has acquired expert knowledge in a particular field of geographic or correlating sciences, as well as knowledge of research methods. This means that a student is capable of producing analytic and synthetic research outcomes;
- 2. Another competence implies further practical application of the acquired knowledge and skills in various scientific or professional geographic, tourism, urban-planning, demographic or environmental institutions. This implies in particular, the capacity to participate in team projects organized through fundamental scientific research, developmental or applicative activities;
- Ability to present the obtained data on seminars or in scientific publications. It is in direct correlation with the opportunity to engage graduate doctoral students from the Faculty of Geography into educational process, at different levels starting from primary schools to the university level;
- 4. Ability to become engaged in global research trends, which is demonstrated through intensive reading and selection of relevant literature and media, communication with the

leading research centers around the world, positioning of one's own research projects in relation to them, in order to enhance participation in joint projects.

Admission requirements

Applicants who have graduated with the average mark of 8.00 (8.00 / 10.00) from the corresponding four year institutions of basic academic studies or master studies are eligible to apply for the doctoral program.

Contact

Head of the study program: **Prof. Dr. Miroljub Milinčić** Telephone: + 381 11 263 74 21 Contact email: <u>mikan@gef.bg.ac.rs</u>



Faculty of Mathematics

Mathematics

at Faculty of Mathematics, 16 Studentski trg, 11000 Belgrade, www.matf.bg.ac.rs

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

Study program content

Study program Mathematics, PhD studies, at the Faculty of Mathematics lasts for 6 semesters and covers 180 ECTS. After completion of these studies, the candidate acquires the scientific name of the Ph.D. in Mathematics.

This program consists of one-semester elective courses and an Independent Research Work with more than 20 hours of active teaching classes per week. The number of active teaching, led by teachers, and number of ECTS define each course. Students have an Independent Research Work that is defined by a corresponding number of ECTS. Study program ends up with a PhD thesis, which covers 60 ECTS.

Study program goals

The aims of PhD program in Mathematics are:

- To gain advanced knowledge in theoretical or applied mathematics and especially a specific knowledge relevant to the selected field of research;
- To master advanced skills such as: solving the tasks that deepen the advanced knowledge, discovering new situations and apply what one have learned in those situations, obtaining original results and writing papers;
- After achieving PhD title, the best students are expected to continue scientific research and to work as university teachers;
- To improve general education and to gain general cultural skills relevant for the profession, such as: the ability to use literature and collect information over the Internet, data processing, drafting texts and modern electronic demonstration, on mother tongue or foreign language, and to represent a scientific or professional activities in the logical connection and linguistically correct manner;
- To develop curiosity and persistence, as well as logical, analytical, inductive-deductive and abstract thinking, very important for mathematics, and to develop general, scientific, professional and other abilities;
- To build professional and ethical attitudes, develop critical thinking;

To have continuous improvement and to continue rich scientific career, to be involved in scientific research in academic institutions, educational and development institutions, as well as in other industries.

Study program outcomes

Student should obtain the following general and specific skills by acquiring the Ph.D. academic program in mathematics:

- To govern with advanced knowledge of the fields of mathematics and related disciplines that the program covered - computer science, etc;
- To make the optimal choice of literature for solving specific problems, to obtain and report on results using the computer and to apply knowledge in practice;
- To know how to teach mathematics at the university level, higher education institutions and high schools in accordance with appropriate regulations;
- To be able to work as a researcher in the scientific and research institutions;
- To know how to think critically about phenomena related to the field of research, to critically examine and analyze the facts, assemble the results that occur, in an understandable manner using modern forms of processing and demonstrating results;
- To know how to demonstrate the results of scientific work to national and international public in an understandable way and to spread knowledge to others.

Admission requirements

Candidates who have completed the appropriate undergraduate academic and master academic studies with an average grade above 8.00 are entitled to enroll.

Contact

Head of the study program: **Prof. Dr. Aleksandar Lipkovski** Contact email: <u>acal@matf.bg.ac.rs</u>

Informatics

at Faculty of Mathematics, 16 Studentski trg, 11000 Belgrade, www.matf.bg.ac.rs

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

Study program content

The program consists of two compulsory subjects which are of general importance to scientific and research work and 8 elective courses (35 are offered) elected by the student, depending on the chosen theme for the PhD thesis, in collaboration with the mentor. Two semesters make up the academic year. Total number of ECTS per semester is 30 and 60 for the academic year. The program lasts 3 years (6 semesters), during which a student should achieve at least 180 ECTS, including the points for PhD thesis.

A candidate who completes the academic program Informatics, defends PhD thesis and acquires 480 ECTS points, gets the title of doctor of Computer Science.

Study program goals

The aims of the PhD academic program include the achievement of scientific and academic skills and development of creative skills.

The aims are in line with modern developments in mathematics and computer science in the world and are compatible with the basic tasks and goals of higher education institution where the program is held.

The aim of this academic program is the education and training students for scientific and research work. The student should acquire a wide knowledge and systematic understanding of a specific scientific field. Through this program, student has to research the topic that was profiled with two compulsory and four elective courses.

Through a large number of elective courses (23) students have a possibility to round up the selected research topic. The student should learn how to recognize the level of scientific knowledge in selected doctoral topics through the review of contemporary scientific literature, through review of news in selected topics and to recognize further development and researches.

Study program outcomes

Acquired knowledge gives the possibility to apply a deeper knowledge, understanding and skills adopted during PhD studies, for the successful resolution of complex problems in new or unfamiliar environment, especially in research fields. Knowledge provides an opportunity to work in research institutes, centers and universities.

Admission requirements

Persons who have completed the appropriate undergraduate academic studies to the extent of 180 ECTS are entitled enroll this program.

Contact

Head of the study program: **Prof. Dr. Miodrag Živković** Contact email: <u>ezivkovm@matf.bg.ac.rs</u>



Astronomy and Astrophysics

at Faculty of Mathematics, 16 Studentski trg, 11000 Belgrade, www.matf.bg.ac.rs

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

Study program content

Academic program Astronomy and Astrophysics, PhD studies, Faculty of Mathematics, according to the Statute of the Faculty it lasts for 6 semesters and covers 180 ECTS.

PhD program consists of one-semester courses and an Independent Research Work with more than 20 hours of active teaching classes per week.

The number of active teaching led by teachers and the number of ECTS define each course. A corresponding number of ECTS also defines Independent Research Work. A way of teaching as well as a way of continuous evaluation is determined for each course. Due to the complexity of content and distribution of various forms of teaching in order to overcome the anticipated contents, 1 ECTS = 30 hours of student's work is the basis for calculating the number of points in each individual course as well as the total number of points in an academic program. Academic program consists only of elective courses and Independent Research Work and, if necessary, practical work in the professional astronomical observatories at home and abroad. This program ends up with a PhD thesis, which covers 60 ECTS.

Study program goals

The main aims of this academic program are to enable students to acquire advanced knowledge and skills and to apply the acquired knowledge from a specific field of astronomy and astrophysics in science, higher education institutions and other organizations. This advanced knowledge and these skills should enable students to work in the field of astronomy and astrophysics and related fields within scientific institutions, higher education institutions or development institutions or in other activities.

The aim of this academic program is to develop specific scientific skills, including mastery of advanced knowledge in all areas covered by the program of study of astronomy and astrophysics as well as the relevant parts of related sciences, mathematics, physics, computer science, chemistry, biology and archeology; to enable students to use the scientific literature, to count with the help of advanced, sophisticated techniques and computers, to simulate, to process and present the results of scientific research, to enable them to think critically and analyze facts, shape results in an understandable manner using modern forms of processing and demonstration of results; to perceive the importance of ethical principles in science, to gain a routine in the application of astronomical methods and techniques in theoretical and experimental fields of astronomical, astrophysical, physical, chemical, biological, archaeological computer and other systems, as well as to interpret their conditions, structure and processes at the level of elementary particles to the Universe as a whole.

An important aspect of concept of this program is to master the theoretical principles of astronomical and astrophysical methods, which provides a creative use of modern equipment for astronomical observations based on modern optics, electronics and automation and the efficient maintenance of equipment, in working condition.

Finally, the program provides the basis for the continuation of rich scientific career, as well as the possibility of including in scientific research work in a wide range of natural and technological sciences.

Study program outcomes

Mastering the PhD program of astronomy and astrophysics student gets general ability:

- To govern with advanced knowledge from fields of astronomy and astrophysics and related sciences - mathematics, physics, computer science;
 - To make the optimal choice of the scientific literature to solve specific astronomical problems, to calculate, simulate, process and demonstrate results using the computer and to apply knowledge in scientific, academic practice;
- To critically think about phenomena related to the field of research, critically examine and analyze the facts, assemble the results

that occur, in an understandable manner using modern forms of processing and demonstration of results;

- To show the results of scientific work to both domestic and international public in an understandable way and to spread knowledge to others;
- To respect the ethical principles of the profession.

Through PhD program of astronomy and astrophysics, a student obtains the following specific scientific competence:

- Has a routine in the application of advanced and modern astronomical methods and techniques in the fields of theoretical and experimental astronomical, physical, chemical, biological, archaeological, computer and other systems and to interpret their conditions, structure and processes at the micro and macro levels;
- To use instrumental analysis methods, such as photometric, spectroscopic, polarimetric, radio astronomy, infrared, ultraviolet etc. in the practice;

- To take a creative look at the possibility of using modern equipment for astronomical measurements for nonspecific use and effectively maintain the equipment, in working condition;
- To teach astronomy, astrophysics, physics and related subjects similar to astronomy and astrophysics in higher education institutions or high schools, in accordance with appropriate regulations.

Admission requirements

Candidates who have completed the appropriate undergraduate academic and master academic studies with an average grade above 8.00 are entitled to enroll.

Contact

Head of the study program: **Prof. Dr. Dejan Urošević** Contact email: <u>dejanu@matf.bg.ac.rs</u>



Faculty of Physics

Physics

at Faculty of Physics, 12 Studentski trg, 11000 Belgrade, www.ff.bg.ac.rs

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

Study program content

The study program of doctoral studies in physics lasts three years. The program has total value of 180 ECTS and the academic title of doctor of natural sciences. The load is evenly distributed across the semesters. The program includes four optional courses and one seminar.

The main part of the studies is student research work, whose result is the doctoral thesis defense. The student is also required to public two papers in leading journals. Courses include the material that is built on the contents of undergraduate and master studies. As modern physics is a very broad scientific area, and research problems and their related technologies are often interdisciplinary, method of selection of subjects on the study program provides direction to the basic disciplines of modern physics and their combination.

Because the courses are divided according to research fields, student has to select 3 subjects of his area of interest. In terms of content items include advanced courses in scientific subfields, methodological courses (technical research in the field), and courses introducing the most important features of the system for the area. Teaching is individual, with mentoring and consulting work. Lectures are conducted in small groups (5 to 10) students.

Study program goals

The primary goal is to create top quality professionals capable of independent research on a world scale, which will continue the development of fundamental and applied aspects of physics in Serbia, and continue the educational process as teachers and mentors.

In this sense, the specific objectives of the program are to provide high quality and modern knowledge in line with international standards. Especially important is to comply with standards of the European educational space, so the students can continue their education abroad and be competitive in finding jobs and training. A specific goal of the program is linked to the fact that physics is the basic natural science, and at the same time a base for other natural sciences which have a series of overlapping. Therefore the program must necessarily allow specialization in scientific areas, giving the student a modern state in the chosen field and to train the student through mastering the basic techniques and systems relevant to the area. On the other hand, since the method often combines different fields, and sometimes the same systems become more relevant in other areas, it is necessary to enable interdisciplinary among the smaller areas.

Study program outcomes

Students obtain competence in accordance with the purposes and objectives of the program.

- The most important is the ability for independent research, which is verified with publications and defending of the doctoral dissertation. This includes mastering the superior knowledge of certain areas and methods of research, i.e. ability of analytical and synthetic thinking and review of the relevant experimental or theoretical techniques;
- Further implementation of the acquired knowledge and skills in practice, whether in science or research labs. This refers to the ability to participate in research and development teams, i.e. coordination with complementary knowledge experts;
- The ability of selection problems that is important for the development of science and international and domestic technology;
- Ability to display the results both in seminars and papers. This is directly related to the possibility of including Ph.D. students in education and in cooperation of students with other research groups;
- Ability to include research into global trends through intensive monitoring and selecting of relevant literature, communication with the world's leading research groups, positioning all the research on them to promote the participation in joint projects.

Admission requirements

Requirement for this degree program is previously completed primary and master academic studies with an average mark above 8.00.

Contact

Head of the study program: **Prof. Dr. Milan Damnjanović** Telephone: +381 11 263 01 52 Contact email: <u>yqoq@afrodita.rcub.bg.ac.rs</u>

Meteorology

at Faculty of Physics, 12 Studentski trg, 11000 Belgrade, www.ff.bg.ac.rs

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

Study program content

The study program of meteorology doctoral studies lasts three years and its completion is obtained a total of 180 ECTS and the academic title of doctor of meteorological science. The load is evenly distributed across the semester. The program includes four optional subjects, two compulsory subjects and one seminar. The significant part of the program consists of students research which ends with the thesis defense. The student is also required to publish two papers in leading journals before the dissertation defense. The curriculum of compulsory subjects includes contemporary topics in central areas of meteo-rology - dynamic meteorology.

Meteorology is a very broad scientific field but optional courses allow students to study the basic disciplines of modern meteorology and to combine them. Teaching is mainly individual with mentoring and consulting work. Lectures are conducted in small groups (5 to 10) students.

Study program goals

The primary goal is to create top quality professionals capable of independent research on a world scale which will continue the development of basic and applied aspects of meteorology in Serbia and continue the educational process as teachers and mentors. In this sense the specific objectives of the program are to provide high quality and modern knowledge in line with international standards. Especially important is to comply with standards of the European educational space, so the students can continue their education abroad and be competitive in finding jobs and training.

Study program outcomes

Students obtain competence in accordance with the purposes and objectives of the program.

• The most important is the ability for independent research, which is verified with publications and defending of the doctoral dissertation. This includes mastering the superior knowledge of certain areas and methods of research, i.e. ability of analytical and synthetic thinking and review of the relevant experimental or theoretical techniques;

- Further implementation of the acquired knowledge and skills in practice, whether in science or research labs. This refers to the ability to participate in research and development teams, i.e. coordination with complementary knowledge experts;
- The ability of selecting problems that is important for the development of science and international and domestic technology;
- Ability to display the results both in seminars and papers. This is directly related to the possibility of including Ph.D. students in education and in cooperation of students with other research groups;
- Ability to include research into global trends through intensive monitoring and selecting of relevant literature, communication with the world's leading research groups, positioning all the research on them to promote the participation in joint projects.

Admission requirements

Requirement for this degree program is previously completed primary and master academic studies with an average mark above 8.00.

Contact

Head of the study program: **Prof. Dr. Milan Damnjanović** Telephone: +381 11 263 01 52 Contact email: <u>yqoq@afrodita.rcub.bg.ac.rs</u>

Faculty of Physical Chemistry

Physical Chemistry

at Faculty of Physical Chemistry, 12–16 Studentski trg, 11000 Belgrade, www.ffh.bg.ac.rs

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

Study program content

Doctoral studies in Physical Chemistry last 3 years (180 ECTS). Upon completion, students receive the title of PhD in Physical Chemistry. The aim of doctoral studies is to enable students to do independent research in the field of Physical Chemistry.

During their first semester, all PhD candidates are required to take the course on "Novel Methods in Physical Chemistry" and gain knowledge about particular methods through lectures and demonstrational or individual laboratory work. In the second semester, students choose one optional course from the list of general courses related to the subject of their PhD thesis. In the third and fourth semesters, students choose four optional courses (after consultation with their mentors) from a second list of optional courses directly related to the subject of PhD thesis.

Teaching is interactive and performed through lectures, discussions, seminars, presentations and research work. Students are performing research work in the area related to their doctoral thesis starting in their first semester. In their fourth semester, PhD students are required to take the course on methods and methodology of scientific investigation, and to write a paper explaining the scientific relevance of their thesis. This stage of the PhD work is considered accomplished once a student presents (in a satisfactory way) the subject of their doctoral thesis, thus fulfilling the legal criteria and receiving an official approval of the subject of future doctoral thesis.

During doctoral studies, students are members of research groups either at the Faculty of Physical Chemistry or at other research institutions in Serbia (or, when necessary, abroad). A PhD thesis must contain original results that students have obtained in the field of Physical Chemistry, presented and discussed in a satisfactory fashion and accompanied with appropriate conclusions. A PhD thesis must also contain a literature overview related to the subject of original work, and should include a list of published papers based on the obtained results.

Study program goals

The aim of PhD studies in Physical Chemistry is to provide understanding of scientific investigation to PhD candidates and enable them to perform independent research in the field of Physical Chemistry and related sciences. Students will be required to perform original research, interpret obtained results, and make conclusions based on those results, as well as to systematically and critically literature overview.

PhD candidates must be able to independently perform methods and methodology of scientific investigation, obtain original results which can be published in peer-reviewed journals, and gain overall competence which will enable them to actively participate in international projects. Curriculum of these studies and the subject of thesis are aligned with contemporary trends in Physical Chemistry in the world, as well as with aims and tasks of Faculty of Physical Chemistry.

Study program outcomes

Doctoral academic study program is design to provide knowledge, skills, abilities and general competence to students in order to be able to:

- Independently plan, organize and execute scientific research aimed at solving practical and theoretical problems in the field of Physical Chemistry and related sciences;
- Actively participate in international projects;
- Develop or participate in the development of new technologies and procedures for different purposes by using novel knowledge in Physical Chemistry;
- Make decisions in complex and non-anticipated situations;
- Communicate verbally and in written with other colleagues working in the area of Physical Chemistry or related sciences, professionally and with competence;
- Present obtained results at scientific conferences, publish in relevant journals or register as patents;
- Transfer their knowledge to different institutions for higher education;

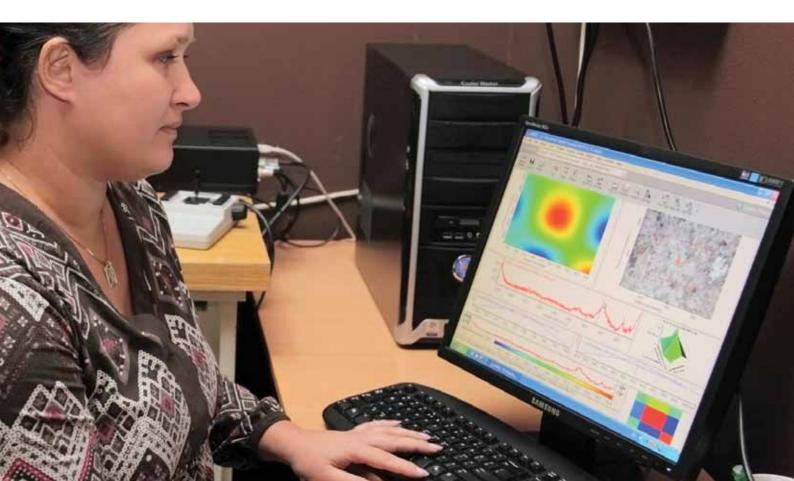
Contribute to general development of Physical Chemistry/science with their research work.

Admission requirements

Candidates must have 300 ECTS and completed master study programmes in the field of Physical Chemistry or related sciences.

Contact

Head of the study program: **Prof. Dr. Šćepan Miljanić** Telephone: +381 11 263 55 45 +381 11 328 40 12 +381 11 333 66 47 Contact email: <u>ffh@ffh.bg.ac.rs</u>



Faculty of Chemistry

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Chemistry

at Faculty of Chemistry, 12-16 Studentski Trg, 11000 Belgrade, www.chem.bg.ac.rs

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

Study program content

Study program of doctoral studies in chemistry lasts for 3 years and has a workload of 180 ECTS credits. The program includes 6 elective (theoretical) courses (30 ECTS credits altogether) and 2 term papers (10 ECTS credits). In compliance with the practice at European universities, the doctoral studies are based on research work during all 3 years of studies. Research, literature overview and introduction to laboratory work (35 ECTS credits) are planned for the first year, and research, laboratory work and writing papers (75 ECTS credits) are planned for the second and third year, while writing papers, writing doctoral thesis and preparation for viva voce (30 ECTS credits) are planned for the sixth semester.

Within the scope of elective courses students will study the subject matter which they have not studied within the basic and graduate program, as well as selected chapters from the areas which they have studied during their basic and graduate studies but which are related to the topic of the doctoral thesis. Instruction is conducted through individual (supervised) work with students, or work in small groups of students.

Teaching methods are adequately adapted to the concept of doctoral studies (consultations, term papers, elaborating papers from original scientific literature). The program includes extensive, independent research work of a student on a scientific problem which results in scientific publications in renowned international journals in chemistry.

Experimental work is complex, and as a rule includes the application of a large number of complementary approaches, techniques and methods, and it is conducted in cooperation with laboratories/groups in the country and abroad.

Study program goals

The primary goal of this study program is to educate experts with high level of fundamental and applied knowledge in various areas of chemistry, whose master's degree (along with the bachelor degree) will be recognized/accepted by all European institutions and which will enable students to find appropriate employment or to continue their doctoral studies in chemistry or related disciplines at Serbian or some other European universities.

Study program outcomes

Students will be able to independently and competently perform complex research work as a part of a team with the aim of solving relevant scientific problems in the field of chemistry and related disciplines. They will become familiar with working with the latest instruments which are used in chemical research laboratories and with their application. They will demonstrate their capacity to apply their knowledge in practice, especially in problem-solving and making new discoveries. They will be able to formulate hypotheses and design experiments to test them. They will be able to analyze a material and formulate concepts. They will be able to adapt to new situations and make decisions. They will be able to establish various types of scientific cooperation and communication in Serbian and English.

Admission requirements

Only students who have completed their basic and master academic studies at an appropriate faculty with GPA no less than 8.0 can be enrolled

Contact

Head of the study program: **Doc. Dr. Sanja Grgurić-Šipka** Telephone: +381 11 333 67 36 Contact email: <u>sanjag@chem.bg.ac.rs</u>

Biochemistry

at Faculty of Chemistry, 12-16 Studentski Trg, 11000 Belgrade, www.chem.bg.ac.rs

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

Study program content

Study program of doctoral studies in biochemistry lasts for 3 years and has a workload of 180 ECTS credits. The program includes 6 elective (theoretical) courses (30 ECTS credits) and 2 term papers (10 ECTS credits). In compliance with the practice at European universities, the doctoral studies are based on research work during all 3 years of studies. Research, literature overview and introduction to laboratory work (35 ECTS credits) are planned for the first year, and research, laboratory work and writing papers (75 ECTS credits) are planned for the second and third year, while writing papers, writing the thesis and preparation for the viva voce (30 ECTS credits) are planned for the second.

Within the scope of elective courses students will study the subject matter which they have not studied within the basic and graduate program (Ecological Biochemistry, Biochemistry of Food and Nutrition, Free Radical Processes in Biochemistry, Design and Development of New Drugs), as well as selected chapters from the areas which they have studied during their basic and graduate studies but which are related to the topic of the doctoral thesis. Instruction is conducted through individual (supervised) work with students, or work with small groups of students.

Teaching methods are adequately adapted to the concept of doctoral studies (consultations, term papers, elaborating papers from original scientific literature). The program includes extensive, independent research work of a student on a scientific problem which results in scientific publications in renowned international journals in biochemistry.

Experimental work is complex, and, as a rule, includes the application of a large number of complementary approaches, techniques and methods, and it is conducted in cooperation with laboratories/groups in the country and abroad.

Study program goals

The primary goal of this study program is to enable students to obtain a degree which will be recognized/accepted by all European institutions, and which will enable students to find appropriate employment in academia or in industry, or to continue their post-doctoral studies in biochemistry or related disciplines at Serbian or some other European universities.

Study program outcomes

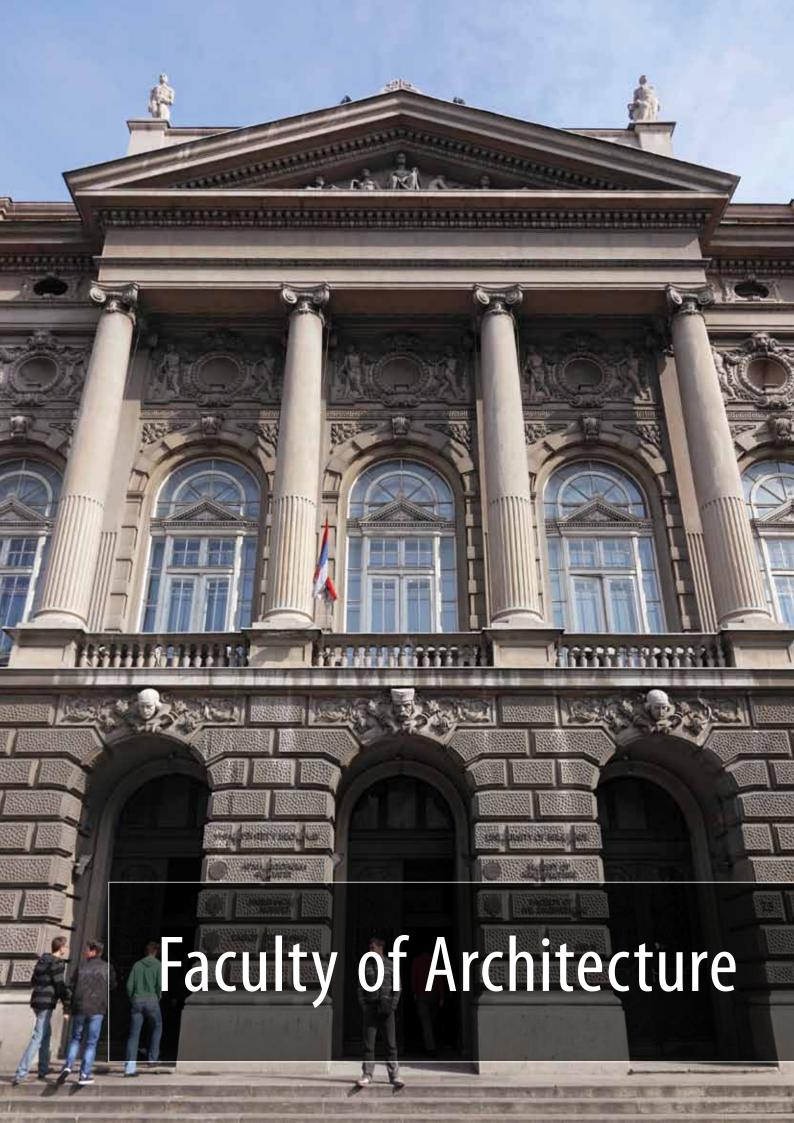
Students will be able to independently and competently perform complex research work as a part of a team with the aim of solving relevant scientific problems in biochemistry and related disciplines. They will become familiar with working with the latest instruments which are used in biochemical research laboratories and with their application. They will demonstrate their capacity to apply their knowledge in practice, especially in problem-solving and making new discoveries. They will be able to formulate hypotheses and design experiments to test them. They will be able to analyze a material and formulate concepts. They will be able to adapt to new situations and make decisions. They will be able to establish various types of scientific cooperation and communication in their native language and in English.

Admission requirements

Only students who have completed their basic and master academic studies at an appropriate faculty with GPA no less than 8.0 can be enrolled.

Contact

Head of the study program: **Prof. Dr. Marija Gavrović-Jankulović** Telephone: +381 11 333 66 61 Contact email: <u>mgavrov@chem.bg.ac.rs</u>



Urban Renewal -Cities in the Third Millennium

at Faculty of Architecture, 73/II Bulevar kralja Aleksandra, 11000 Belgrade, www.arh.bg.ac.rs

ECTS: 60/ LANGUAGE OF INSTRUCTION: SERBIAN/ DEGREE: SPECIALIST

Study program content

The 'Urban renewal - Cities in the Third Millennium' study program is included in specialist academic studies of architecture that provide scientific and professional specialization in the field of urban renewal. The program is premeditated to take in the fields of technical and technological, social and human sciences and art, which contribute to professional and scientific training of an adequate level. Studies in the first semester are based on the method of multimedia interactive lectures and consultations, while the second semester studies are based on the "studio-driven" method which emphasize teaching placed in the studio through which students in individual and group work on specific tasks (project) acquire knowledge, skills and competence in the field of urban renewal.

Study program goals

The study program curriculum is based on a set of general objectives:

- Program of specialized study should provide education and skills of oriented (directed) professional profiles in the field of urban renewal;
- Curriculum structure should clearly reflects the essence of pedagogical approaches and allows immediate recognition of professional and scientific fields, which includes upgrading the acquired knowledge at master academic studies and related professions, Studying program structure is to encourage changes in disciplinary settings and introduce new, modern cultural and professional concepts;
- Deepening and improvement of professional knowledge and skills in the field of urban renewal of traditional cities;
- Improving knowledge in the field of urban design, engineering, urban planning and urban management;
- Improvement of professional skills that encourage the professional work that follows current trends, particularly the principle of sustainable development accompanied by economic and social parameters;

- Advancement of skills which allow perception of real urban situation, as well as professional;
- Expert planning acting toward the city of the future.

Study program outcomes

The outcome of the learning process is to acquire immediate professional qualifications in the field of urban renewal which would be used in projects and studies relating to urban renewal, in the process of research in urban areas, planning and implementing urban renewal projects, as well as in the application of knowledge management practices and planning community development.

Admission requirements

Requirement for student admission to the program are completed graduate studies in architecture, urban planning, economics, landscape architecture, organizational scinces, law, aplied arts, art history and other related fields.

Contact

Head of the study program: **Prof. Dr. Nada Lazarević-Bajec** Contact email: <u>jbajec@eunet.rs</u>

Architecture and Urbanism

at Faculty of Architecture, 73/II Bulevar kralja Aleksandra, 11000 Belgrade, www.arh.bg.ac.rs

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

Study program content

Study program is integral and includes the scientific study character and the artistic one. The first year instruction is common to all students and organized in single modules. Module contents can be changed within the same study program at the beginning of each school year, without changing the final number of ECTS. In the second year student are to choose basic/ narrow field of scientific or artistic research; while the third year is devoted exclusively to preparing doctoral thesis. During all three years the candidate is engaged in study and research work in the function of his doctoral dissertation.

Study program goals

- Achieving scientific and artistic abilities and academic skills in the field of architecture and urbanism;
- Understanding, recognition, interpretation and criticism of scientific, technical and artistic achievements in the fields of architecture and urbanism;
- Development of creative skills and mastery of specific practical skills needed for future career;
- Compliance with contemporary developments in world architecture and urbanism;
- Transferring knowledge to new generations;
- Personnel training for higher education engagements in the field of architecture and urbanism;
- Personnel training to independently carry out original research and develop new technologies.

Study program outcomes

Completing of the doctoral studies curriculum at the Faculty of Architecture student obtains the following competencies:

 To contribute in certain field of study, through original research that pushes the limits of knowledge and which is presented in the form of a comprehensive text of sufficient quality to be in part or whole published in national and international professional publications;

- To thoroughly know and understand the profession of architecture and urbanism;
- To solve problems using scientific methods and procedures;
- To link the basic knowledge in the field of architecture and urban design and their application;
- To follow the latest developments in architecture and urbanism;
- To develop skills and dexterity in the use of knowledge in a relevant field;
- To use information and communication technology in gaining knowledge in the art.

Modules

Study program is integral and includes the scientific studies and artistic studies. Scientific studies are divided into two main areas of study: architecture and urbanism. Main fields of researches are specific scientific areas of research, such as: the study of architecture, technology and management in architecture, bioclimatic and environmental architecture, structural systems, history and theory of architecture, the study and preservation of the built heritage.

Artistic studies have one main research field – architectural and urban design. Specific scientific research can be changed within the same study program at the beginning of each school year, without changing the final number of ECTS. In the second year, students are choosing basic/ narrow field of scientific and artistic research, while the third study year is devoted exclusively to doctoral dissertation.

Admission requirements

Completed the appropriate graduate and master academic studies and achieved 300 ECTS with an average grade of at least 8.

Contact

Head of the study program: **Prof. Dr. Vladan Đokić** Telephone: +381 11 322 52 54 Contact email: <u>vdjokic@arh.bg.ac.rs</u>

Faculty of Civi Engineering F

EDUCATE - Water Resources and Environmental Management

at Faculty of Civil Engineering, 73 Bulevar kralja Aleksandra, 11000 Belgrade, <u>www.grf.bg.ac.rs</u>

ECTS: 120/ LANGUAGE OF INSTRUCTION: ENGLISH/ DEGREE: SPECIALIST

Study program content

The specialist study program EDUCATE! is envisioned as a continuation of master academic studies during which the students gain scientific and professional knowledge in the area of project planning and execution of various civil works and structures.

The students who continue their education through the Educate! studies program gain advanced knowledge in the specific areas of hydraulic and environmental engineering. In addition, the Educate! studies program represents an intermediate step to the highest academic learning level of a doctorate degree.

By completing the Educate! studies program the students gain a solid knowledge base that eases the path to continuing their studies further towards a doctorate degree.

Study program goals

The overall objective of this postgraduate course is to assist the regional translational cooperation on Water Resources and Environmental Management. This will be achieved by shaping future policy makers from highly trained graduates from a number of countries who can rise to positions of leadership in their fields and perform their function professionally and with an understanding of the perspectives of the entire region.

The international character of the educational course enables the pulling together of resources and academic personnel, allows cross - fertilization from expertise niches from different universities and a cross-cultural exchange of views and ideas both between academics and students which directly support the broader objectives of promoting cooperation within the region. Since most of the environmental problems the Balkans are in fact cross-boundary, the project works on the assumption that their solutions can only be cross-boundary and that shared knowledge and understanding of the issues directly contribute to effectively addressing them.

Study program outcomes

Students learn how to critically assess research results and acquire an understanding of the impact of engineering solutions within a physical and societal context. IT literacy, reporting and presentation skills are further improved and an ability to function in multi-national teams is acquired.

Specific capacities are developed for analysis, modeling through a variety of hydro informatics tools and management of all of key aspects of catchment and integrated water management systems. IT, data analysis, reporting and presentation skills are further improved, as well as the necessary skills for independent learning.

Specific competencies for understanding water and environmental policy and legislation are developed, with an emphasis on EU legislation and the Water Framework Directive (WFD), policy making and social processes and the role of public participation in the decision making process. Furthermore it develops an understanding of environmental assessment, its components, the different techniques widely used and how they can contribute to sustainable development.

Modules

The course is a flexible distance learning program based on e-learning. All educational material, lectures and tutorials are developed in English. The Academic Program is organized as a pedagogic continuum and includes four Thematic Areas and a research thesis. Students can follow the entire postgraduate course or alternatively they can follow selected course elements according to their needs. The four Thematic Areas are: Scientific Background, Urban Water Management, Catchment Management and Environmental Management.

Admission requirements

Admission is based on the academic and intellectual excellence of applicants as well as their motivation and prior experience. In order to create a multicultural learning environment, the consortium strives to achieve a balance between various geographic and disciplinary backgrounds of the program's students.

Successful candidates must have a good first degree from a recognized university of at least 4 years of full-time study (B.Eng + MSc, M.Eng or equivalent) in Engineering.

Contact

Head of the study program: **Prof. Dr. Marko Ivetić Doc. Dr. Zorana Naunović** Telephone: +381 11 321 85 30 Contact email: <u>marko.ivetic@hikom.grf.bg.ac.rs</u> <u>znaunovic@hikom.grf.bg.ac.rs</u>

Geodesy and Geoinformatics

at Faculty of Civil Engineering, 73 Bulevar kralja Aleksandra, 11000 Belgrade, www.grf.bg.ac.rs

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

Study program content

The study program is modeled to follow the modern and actual developments in the area of geodesy and geoinformatics. It consists of eight elective courses and doctoral thesis.

A supervisor is appointed for each student after admission to the studies. The student and the supervisor compose the list of courses the student will take during the first three semesters, having in mind the topic of the future doctoral thesis.

The list of courses for each student is approved by the appropriate chair of the Faculty and verified by the Doctoral Studies Council. The offered courses are related to fundamental theoretical topics and subfields such as: satellite geodesy, physical geodesy, geodynamics, geodetic astronomy, 3D cadastre, cartography, photogrammetry, geostatistics.

The work on doctoral thesis lasts for another three semesters. It usually consists of laboratory (experimental) and theoretical research in the chosen topic.

Study program goals

Main goal of the studies is to provide further scientific training of graduate students through a specialized research program. The courses and doctoral thesis are designed to instruct students for self-sufficient organization and management of the research process. Students are also trained in verbal and written communication skills, independent presentation and critical evaluation of scientific results, developing the international scientific cooperation.

Study program outcomes

Thorough understanding and comprehension of geodesy and geoinformatics and especially the chosen area of expertise; capabilities for solving different problems in the field of geodesy and geoinformatics by scientific methods and procedures application; capabilities of using the obtained skills and knowledge in planning, performing and managing the research process, presentation the results, monitoring the other research results, communication; capabilities of application and development of information technologies.

Admission requirements

Master degree in civil engineering.

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Contact

Head of the study program: **Prof. Dr. Snežana Marinković** Telephone: +381 11 337 01 02 Contact email: <u>sneska@imk.grf.bg.ac.rs</u>

Civil Engineering

at Faculty of Civil Engineering, 73 Bulevar kralja Aleksandra, 11000 Belgrade, www.grf.bg.ac.rs

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

Study program content

The study program is modeled to follow the modern and actual developments in the area of civil engineering. It consists of eight elective courses and doctoral thesis. A supervisor is appointed for each student after admission to the studies. The student and the supervisor compose the list of courses the student will take during the first three semesters, having in mind the topic of the future doctoral thesis.

The list of courses for each student is approved by the appropriate chair of the Faculty and verified by the Doctoral Studies Council. The offered courses are related to fundamental theoretical topics and subfields such as: Engineering Mechanics and Theory of Structures, Civil Engineering Materials and Structures, Hydraulic and Environmental Engineering, Roads, Railways and Airports, Management, Technology and Informatics in Civil Engineering.

The work on doctoral thesis lasts for another three semesters. It usually consists of laboratory (experimental) and theoretical research in the chosen topic.

Study program goals

Main goal of the studies is to provide further scientific training of graduate students through a specialized research program. The courses and doctoral thesis are designed to instruct students for self-sufficient organization and management of the research process. Students are also trained in verbal and written communication skills, independent presentation and critical evaluation of scientific results, developing the international scientific cooperation.

Study program outcomes

Thorough understanding and comprehension of civil engineering and especially the chosen area of expertise; capabilities for solving different problems in the field of civil engineering by scientific methods and procedures application; capabilities of using the obtained skills and knowledge in planning, performing and managing the research process, presentation the results, monitoring the other research results, communication; capabilities of application and development of information technologies.

Admission requirements

Master degree in civil engineering.

Contact

Head of the study program: **Prof. Dr. Snežana Marinković** Telephone: +381 11 337 01 02 Contact email: <u>sneska@imk.grf.bg.ac.rs</u>

Faculty of Electrical Engineering

Electrical and Computer Engineering

at School of Electrical Engineering, 73 Bulevar kralja Aleksandra, 11000 Belgrade, www.etf.bg.ac.rs

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

Study program content

The study program of doctoral studies is equal to 180 ECTS points, and the duration of these studies is six terms (3 years). 90 ECTS points are obtained by passing the exams of the given study course, and 90 ECTS points are obtained by research work related to the doctoral dissertation, the completion of the dissertation and by defending the dissertation. The study program contains the optional subjects, which are chosen in accordance with the chosen module, selected by a student. The faculty offers 10 optional modules related to particular fields of electrical engineering and computer science.

The instruction process is carried out during the first two years of studies, and the third year is exclusively devoted to the completion of doctoral dissertation. A student makes a profile of his/her research interest by selection of subjects which he/she will attend and pass, and which contribute to advancement of knowledge and comprehension of the topic of the doctoral dissertation. The instruction process is carried out through lectures and individual work with supervisor.

During all three years of studies, the candidate performs the research work related to his/her doctoral dissertation, and the final year is exclusively dedicated to the doctoral dissertation.

Study program goals

The goal of the study program of doctoral studies of electrical engineering and computer science is to improve and enhance the scientific and research work, to develop critical thinking, to transfer knowledge to new generations from the fields for which the faculty is registered, to train the future staff to independently perform scientific research and develop new technologies.

The objective of the study program is to achieve scientific competences and academic skills from the field of electrical engineering and computer science, which includes the development of creative abilities of evaluating and assessing the problem and critical thinking abilities, the development of the abilities for team work and mastering the specific practical skills necessary for performing one's profession especially in accordance with the requirements impose on electrical engineers. The study program creates an expert who possesses knowledge profound enough, and adjusted to modern trends.

The goal is to develop students' awareness of need for personal contribution to the development of society as a whole, as well as preparation of experts for team work. The significant goal of the study program is developing capabilities for communicating and exposing one's original results to the scientific community and wider audience.

Study program outcomes

Doctoral students graduated from our School have the ability for systematic understanding of phenomena and problems in the field of electrical engineering, for critical thinking development and the application of knowledge. In addition to the necessary degree of academic integrity, the graduate students have by means of their original research achieved the realization which broadens the boundaries of the currently known and attested knowledge, which has been published in the appropriated scientific journal and which represents the valid reference both at the national and international levels. With the help of the critical analysis, evaluation and synthesis of the new and complex ideas, they may transfer the technical knowledge and ideas to their colleagues, wider academic community and society as a whole. At the same time, they are capable of promoting the technological, social and cultural advancement in the academic context and professional environment.

The acquired skills of the graduate doctoral students include thorough knowledge and understanding of disciplines they deal with professionally, the ability to solve problems by means of scientific methods and procedures, connecting the basic knowledge derived from various fields and their application, the ability to follow the contemporary achievements in the field, the development of skills and skills in the application of knowledge in the field of electrical engineering, as well as in the application of information and communication technologies.

The competence is verified also in the form of scientific papers which must be written and published by the candidate before the defending the doctoral dissertation, among which, at least one scientific paper should be published in the international journal listed in SCI list.

Modules

- 1. Electrical power networks and systems
- 2. Electronics
- 3. Power converters and drives
- 4. Nanoelectronics and photonics
- 5. Nuclear, biomedical and ecological engineering
- 6. Computer science and informatics
- Software engineering
 Telecommunications information and technologies
- 9. Microwave techniques
- 10. Control systems and signal processing

Admission requirements

Persons with finished bachelor and master studies in Electrical and Computer Engineering (300 ECTS), with average score greater than 8.

Some courses may be taught in English

Contact

Head of the study program: **Prof. Dr. Miodrag Popović** Doc. Dr. Lazar Saranovac Telephone: +381 11 324 84 64 Contact email: <u>dekanat@etf.bg.ac.rs</u>



Faculty of Mechanical Engineering

Mechanical Engineering

at Faculty of Mechanical Engineering, 16 Kraljice Marije, 11000 Belgrade, www.mas.bg.ac.rs

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

Study program content

Development of science, critical thinking and education of professionals capable to independently organize original and scientific research studies, develop novel technologies and procedures contributing to the development of society, and to critically evaluate research activities of other researchers.

Study program goals

Development of top class experts in mechanical engineering capable of scientific-research work and managing scientific-research projects.

Development of young researchers educated for publishing research works and competent to work with students by participating in teaching at undergraduate level.

Development of R & D experts for work in economy and leadership in the respective field.

Study program outcomes

On completion of PhD studies students should possess knowledge, skills, developed abilities and competences: to independently solve practical and theoretical problems in the respective PhD field, and to organize and accomplish scientific and developmental research; to get involved in international scientific projects; to realize the development of novel technologies and procedures within the framework of the respective profession, and to understand and utilize modern knowledge in the respective scientific field; to communicate at the professional level in order to present their research results; to be able to communicate the research results at international meetings, publish them in scientific journals and apply them through patents and novel technical solutions; to contribute to the development of their branch of science and science in general.

Modules

Mechanical engineering.

Admission requirements

PhD studies at Faculty of Mechanical Engineering can be enrolled by: students who have acquired or will acquire VII - 1 degree of vocational education, students who have completed M.Sc. studies in Mechanical Engineering and have at least ECTS 300, and those who are the holders of Magister of Science title.

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Contact

Head of the study program: **Prof. Dr. Dragan Marković** Telephone: +381 11 337 03 50 +381 11 337 03 39 +381 11 330 22 51 +381 11 330 22 49 Contact email: <u>mf@mas.bg.ac.rs</u> <u>dekan@mas.bg.ac.rs</u> <u>pronast@mas.bg.ac.rs</u>

Faculty of Agriculture

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Food Technology

at Faculty of Agriculture, 6 Nemanjina, 11080 Zemun, www.agrif.bg.ac.rs

ECTS: 60/ LANGUAGE OF INSTRUCTION: SERBIAN/ DEGREE: SPECIALIST

Study program content

The study program of specialized academic studies lasts for 1 year that is 2 semesters. In the first semester students attend the common bases for all elective groups - modules, which are comprised of 4 obligatory courses. Concerning the methods of teaching, ex cathedra lectures, laboratory sessions and methods of interactive teaching as well as research work are used. Producing seminar papers and keeping a research diary are envisaged, too. A special focus, regarding active teaching and learning, is put on discussion, cooperative learning, teamwork for research paper, organization of teamwork and qualifying for independent problem solving in the processes of food production.

Within each course of the study program of specialized academic studies obligatory continuous monitoring of the acquisition of knowledge and skills is envisaged during the semesters though tests and knowledge tests as well as through a final examination at the end of the semester.

Study program goals

The main goal of specialized study program is expert with high level of fundamental and applicable knowledge of the fields of food microbiology, food chemistry and different food technologies of plant and animal products whose diploma will enable students to lead different programs in production and control of food products, to introduce innovations and contribute to the development of food technology and its harmonization with European standards.

Study program outcomes

Upon the completion of these studies, the student should be qualified for implementation of microbiological methods of the analysis of food products, chemical methods of analysis of food, organizing the input process and final product quality control of selected technology of plant or animal products, has extended knowledge of the field of microbiological food safety, chemical analysis of food, management and safety in the production of food and selected food technologies. Development of competences required for solving concrete problems in food production.

They will be qualified for independent and team work, inclusion in the management processes of production, organization of the control of product quality of selected technology, implementation of legislation in the processes of production organization and management of team work. The student will acquire knowledge and skills needed for work with real, complex samples and will develop competences in understanding problem and its solving. Students will be able, within independent and team work, to process the corresponding problem, and statistically process the results and present them in the specialist's thesis as well as orally defend their work.

Modules

The program of specialized academic studies Food Technology comprises four Elective areas – modules:

- 1. Technology of plant products
- 2. Technology of animal products
- 3. Food chemistry
- 4. Technological microbiology

Admission requirements

The candidate who completed master academic studies is eligible to enroll in the first year of specialized academic studies.

Contact

Head of the study program: **Prof. Dr. Miomir Nikšić** Telephone: +381 11 261 53 15, ext.246 Contact email: <u>mniksic@agrif.bg.ac.rs</u>

Zootechnics

at Faculty of Agriculture, 6 Nemanjina, 11080 Zemun, www.agrif.bg.ac.rs

ECTS: 60/ LANGUAGE OF INSTRUCTION: SERBIAN/ DEGREE: SPECIALIST

Study program content

The study program of specialized academic studies – Zootechnics lasts for one year that is two semesters. The program is comprised of a total of 23 (+1 – specialist's thesis) courses, namely: 1 obligatory and 22 elective courses. The programs of all courses are defined in a way they describe modern scientific, technical and practical achievements of the given area, but in a way they are acceptable and applicable to this level of a higher education.

Teaching in the study program is organized through: lectures, sessions, field practices, seminar papers and interactive teaching. Methods of interactive teaching in the study program include individual, group and cooperative methods of active learning. Interactive methods are used in the classroom and out of it (in the equipped library and computer centre, at home) within individual or group work. Within each course of specialized academic study program, a continuous monitoring of acquiring knowledge and skills of students is envisaged during the semester by using tests and knowledge tests and a final exam at the end of the semester.

Study program goals

The main goal of the study program of specialized academic studies - Zootechnics is to enable students to acquire the latest scientific and specific technical knowledge and skills, knowledge of methodology of research in zootechnics, knowledge of independent solving of practical and theoretical in the field of zootechnics, following modern trends and biotechnological achievements in zootehnics in the world, application of adequate methodology of processing and analysis of data in zootehnics, as well as to organize and implement development research in the field of livestock production. The second important goal is continuous and comprehensive development of all aspects of animal husbandry profession based on modern principles and standards. The study program offers possibilities for acquisition of various technical and practical knowledge of all branches and areas of livestock production, such as breeding farm

animals, fish and wildlife, production of meat, milk, eggs and other animal products. The study program is aimed at directing studies towards the acquisition of knowledge and skills necessary for profitable livestock production by taking advantage of renewable natural resources, along with environmental protection, conservation of the resources of rural areas and cultural heritage.

Study program outcomes

A student of specialized academic studies, having acquired knowledge, is provided with expertise and competence to work in:

- Agricultural work organizations, such as agricultural combines, cooperatives, specialized livestock farms and horse farm, hatcheries, associations, clubs, feed mills, companies for manufacturing and trading of equipment and other products for livestock production, veterinary institutes, professional and raw materials division in slaughterhouses and dairies, business organizations of special purpose (racecourse, centers for training of some species of domestic animals, etc..), and other organizations included in production and processing of livestock products;
- Entrepreneurial organizations and individual farms, which are involved in the production of domestic and raised animals;
- Hunting areas and production centers of wildlife, fisheries;
- Advisory and technical services;
- Scientific and research institutions;
- Banks and insurance companies;
- Secondary education, etc.

Admission requirements

The candidate who completed master academic studies is eligible to enroll in the first year of specialized academic studies.

Contact

Head of the study program: **Prof. Dr. Grigorije Trifunović** Contact email: <u>trifun@agrif.bg.ac.rs</u>

Agricultural Sciences

at Faculty of Agriculture, 6 Nemanjina, 11080 Zemun, www.agrif.bg.ac.rs

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

Study program content

Study program Agricultural Sciences of doctoral academic studies lasts for 3 years that is 6 semesters.

The first year represents a common basis, whereas in the second year the courses are related to the one of 6 modules. The third year is devoted to working on a doctoral dissertation.

The number of ECTS credit points for each semester is 30 (total of 180 ECTS). A study program comprises 1 obligatory course and elective courses in 7 positions. For each position of the elective course, students are offered a list of courses they can choose. A doctoral dissertation is worked on during the three years of the study program.

In the first semester of the common basis a student enrolls on one obligatory and two elective courses (elective courses 1 and 2), from the offered seven (total 14) methodological courses.

In the second semester, there are two elective general courses, which can be chosen by the students of all modules. The list of 16 and 15 (total 31) is offered for each elective course.

Study program goals

The goals of the study program Agricultural Sciences of doctoral academic studies comprise achieving the scientific competences and acquiring the academic skills in the scientific disciplines the student opted for, developing of creative competences and special, practical skills needed for the future career development. The goals are in accordance with the modern courses of corresponding scientific discipline development in the world and they are compatible with the basic tasks and goals of the Faculty of Agriculture, as a higher education institution where the program is implemented.

The goal of this study program is education and training of students for the research in the field of technical and technological sciences (biotechnological sciences).

The main goals of the study program are to establish standards, criteria and methodology of the research work. Students enrolled in this level of study have to know the techniques of using modern scientific literature in the world, its understanding, application, qualification, and the final purpose of the study program is their training for independent scientific work, success and excellent presentation techniques as well as publishing the results of that work.

Study program outcomes

After completing studies, students at this level of education have the following general and course-specific competences:

- Competence in analysis, synthesis and predicting solutions and consequences of the concrete problems of the academic discipline;
- Competence in skills and modern methods of research in technical and technological field;
- Ability to use information and communication technologies for obtaining knowledge of corresponding area;
- Competence in thorough knowledge and understanding of science and profession of technical and technological field;
- Competence in the independent research of theoretical and practical problems for the purpose of obtaining new and better results and their application;
- Ability to connect knowledge of different fields acquired at the earlier levels of education, for the purpose of developing new technologies;
- Ability to design own experiment, or repeating already defined and, in the literature, described procedure of measuring, making assumptions and characterization of the expected measurements, conducting the acquisition of measuring, carrying out their statistical and methodological analysis and making final decision on veracity, significance and meaning of the established procedure of measuring;
- Ability to monitor and implement innovations in the field;
- Competence in teamwork and professional

communication for the purpose of improving science and profession;

- Competence in communication and cooperation with closer social and international environment;
- Ability to present the results of scientific research at scientific conferences and to publish in scientific journals, or display through patents and new technical solutions;
- Ability to contribute to expanding limits of knowledge in the field by conducting original research and especially by the results obtained by working on doctoral dissertation;
- Ability to participate in domestic and international research projects;
- Competence in critical thinking, creative and independent activity;
- Knowledge and respect of the principle of ethical code of good scientific practice.

Admission requirements

Admission requirements for doctoral studies are awarding of 300 ECTS credit points at the undergraduate academic and master academic studies as well as the grade point average at the undergraduate academic studies being at least 8 that is 7.5 along with publishing of a certain number of scientific papers worth of 5 points according to the criteria accepted by the Ministry of Science.

Contact

Head of the study program: **Prof. Dr. Slavica Todić** Telephone: +381 63 343 346 Contact email: <u>slavicat@agrif.bg.ac.rs</u>



Food Technology

at Faculty of Agriculture, 6 Nemanjina, 11080 Zemun, www.agrif.bg.ac.rs

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

Study program content

Study program Food Technology of the doctoral academic studies lasts for 3 years that is 6 semesters.

The number of ETCS credits for each semester is 30 (total of 180 ETCS). A study program comprises 3 obligatory courses and elective courses in 3 positions. For each position of the elective course, students are offered a list of courses they can choose. In the first semester a student enrolls on three obligatory methodological courses.

In the second semester a student takes two elective scientific and technical courses. In both elective groups, lists comprising 3 courses each, within which a student chooses courses more closely connected with the area in which a dissertation will be done.

In the third semester a student enrolls on one elective course, which should be chosen from the list containing 20 courses. The area of the dissertation should be a part of this elective course.

Study program goals

The goals of the study program Food Technology of doctoral academic studies comprise achieving the scientific competences and acquiring the academic skills in the scientific disciplines the student opted for, developing of creative competences and special, practical skills needed for the future career development. The goals are in accordance with the modern courses of corresponding scientific discipline development in the world and they are compatible with the basic tasks and goals of the Faculty of Agriculture, as a higher education institution where the program is implemented. The goal of this study program is education and training of students for the research in the field of technical and technological sciences (biotechnological sciences).

Study program outcomes

After completing studies, students at this level of education have the following general and course-specific competences:

- Competence in analysis, synthesis and predicting solutions and consequences of the concrete problems of the academic discipline;
- Competence in skills and modern methods of research in technical and technological field;
- Ability to use information and communication technologies for obtaining knowledge of corresponding area;
- Competence in thorough knowledge and understanding of science and profession of technical and technological field;
- Competence in the independent research of theoretical and practical problems for the purpose of obtaining new and better results and their application;
- Ability to connect knowledge of different fields acquired at the earlier levels of education, for the purpose of developing new technologies;
- Ability to monitor and implement innovations in the field;
- Competence in teamwork and professional communication for the purpose of improving science and profession;
- Competence in communication and cooperation with closer social and international environment;
- Ability to present the results of scientific research at scientific conferences and to publish in scientific journals, or display through patents and new technical solutions;
- Ability to contribute to expanding limits of knowledge in the field by conducting original research and especially by the results obtained by working on doctoral dissertation;
- Ability to participate in domestic and international research projects;
- · Competence in critical thinking, creative

and independent activity;

Knowledge and respect of the principle of ethical code of good scientific practice.

Admission requirements

Admission requirements for doctoral studies are awarding of 300 ECTS credit points at the undergraduate academic and master academic studies as well as the grade point average at the undergraduate academic studies being at least 8 that is 7.5 along with publishing of a certain number of scientific papers worth of 5 points according to the criteria accepted by the Ministry of Science.

Contact

Head of the study program: **Prof. Dr. Miloš Rajković** Telephone: +381 11 261 53 15, ext. 261 Contact email: <u>rajmi@agrif.bg.ac.rs</u>



Faculty of Mining and Geology

WARPCKO FEDRO

Geology

at Faculty of Mining and Geology, 7 Đušina, 11000 Belgrade, 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 gualified 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

Head of the study program: **Prof. Dr. Dragoman Rabrenović** Telephone: +381 11 263 21 66 Contact email: <u>rabrenovic@rgf.bg.ac.rs</u>

Geophysics

at Faculty of Mining and Geology, 7 Đušina, 11000 Belgrade, 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 gualified 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

Head of the study program: **Doc. Dr. Ivana Vasiljević** Telephone: +381 11 321 92 44 Contact email: <u>vivanagf@rgf.bg.ac.rs</u>

Hydrogeology

at Faculty of Mining and Geology, 7 Đušina, 11000 Belgrade, 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 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 founds, 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: **Prof. Dr. Zoran Stevanović** Telephone: +381 11 321 92 33 Contact email: <u>zstevanovic@rgf.bg.ac.rs</u>

Mining Engineering

at Faculty of Mining and Geology, 7 Đušina, 11000 Belgrade, www.rgf.bg.ac.rs

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

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

Head of the study program: **Prof. Dr. Božo Kolonja** Telephone: +381 11 321 91 30 Contact email: <u>kolonja@rgf.bg.ac.rs</u>

Faculty of Transport and Traffic Engineering

Transport and Traffic

at Faculty of Transport and Traffic Engineering, 305 Vojvode Stepe, 11000 Belgrade, www.sf.bg.ac.rs

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

Study program content

PhD studies program consists of courses and exams in ten optional subjects, writing and presentation of work done throughout year on doctoral seminar, preparing and defending proposal for research within thesis and research, writing and defending PhD thesis with total 180 ECTS.

Multidisciplinary character of planning, designing, managing and operation of system in traffic, transport, communications and logistics stipulates modular and individual structure of studies adjusted to research connected to the topic and content of PhD thesis.

Study program goals

Faculty of Transport and Traffic Engineering PhD studies have two main goals.

First, to gain through lectures new, comprehensive knowledge in the area of traffic, transport, communications and logistics. Lecturers at this level of studies have special task through mentor work to introduce candidates to methodology of scientific research, train them to observe and define problems and design research which will lead to valuable scientific results.

The second goal follows the first – by theoretical and methodological contents, research work, writing course papers and scientific work to qualify students for individual scientific and highly qualified work on modeling and research in traffic, transport, logistics and communications.

Study program outcomes

The result of PHD studies should be that young researchers are trained for individual scientific work, research and development in the field of traffic, transport, logistics and communications.

The aim of this program is to gain competence for scientific research which encompass planning and designing, operating, managing, economy, exploitation and maintenance, information technologies, marketing, security, environment protection, expertise, operational research and modeling in traffic, transport, logistics and communications.

Admission requirements

Basic and master studies graduates with average rating above 8.

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Contact

Head of the study program: **Prof. Dr. Obrad Babić** Telephone: +381 11 309 12 31 Contact email: <u>o.babic@sf.bg.ac.rs</u>

Technical Faculty in Bor

Chemical Engineering

at Technical Faculty in Bor, 12 Vojske Jugoslavije, 19210 Bor, www.tf.bor.ac.rs

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

Study program content

The program includes five compulsory and five optional subjects which are connected to defining a dissertation topic and doing a doctor's thesis. A student can choose, according to his affinities and coaching of his mentor, any combination of optional subjects which are related directly or indirectly to the topic of a doctor's thesis.

The study program of Chemical Engineering represents a direct continuation of the academic master's program in Chemical Engineering. The program clearly defines total number of ECTS subjects and research work, which directly relate to the realization of the doctor's dissertation, as well as the number of credits for the doctor's dissertation itself. The doctor's dissertation is a final part of doctoral studies together with a research work which relates to defining a dissertation topic.

Study program goals

The study program aims at educating and enabling students for scientific research in the field of Chemical Engineering. After completing doctoral studies, Doctors of Science gain in-depth competence in this field, which enables them to carry out research work successfully in this field.

By having an insight into current scientific literature, students are supposed to discover how broad the scientific knowledge in the field of the doctoral thesis is, how up-to-date the topic for the research is. They should also anticipate further courses of the development and research. At the same time students should know how to formulate a scientific hypothesis, to plan and set out experiments, choose up-to-date methods, elaborate results of research, interpret them fully, analyze them in a scientific and critical way, make some logical deductions and present results in the form of a final scientific paperwork.

Study program outcomes

After completion of technological studies doctors of science can apply their expertise to the resolution of complex operational issues in the field of chemical engineering. They should be motivators of the incentives for development and scientific researches.

Doctors of science should be enabled to participate in international scientific projects, to understand and use the latest findings in the field of Chemical Engineering, to develop their creativity and follow ethical code during scientific research. They should also acquire a satisfactory level of written and oral communication skills and present their research results independently, as well as present their work at international science conferences and publish the results in leading science journals. All this makes it possible for doctors of Chemical Engineering to be leaders of science and economic progress in society and, of course, the knowledge that they have acquired can be accessible to the scientists worldwide, since their results will be published in international journals.

Admission requirements

A person who has completed Bachelor's degree and Masters academic degree with the mean mark 8 (eight) at least.

Contact

Head of the study program: **Prof. Dr. Milan Antonijević** Telephone: +381 30 421 663 Contact email: <u>mantonijevic@tf.bor.ac.rs</u>

Metallurgical Engineering

at Technical Faculty in Bor, 12 Vojske Jugoslavije, 19210 Bor, www.tf.bor.ac.rs

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

Study program content

Doctoral academic studies last three years with the total of 180 ECTS credits. Methods of realizing the program are lectures and research work which are done in interactive way, with coaching, mentor work and independent students' work. Thus, a continual contact of students with their teachers and mentor is achieved.

It is also possible to opt for subjects, i.e. to transfer ECTS credits, from other accredited study programs of doctoral studies at domestic and foreign universities, with which The Faculty in Bor has an agreement of cooperation and student exchange.

Study program goals

The study program is aiming at:

- Enabling students as individuals to participate as an effective part of a team and to appreciate teamwork, realization of scientific research and active participation in international and domestic research and development projects;
- Enabling students for innovative thinking and implementation of the latest scientific findings into actual production systems;
- Continual encouragement of ecological thinking and ethical engineering thinking
- defining of research issues, its elaboration, research and writing;
- Presenting the obtained results to a wide scientific audience, through publishing their research in the journals on the Sci list.

Study program outcomes

General competences which students acquire at this study program comprise knowledge, skills, developed competences for independent scientific research work; presentation of their own results at scientific gatherings; publication of their research in scientific journals; participation in domestic and international projects; dealing with actual issues from metallurgical production, due to the acquired general and specific competences expressed through knowledge and understanding; development of new and innovative technologies; following the code of scientific practice with the aim of contributing to the development of science in general; understanding of important concepts in a wider range of engineering sciences (concepts of modeling, experimental, simulation and analytic analysis of complex issues, principles of projecting and organization); correlation of basic knowledge in various fields and their application.

Admission requirements

A person who has completed Bachelor's degree and Masters academic degree with the mean mark 8 (eight) at least.

Contact

Head of the study program: **Prof. Dr. Mirjana Rajčić-Vujasinović** Telephone: +381 30 424 555 Contact email: <u>mrajcic@tf.bor.ac.rs</u>

Engineering Management

at Technical Faculty in Bor, 12 Vojske Jugoslavije, 19210 Bor, www.tf.bor.ac.rs

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

Study program content

Doctoral academic studies of Engineering Management last three years and bring at least 180 ECTS credits. Research work in Theoretical basics of doctoral dissertation represents individual work of students in defining a dissertation topic and is verified by taking an exam approved by The Teachers' Council at the suggestion of the mentor and which is taken before a committee consisting of three teachers of subjects from the study program.

Students define their research interests by choosing from the suggested list of optional subjects which they are going to study and take exams in. These subjects contribute to deepening of their knowledge and understanding of the field and topic of their doctoral dissertation. The teaching program of the subjects (compulsory and optional) is realized in a group or individually (coaching).

Study program goals

The aim of the study program of doctoral studies of Engineering Management is designed to enable progressive education to students of above average abilities who want to continue their career in researching academic, scientific and production institutions.

Combination of the right courses offers students a rare opportunity for interdisciplinary approach to research, as well as to methods and skills of empirical and analytic management disciplines. In this way creative competences are developed, as well as mastering of necessary skills needed for successful development of vocational career. Special aim of the study program is achieving a competence for independent defining of research issue, its elaboration, research and writing - presenting the obtained results to a wide scientific audience, through publishing their research in the magazines from the SCI list.

In this way the obtained results are adjusted with the development of this discipline worldwide.

Study program outcomes

The competences which students acquire at this study program comprise knowledge, skills, developed competences for independent scientific research work; dealing with actual issues in practice; participation in domestic and international projects; taking part in the development of new technologies; presentation of their own results at scientific gatherings and publication of their research in scientific journals; following the code of scientific practice with the aim of contributing to the development of science in general; contributing to the development of science in general.

Admission requirements

A person who has completed Bachelor's degree and Masters academic degree with the mean mark 8 (eight) at least.

Contact

Head of the study program: **Prof. Dr. Milovan Vuković** Telephone: +381 30 424 555 Contact email: <u>mvukovic@tf.bor.ac.rs</u>

Faculty of Technology and Metallurgy

Metallurgical Engineering

at Faculty of Technology and Metallurgy, 4 Karnegijeva, 11000 Belgrade, www.tmf.bg.ac.rs

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

Study program content

Full course workload of the doctoral study program has been assigned 180 ECTS credits. The program of study comprises active teaching and work towards doctoral dissertation. Active teaching is composed of lectures and research work relevant to the study. Active teaching is delivered in the first three semesters. Active teaching in the first year encompasses compulsory and elective courses, the total workload being at least 50 ECTS credits.

Active teaching in the third semester of studies encompasses preparation and sitting for final examination, which is equivalent to a workload of 30 ECTS credits. The final examination is supposed to demonstrate candidate's scientific maturity and also to show scientific justification of the topic of the candidate's doctoral dissertation. Successfully defended final work is a prerequisite for submitting the topic of doctoral dissertation. The last year of study is dedicated solely to the preparation of the doctoral dissertation.

Study program goals

The program of study is intended to educate doctors of science who will have knowledge and capacities to develop new metals and related materials, to design metallurgical processes for their production, characterization and application. A particular emphasis is placed upon the prevention of environmental pollution through the reconstruction of existing metallurgical processes, the development of new metallurgical processes as well as through recycling of waste materials and the development of new, integrated and clean processes of metallurgical production.

In addition, the program of study is also aimed at affording the students knowledge about the role of metallurgical industry in the society and its impact on the environment as well as about the role and responsibility of engineers in the development of the society and improvement of the quality of life. The ultimate objective is that doctors of science in Metallurgical Engineering are in that way qualified for assuming the leading role both in industry and in scientific research institutions in the field of metallurgy but also, and not of less importance, in social organizations that are dealing with problems of metals and related materials use, development and production, thereby paying a great deal of attention to pollution aspects, environmental protection and sustainable development of the society.

Study program outcomes

By completing the doctoral study program the students gain general knowledge and competences:

- Knowledge and competence for devising original scientific research;
- Communication and social skills for clear presentation of results and conclusions as well as for formulation of problems and approaches to problems solving;
- Ability for critical and creative thinking, as well as contribution to the development of scientific thought;
- Ability to organize knowledge from various fields into a coherent framework for problem solving;
- Competence for independent and team work, as well as for heading the scientific research.

Students also gain specific professional abilities in the area of metallurgical engineering:

- Breadth of knowledge and understanding of specific area of metallurgical engineering;
- Professional knowledge for the analysis of existing and new materials as well as metallurgical processes;
- Competence for analyzing pollution sources in metallurgical processes and their impact on the environment as well as competence for problem solving;
- Professional knowledge for the reconstruction of existing and for the development of new, cleaner, integrated and sustainable

production processes in metallurgy, aimed at decreasing pollution and the amount of waste materials;

Ethical and professional competence for making strategic decisions and establishing of standards aimed at society development.

Admission requirements

Graduates in bachelor and master academic study programs of at least 300 ECTS.

Materials and consultations in English

Contact

Head of the study program: **Prof. Dr. Ivanka Popović** Telephone: +381 11 337 05 03 Contact email: <u>tmf@tmf.bg.ac.rs</u>



Biochemical Engineering and Biotechnology

at Faculty of Technology and Metallurgy, 4 Karnegijeva, 11000 Belgrade, www.tmf.bg.ac.rs

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

Study program content

The full course workload of the doctoral study program has been assigned 180 ECTS credits. The program comprises active teaching and work towards the doctoral dissertation. Active teaching consists of lectures and research work. Active teaching is delivered in the first three semesters. In the first year it encompasses compulsory and elective courses, the total workload being at least 50 ECTS credits.

In the third semester it encompasses preparation and sitting for the final exam, which is equivalent to a workload of 30 ECTS credits. The final examination should demonstrate the candidate's scientific maturity and show scientific justification of the topic of the candidate's doctoral dissertation. A successfully defended final work is a prerequisite for submitting the topic of the doctoral dissertation. The last year of study is dedicated solely to the preparation of the doctoral dissertation.

Study program goals

The aim of the study program is to educate PhDs that will have knowledge and abilities to analyze the effect of different factors on the efficiency of traditional biotechnological processes for the purpose of their upgrading and to assume an active role in the development of new biotechnologies by analyzing and adopting contemporary achievements in this area. Besides, the objective is to train the students to devise new biotechnological processes and systems that produce small amounts of waste materials based on the principles of integrative energy savings.

The program is concerned with both the traditional application of microorganisms and enzymes in industrial biotechnology and with the contemporary trends of the application of biotechnology in pharmacy and biomedicine. The study program provides the students capacities to actively coordinate and participate in the upgrading of traditional biotechnological processes and in the development of new ones, to follow advances in biotechnology in the world and to participate in scientific research.

Study program outcomes

By completing the doctoral study program the students gain general knowledge and competences:

- Knowledge and competence for devising original scientific research;
- Communication and social skills for the clear presentation of results and conclusions as well as for the formulation of problems and approaches to problems solving;
- The ability for critical and creative thinking, as well as the contribution to the development of scientific thought;
- The ability to organize knowledge from various fields into a coherent framework for problem solving;
- Competence for independent and team work, as well as for heading scientific research.

Students also gain specific professional abilities in the field of biotechnology:

- Professional knowledge for upgrading the existing production processes;
- Professional knowledge for the development of new integrated biotechnological processes that are based on renewable raw materials and waste materials;
- Professional knowledge and academic skills for critical analysis and evaluation of new complex ideas;
- Competence for work in multidisciplinary teams.

Admission requirements

Graduates in bachelor and master academic study programs of at least 300 ECTS.

Materials and consultations in English

Contact

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Chemistry

at Faculty of Technology and Metallurgy, 4 Karnegijeva, 11000 Belgrade, www.tmf.bg.ac.rs

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

Study program content

Full course workload of the doctoral study program has been assigned 180 ECTS credits. The program of study comprises active teaching and work towards doctoral dissertation. Active teaching is composed of lectures and research work relevant to the study. Active teaching is delivered in the first three semesters. Active teaching in the first year encompasses elective courses, the total workload being at least 50 ECTS credits. Active teaching in the third semester of studies encompasses preparation and sitting for final examination, which is equivalent to a workload of 30 ECTS credits.

The final examination is supposed to demonstrate candidate's scientific maturity and also to show scientific justification of the topic of the candidate's doctoral dissertation. Successfully defended final work is a prerequisite for submitting the topic of doctoral dissertation.

The last year of study is dedicated solely to the preparation of the doctoral dissertation.

Study program goals

The doctoral study program in Chemistry is intended to educate doctors of science in this field who will have competence to apply knowledge in chemistry in various sectors of economy and society, such as synthesis of new materials, development of new chemical products, development of new chemical analytical methods and alike. Besides, through the scientific research and preparation of the doctoral dissertation along with diversity of topics offered, the objective of the program is to equip the students for critical analysis and solving of complex problems as well as for devising and heading original scientific research.

The ultimate objective of the study program is that the doctors of science in chemistry are trained for assuming a leading role in the advancement of science and practical application of scientific achievements in the area of chemistry and that in this way contribute significantly to the development of the entire society.

Study program outcomes

By completing the doctoral study program the students gain general knowledge and competences:

- Knowledge and competence for devising original scientific research;
- Communication and social skills for clear presentation of results and conclusions as well as for formulation of problems and approaches to problems solving;
- Ability for critical and creative thinking, as well as contribution to the development of scientific thought;
- Ability to organize knowledge from various fields into a coherent framework for problem solving;
- Competence for independent and team work, as well as for heading the scientific research.

Students also gain specific professional abilities in the field of chemistry:

- In depth knowledge and understanding of appropriate field of chemistry;
- Ability for applying various instrumental methods and independent use of contemporary research equipment;
- Proficiency in solving concrete problems in practice by applying scientific methods and by devising new, original solutions;
- Ability for establishing various types of scientific collaboration and for maintaining scientific communication.

Admission requirements

Graduates in bachelor and master academic study programs of at least 300 ECTS.

Materials and consultations in English

Contact

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Chemical Engineering

at Faculty of Technology and Metallurgy, 4 Karnegijeva, 11000 Belgrade, www.tmf.bg.ac.rs

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

Study program content

Full course workload of the doctoral study program has been assigned 180 ECTS credits. The program of study comprises active teaching and work towards doctoral dissertation. Active teaching is composed of lectures and research work relevant to the study. Active teaching is delivered in the first three semesters. Active teaching in the first year encompasses compulsory and elective courses, the total workload being at least 50 ECTS credits.

Active teaching in the third semester of studies encompasses preparation and sitting for final examination, which is equivalent to a workload of 30 ECTS credits. The final examination is supposed to demonstrate candidate's scientific maturity and also to show scientific justification of the topic of the candidate's doctoral dissertation. Successfully defended final work is a prerequisite for submitting the topic of doctoral dissertation. The last year of study is dedicated solely to the preparation of the doctoral dissertation.

Study program goals

The objective of the program of study is to educate doctors of science who will have knowledge and ability to apply engineering principles and basic sciences, such as chemistry, mathematics and physics, for the development of integrated, cleaner and sustainable production processes as well as new products with strictly controlled properties in accordance with contemporary reguirements of high living standard, preservation of the environment and development of economy and society on the principles of sustainable development. Thereby, through a broad choice of offered courses, it is aimed that students acquire good basis in fundamental sciences, chemistry in particular, and also in engineering disciplines, especially in chemical engineering. Besides, the study program is designed to confer to the students knowledge about the role of chemical processing industry in the society and its impact on the environment as well as to acquaint them about the role and responsibility of engineers in the development of society and in providing and improving the quality of life.

Finally, through scientific research and preparation of doctoral dissertation, along with a great diversity of offered topics, the program is tailored to train the students for critical analysis and solving of complex problems, as well as for devising and heading original scientific research. The ultimate objective is that doctors of science in Chemical Engineering are provided with capacities for assuming a leading role both in manufacturing organizations and in scientific research institutions in the field of chemical technology, and also in social organizations that are concerned with sustainable development of the society. In this way they will contribute to the development of science and the entire society.

Study program outcomes

By completing the doctoral study program the students gain general knowledge and competences:

- Knowledge and competence for devising original scientific research;
- Communication and social skills for clear presentation of results and conclusions as well as for formulation of problems and approaches to problems solving;
- Ability for critical and creative thinking, as well as contribution to the development of scientific thought;
- Ability to organize knowledge from various fields into a coherent framework for problem solving;
- Competence for independent and team work, as well as for heading the scientific research.

Students also acquire specific professional abilities in the field of chemical engineering:

- Proficiency and understanding of appropriate field of chemical engineering;
- Ability for solving chemical engineering problems by applying scientific methods and by devising novel, original solutions;
- Professional knowledge for the critical analysis of existing and the development of novel production processes and products starting from the molecular level to design and management of industrial facilities.

Admission requirements

Graduates in bachelor and master academic study programs of at least 300 ECTS in total.

Materials and consultations in English

Contact

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Materials Engineering

at Faculty of Technology and Metallurgy, 4 Karnegijeva, 11000 Belgrade, www.tmf.bg.ac.rs

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

Study program content

The full course workload of the doctoral study program has been assigned 180 ECTS credits. The program of study comprises active teaching and work towards doctoral dissertation. Active teaching is composed of lectures and research work relevant to the study. Active teaching is delivered in the first three semesters. Active teaching in the first year encompasses compulsory and elective courses, the total workload being at least 50 ECTS credits.

Active teaching in the third semester of studies encompasses preparation and sitting for final examination, which is equivalent to a workload of 30 ECTS credits. The final examination is supposed to demonstrate candidate's scientific maturity and also to show scientific justification of the topic of the candidate's doctoral dissertation. Successfully defended final work is a prerequisite for submitting the topic of doctoral dissertation.

The last year of study is dedicated solely to the preparation of the doctoral dissertation.

Study program goals

The study program is intended to educate doctors of science that will have knowledge and abilities to analyze the existing materials and also to modify them and develop new ones, as well as to assume an active role in the society as torch-bearers of sustainable development.

The objective is that doctors of science of this scientific area may successfully solve problems relative to the use of wide range of materials by introducing materials that are more suitable for specific purposes, thereby honoring the imperatives of energy efficacy and sustainable development, and also by developing new processes for materials processing and recycling as well as by developing new materials.

In addition, the program of study is aimed at equipping the students with the knowledge not only about the role of chemical processing industry in the society and its impact on the environment but also about the role and responsibility of engineers in the development of the whole society and in giving opportunity for improved and safe conditions of living.

The ultimate objective is that doctors of science in materials engineering are in that way qualified for assuming a leading role both in manufacturing organizations and in scientific research institutions in the field but not of less importance, in social organizations that deal with problems of chemical industry, science and sustainable development of the entire society.

Study program outcomes

By completing the doctoral study program the students gain general knowledge and competences:

- Knowledge and competence for devising original scientific research;
- Communication and social skills for clear presentation of results and conclusions as well as for formulation of problems and approaches to problems solving;
- Ability for critical and creative thinking, as well as contribution to the development of scientific thought;
- Ability to organize knowledge from various fields into a coherent framework for problem solving;
- Competence for independent and team work, as well as for heading the scientific research.

Students also gain specific professional abilities in the field of Materials Engineering:

- Proficiency in the analysis of existing materials and possibilities of their application;
- In depth knowledge for modifying existing materials and development of new materials in order to achieve their more efficient use;
- Thorough knowledge and competence for the application of materials engineering in multidisciplinary and interdisciplinary teams;
- In breadth knowledge for participating in the development of new, cleaner, integrated and sustainable production processes.

Admission requirements

Graduates in bachelor and master academic study programs of at least 300 ECTS.

Materials and consultations in English

Contact

Head of the study program: **Prof. Dr. Ivanka Popović** Telephone: +381 11 337 05 03 Contact email: <u>tmf@tmf.bg.ac.rs</u>



Environmental Engineering

at Faculty of Technology and Metallurgy, 4 Karnegijeva, 11000 Belgrade, www.tmf.bg.ac.rs

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

Study program content

The full course workload of the doctoral study program has been assigned 180 ECTS credits. The program of study comprises active teaching and work towards doctoral dissertation. Active teaching is composed of lectures and research work relevant to the study. Active teaching is delivered in the first three semesters. Active teaching in the first year encompasses compulsory and elective courses, the total workload being at least 50 ECTS credits.

Active teaching in the third semester of studies encompasses preparation and sitting for final examination, which is equivalent to a workload of 30 ECTS credits. The final examination is supposed to demonstrate candidate's scientific maturity and also to show scientific justification of the topic of the candidate's doctoral dissertation. Successfully defended final work is a prerequisite for submitting the topic of doctoral dissertation.

The last year of study is dedicated solely to the preparation of the doctoral dissertation.

Study program goals

The objective of the study program is to educate doctors of science who will have knowledge and abilities to analyze the impact of existing industrial facilities on the environment, to solve pollution problems and to assume an active role in the society as torch-bearers of sustainable development. It is aimed that doctors of science of this scientific field may successfully solve problems related to the environmental pollution by the reconstruction of existing production processes, by the development of new purification processes as well as by recycling of waste materials and by the development of new, integrated and cleaner production processes.

This program of study provides the students with capacities to contribute to each of the mentioned segments. In addition, the study program is aimed at offering the students knowledge about the role of chemical processing industry in the society, due to its impact on the environment, as well as about the role and

responsibility of engineers in the development of the society and in giving opportunities for improving the quality of life.

The ultimate objective is that doctors of science in Environmental Engineering are capable for assuming a leading role both in manufacturing organizations and in scientific research institutions in the field of environmental protection but not of less important in social organizations that deal with the problems of pollution, environmental protection and sustainable development of the society.

Study program outcomes

By completing the doctoral study program the students gain general knowledge and competences:

- Knowledge and competence for devising original scientific research;
- Communication and social skills for clear presentation of results and conclusions as well as for formulation of problems and approaches to problems solving;
- Ability for critical and creative thinking, as well as contribution to the development of scientific thought;
- Ability to organize knowledge from various fields into a coherent framework for problem solving;
- Competence for independent and team work, as well as for heading the scientific research.

Students also gain specific professional abilities in the field of Environmental engineering:

- Professional knowledge needed for monitoring and evaluating the extent of pollution and the impact of pollutants on the environment and human health as well as for solving pollution problems;
- Professional knowledge for the reconstruction of the existing production processes aimed at decreasing pollution and the amount of waste materials;
- Professional knowledge for the development of new processes of purification and recycling of waste materials;

- Professional knowledge for the development of new, cleaner, integrated and sustainable production processes;
- Ethical and professional competence for establishing standards for the development of cleaner production processes and sustainable development of the society.

Admission requirements

Graduates in bachelor and master academic study programs of at least 300 ECTS.

Materials and consultations in English

Contact

Head of the study program: **Prof. Dr. Ivanka Popović** Telephone: +381 11 337 05 03 Contact email: <u>tmf@tmf.bg.ac.rs</u>



Textile Engineering

at Faculty of Technology and Metallurgy, 4 Karnegijeva, 11000 Belgrade, www.tmf.bg.ac.rs

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

Study program content

The full course workload of the doctoral study program has been assigned 180 ECTS credits. The program of study comprises active teaching and work towards the doctoral dissertation. Active teaching consists of lectures and research work and is delivered in the first three semesters. In the first year it encompasses compulsory and elective courses, the total workload being at least 50 ECTS credits. In the third semester it encompasses preparation and sitting for the final examination, which is equivalent to a workload of 30 ECTS credits.

The final exam should demonstrate the candidate's scientific maturity and to show the scientific justification of the topic of the candidate's doctoral thesis. A successfully defended final work is a prerequisite for submitting the topic of the doctoral dissertation. The last year of study is dedicated solely to the preparation of the doctoral dissertation.

Study program goals

The objective of the study program is to educate Phds to apply the gained knowledge on fiber structure, manufacturing, properties and the application of biologically active fibers, technical fibers, geotextile and medical textile materials, for an independent formulation of new research ideas in the field of fiber chemistry and technology, as well as for multidisciplinary approaches to new textile materials and technologies.

The program trains candidates in the field of textile engineering to apply engineering approaches to the design of fabric quality parameters, gain necessary knowledge and skills needed to design special-purpose clothing (high - tech materials), master the theory and practice of measuring dyes of polymeric and textile materials, and gain knowledge about new and special processes for the treatment and finishing of textile materials. Finally, the program of study should educate PhDs that will be able to make an adequate choice of technology and to direct procedures of textile material treatment that will ensure minimal environmental pollution.

Study program outcomes

By completing the doctoral study program the students gain general knowledge and competences:

- Knowledge and competence for devising original scientific research;
- Communication and social skills for the clear presentation of results and conclusions as well as for the formulation of problems and approaches to problem solving;
- The ability for critical and creative thinking, as well as a contribution to the development of scientific thought;
- The ability to organize knowledge from various fields into a coherent framework for problem solving;
- Competence for independent and team work, as well as for heading scientific research.

Students also acquire specific professional abilities in the field of textile engineering, such as:

- Professional knowledge for independent formulation of new research ideas in the field of fiber chemistry and technology, as well as for the development of new fibers and special –purpose textile materials;
- Professional knowledge for the choice of contemporary physical and instrumental methods for textile material characterization.

Admission requirements

Graduates in bachelor and master academic study programs of at least 300 ECTS.

Materials and consultations in English

Contact

Head of the study program: **Prof. Dr. Ivanka Popović** Telephone: +381 11 337 05 03 Contact email: tmf@tmf.bg.ac.rs

Faculty of Organizational Sciences

Management

at Faculty of Organizational Sciences, 154 Jove Ilića, 11000 Belgrade, www.fon.bg.ac.rs

ECTS: 60/ LANGUAGE OF INSTRUCTION: SERBIAN/ DEGREE: SPECIALIST

Study program content

Specialized academic study program in Management is the continuation of Master's studies at the Faculty of Organizational Sciences, University of Belgrade and the preparation of candidates for the doctoral studies in Management. The program is also intended for those candidates whose primary academic education is not directly related to this scientific discipline, and who have completed their integrated graduate or Master's studies in some other institution, but which are related to the study group the student chose. The study program is designed to enable students to expand their knowledge in both management and specialized professional disciplines they focused on during their graduate and Master's studies. The program duration is one year, or two semesters, with a total of 60 ECTS. Upon the completion of this study program, students receive the academic degree of Professional Science Master in Management / Health Management / Management in Pharmacy / Public Relations and Multimedia Communications / Marketing Management.

Study program goals

The objectives of the specialized academic study program in Management are:

- Creation of professionals capable to independently solve complex professional and scientific problems in management using the appropriate quantitative and quantitative methods, economic and organizational models, information technology and knowledge of social sciences;
- Development of competent professionals capable of applying modern theoretical and practical knowledge successfully;
- Acquisition of theoretical knowledge and practical skills that will enable students to successfully continue their academic education at the third level studies;
- Education in line with market needs and with contemporary trends in industrial sectors;
- Creation of professionals with advanced managerial, leadership and entrepreneurial characteristics.

Study program outcomes

Through the specialized academic study program in Management a student receives skills such as:

- Use of methods, procedures and processes of research and analysis of complex organizational systems in the public sector and the industry;
- Implementation of problem analysis and synthesis, prediction and proposing solutions;
- Taking the initiative to achieve goals and active participation in business processes;
- Decision-making through the development of alternative directions of action, taking into consideration resources, constraints and organizational values;
- Making complex decisions, delegating responsibility, implementation of tasks and efficient utilization of potential employees;
- Written and oral communication through clear presentation and communication in accordance to the needs;
- Independent application of acquired knowledge and solve practical problems;
- Capability for critical thinking, creative and independent action;
- Subject-specific competencies that students acquire by mastering a specific study group.

Modules

There are several study groups in this program: Management, Marketing Management, Health Management, Management in Pharmacy, Public Relations and Multimedia Communications.

Admission requirements

Admission is available to every person that has completed the appropriate basic academic studies.

Contact

Head of the study program: **Prof. Dr. Dejan Petrović** Telephone: +381 11 395 08 62 Contact email: <u>petrovic.dejan@fon.rs</u>

Engineering in Organizational Sciences

at Faculty of Organizational Sciences, 154 Jove Ilića, 11000 Belgrade, www.fon.bg.ac.rs

ECTS: 60/ LANGUAGE OF INSTRUCTION: SERBIAN/ DEGREE: SPECIALIST

Study program content

The specialized academic study program in Organizational Sciences is the continuation of Master's studies at the Faculty of Organizational Sciences, University of Belgrade. To enroll in this program, students need to have acquired 300 ECTS. Before the thesis presentation, the students are required to apply for and present a practical work (project) showing that they possess the knowledge and skills in the chosen field of specialization necessary for independent research in the narrower scientific field. By doing and by presenting the thesis, students are to demonstrate an enhanced ability to automatically connect to the acquired knowledge and skills by solving complex problems, and are capable of keeping step with the advances and the results of research in the field of specialization. The studies last for one year, or two semesters. During the specialized academic study program, students are to acquire at least 60 ECTS.

Study program goals

This study program goal is to obtain highest professional competence and skills and the academic title of a specialist in one of the following sub-areas: Information Systems, Operations Research, Management, Software Engineering, E-business, System Management, Quality Management and Operations Management. The goal is to master the practical knowledge and skills needed for professional performance at work and a successful career. Another important goal is to develop teamwork skills and to participation enable students to participate in research and present their research results. The overall objective of these studies is to educate a high quality professional in the field of organization and management, with an extensive knowledge and skills in the field of information and communication technologies necessary for electronic commerce or quality systems. The knowledge gained allows an engineering approach in the construction and implementation of complex solutions.

Study program outcomes

field of organizational sciences needs to demonstrate an increased ability to explore new and unfamiliar problems in the field of the chosen module, to connect the acquired knowledge and skills in solving complex problems, and the ability to observe research results and to follow the advances in their fields. Mastering these abilities and skills necessary to strengthen the creative potential candidates in solving practical problems in new or unfamiliar environment. Students who gain from these sub-areas of specialization may, either individually or in teams, solve the most complex problems, for deepening previously acquired academic knowledge and skills, understanding and skills. Through mandatory practice, making access to practical work (the project) and specialist work in the relevant subfields, students are trained for complex tasks of designing, production organization and quality management systems. They may also perform independent tests, perform statistical analysis of results, draw conclusions, write and present the results of their work. The final outcome of the learning process is to prepare students for independent research in institutions and organizations engaged in scientific work.

Modules

There are eight modules, including:

Information Systems / Operations Research / Management / Software Engineering / E-Business / Systems Management / Quality Management / Operations Management.

Admission requirements

Admission is available for any person that has earned at least 300 ECTS in undergraduate and graduate academic studies in the field of organizational or related sciences. Students who have previously enrolled in a study program of doctoral studies related to this program can also transfer to these studies.

Contact

Head of the study program: **Prof. Dr. Ondrej Jaško** Telephone: +381 11 395 08 17 Contact email: jasko@fon.rs

Bachelor of Science Engineer - Specialist in the

Cyber Forensics

at Faculty of Organizational Sciences, 154 Jove Ilića, 11000 Belgrade, www.fon.bg.ac.rs

ECTS: 90/ LANGUAGE OF INSTRUCTION: ENGLISH/ DEGREE: SPECIALIST

Study program content

Advanced Master in Cyber Forensics is multidisciplinary study program developed jointly by Faculty of Organizational Sciences and School of Engineering and Information Sciences, Middlesex University, London. This study program is continuation of graduate academic studies at the Faculty of Organizational Sciences and preparation for PhD candidates. Program is also intended for candidates whose previous education is not strictly linked to these scientific disciplines but their graduate studies in similar field.

Program enables students to develop knowledge and skills necessary to understand phenomenon of cyber crime and to discover, investigate and prevent these specific misconduct. Enabling students to use specific forensic tools raises the competence for practical problem solving and presentation of digital evidence acceptable for the court. After completion, graduates are able to perform specialist's tasks in judicial bodies organizations that design information systems and databases, e-commerce and e-banking, public administration and other organizations that are in need of specific cyber forensic's skills and knowledge.

Study program goals

- Understanding and linking theory and practice of methods and techniques of cyber forensics in investigation for discovering the perpetuators of cyber-crime;
- Development of capabilities for risk analysis of communication systems security, accurate prediction of future threats and design of new security systems;
- Qualifying for application of specific instruments for problem analysis and knowledge synthesis in the areas of forensics, security and crime;
- Introduction to forensic processing of crime scenes and the role of a forensic agent;
- Development of capabilities and skills for correct application of quantitative and qualitative research methods;
- Development of capabilities for individual research work and autonomous solving of more demanding professional and scientific

problems;

- Fostering teamwork in the research of cyber-crime phenomena and the application of methods and techniques of cyber forensics;
- Qualifying for professional work as forensic scientists on court and other in other jobs in the field of cyber forensics.

Study program outcomes

On completion of this program graduates will:

- Have gained knowledge and understanding of the theoretical concepts, methods and techniques necessary for investigating cyber-crimes;
- Have practical skills from cyber-crime cases and collection of evidence for the court;
- Have gained experience in team work and in carrying out research necessary for criminal pursuit of cyber offenders, as well as for security of computer networks and systems. The competence is verified also in the form of scientific papers which must be written and published by the candidate before the defending the doctoral dissertation, among which, at least one scientific paper should be published in the international journal listed in SCI list.

Admission requirements

Open to candidates who have previously completed 300 ECTS of undergraduate and graduate studies at the Faculty of Organizational Sciences or similar study program. Candidates with less than 300 ECTS are eligible to apply for tailored program before enrolment to this study program.

Contact

Head of the study program: **Prof. Dr. Mirjana Drakulić** Telephone: +381 11 395 08 93 Contact email: <u>international@fon.bg.ac.rs</u>

Information Systems and Management

at Faculty of Organizational Sciences, 154 Jove Ilića, 11000 Belgrade, www.fon.bg.ac.rs

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

Study program content

The purpose of the study program is the education of students so that they are capable of highquality and independent scientific research in the field of organizational sciences and management, computer science and other related disciplines.

The study program has been designed so as to introduce students to the latest scientific achievements, to train them for their own critical evaluation of publicly available scientific results in order that they themselves then can propose, organize and lead scientific research projects and teams, and draw relevant conclusions on the basis of conducted research and published works in the areas of organizational and related scientific fields. Graduates of doctoral studies need to upgrade their previously acquired engineering positions with new knowledge and skills, and so to acquire skills that are socially justified and useful contribution to the further development of society, whether in the field of education, scientific research or development of new technologies, processes, products and services.

The program integrates the areas of organization and management system (management), whose task is to fulfill the purpose and goals, bearing in mind first of all, almost inevitable use of information and communication technologies in contemporary society. Within a single curriculum, elective courses allow profiling of organizational sciences to meet specific social needs in the areas of organization and management systems, management, operational research, information systems, software engineering and e-business in general.

Study program goals

The main objective of this PhD study program is for students to gain the highest scientific abilities and academic skills in the field of Organizational Sciences and Management, Computer Science and the related disciplines. Mastering of these abilities and skills is necessary for strengthening the creative potential candidates to spot, identify and analyze problems in practice, to develop the capacity of critical and constructive thinking and formulate proposals able to withstand scientific criticism - all of which is achieved by mastering the methodology of scientific research. Also, an important goal is to develop skills of team work or conducting a scientific research, but also to master the practical skills necessary for performing work tasks professionally and achieving a successful career.

Thus, the overall objective of this study program is to establish high quality professionals in the field of Organization and Management who possess the deepest knowledge and skills offered by Information and Communication Technologies in the automation of business or setting up quality systems, that enable them to apply engineering approach in identifying and analyzing problems, e.i. in the design and introduction of complex solutions to such problems.

Study program outcomes

The general characteristic of doctoral study graduates in Organizational Sciences is that they possess the knowledge, skills and competencies that enable them to think critically, work creatively and independently. Therefore they are able to identify specific problems, and if necessary, to abstract an original phenomenon and replace it with another, more representative but simpler system, in which they can perform a quantitative analysis of the problem and construct a solution, simulating the behavior of the system and following the introduction of selected solutions in which they can carry out quantitative analysis of the problem and construct the solution, as well as to simulate the system's behavior after the introduction of the chosen solution and identify benefits and drawbacks of the proposed approach, and, in the end, if they decide so, to introduce the system into the practice and maintain the system in the regime of required performances.

Graduated PhD students have the knowledge and skills needed for publication of scientificresearch work and participation in international research projects.

Doctors of Organizational Sciences acquire highest competences in the areas of the organization, management and information technology, based primarily on the meaningful use of ICT.

Depending on the selected study group, the candidates are qualified to meet specific social needs of organizational systems in management, information systems, electronic business, operations research and management systems.

Modules

- Information systems
- Management
- Operational researches
- Software engineering
- Management of systems
- Electronic business

Admission requirements

Master degree with Grade Point Average 8,00 (eight) and higher.

Contact

Head of the study program: **Prof. Dr. Dušan Starčević** Telephone: +381 11 395 08 28 Contact email: <u>starcevic.dusan@fon.rs</u>



Faculty of Forestry

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Timber and Wood Products Trade

at Faculty of Forestry, 1 Kneza Višeslava, 11000 Belgrade, www.sfb.rs

ECTS: 60/ LANGUAGE OF INSTRUCTION: SERBIAN OR ENGLISH/ DEGREE: SPECIALIST

Study program content

The purpose of the study program of specialist academic studies in timber and wood products trade is the education of graduate students in order to acquire knowledge and skills needed to independently perform tasks and solve problems in the area of timber and wood products trade, primarily in the monitoring of the current state of affairs in the domestic and international markets of wood products, establishing business contacts, negotiating and concluding contracts with domestic and foreign companies.

Current trends in the international market of wood products influence the prices of raw materials to a much greater extent than the prices of final products. That requires a much higher utilization efficiency of raw materials and reduction of costs in the sphere of wood products turnover, which imposes more complex tasks to the professional staff of the companies in wood processing and wood products trade. At the same time, the ever growing need for strategic planning in terms of competitiveness, promotion of wood products, the need for a strategy of innovation processes and activities of certification and standardization as an instrument of marketing in this area further reinforce the need for trained personnel - specialists in the field of timber and wood products trade.

Study program goals

The main aim of realizing the program of specialist studies is to qualify graduates by providing them professional knowledge, understanding and skills required to perform business activities in timber and wood products trade competently and professionally. Primary attention is devoted to the acquisition of integrated theoretical and practical knowledge which is a basis for the development of critical thinking in solving of the following problems:

- Analysis of the current situation in the domestic and international markets of timber and wood products in terms of: timber sales, wood trade flows and tariff and nontariff barriers to wood products and prices;
- Establishment of the necessary documenta-

tion for the receipt and dispatch of goods, cargo insurance, transport, storage and forwarding of goods, customs clearance and charge of goods;

- Product certification, implementation of European (EN) and ISO standards for wood products;
- Establishing of business contacts, negotiating and concluding contracts with domestic and foreign companies;
- System of legislation in the field of turnover of goods in the country and abroad;
- Creation and implementation of the strategy of timber and wood products export.

Study program outcomes

Competent and professional performing of tasks and jobs in timber and wood products trade as follows:

- Jobs of commercial management of companies in wood processing and furniture production related to the creation and implementation of the strategy of export of timber and wood products and establishment of business contacts, negotiation and conclusion of contracts with domestic and foreign companies;
- Expert analysis of domestic and international markets of wood products in terms of: timber sales, timber trade flows, prices, tariff and non-tariff barriers to wood products, demand for certification and quality, implementation of European (EN) and ISO standards for wood products and other products;
- Jobs of a manager responsible for the affairs of foreign trade in timber and wood products such as: the receipt and dispatch of goods, cargo insurance, transport, storage and forwarding of goods, customs clearance, charge of goods, monitoring of the legislation in the field of turnover in the country and abroad.

Modules

International flows of timber and wood products trade, analysis of timber and wood products

market, certification of wood products, business communication and negotiation skills, techniques of closing foreign trade contracts in timber trade, international business finance, business ethics, export strategies and positioning on the market of timber and wood products, socially responsible business practice of companies in timber and wood products trade, international standards and commercial usances for timber and wood products.

Admission requirements

The right of entry have:

- Persons from the country and from abroad who have completed undergraduate studies and have earned at least 240 ECTS credits;
- Persons from the country and abroad who have completed bachelor studies in compliance with the rules applicable before the entry into force of the current Law on Higher Education of the Republic of Serbia;

The same standards are applied for the candidates who have completed bachelor studies at another faculty as for students from this faculty, except that their average grade point is not scored from the group of subjects (criteria 2 from) and they are obliged to take differential examinations. Differential tests and criteria for evaluating the results for admission to specialist academic studies are determined at the level of the module.

Contact

Head of the study program: **Prof. Dr. Branko Glavonjić** Telephone: +381 11 305 38 63 Contact email: <u>branko.glavonjic@sfb.rs</u>



Forestry

at Faculty of Forestry, 1 Kneza Višeslava, 11000 Belgrade, www.sfb.rs

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

Study program content

The purpose of the study program of doctoral studies is the development of science, critical thinking and training of personnel trained to carry out independent, original and scientifically relevant research and development of new processes that contribute to the overall development of the forestry profession, scientifically based procedures that contribute to the protection and preservation of forests and sustainable forest management and therefore environment and society as a whole, and to critically evaluate the research of others related to the specific scientific field.

Researchers at doctoral studies are focused on modern methods and techniques in the study of forest ecosystems, plant materials and plant materials for special purposes, and will acquire the necessary knowledge in the integral protection of forest and urban areas, the role of sports and recreational surfaces, vegetation of landscapes and management of projects in these areas of research.

Based on the knowledge and skills in these fields candidates will master the process of working with plant material and its implementation, preservation and protection of floristic diversity, a strategy of protection of plant species as well as management and implementation of various projects related to forestry, wood processing, landscape architecture and horticulture and ecological engineering in the protection of soil and water resources.

Study program goals

The aims of the Ph.D. program include the ability to achieve scientific and academic skills, development of useful skills and mastery of specific practical skills needed for future career development within the forestry profession, and primarily universities and research institutes that work in this area, as well as other scientific institutions whose activities are compatible with the program of the completed doctoral studies.

The aims of the Ph.D. program are consistent with contemporary developments in specific

scientific disciplines in the world, starting from the strategic global objectives listed in the defined mid-term projects and research tasks of the future.

The main objective of the program is to prepare candidates for scientific research in the field of complex problems related to forest complexes, soil and water as basic natural resources since overall development of the society is dependent on them.

Study program outcomes

The program of doctoral studies in the field of biotechnical science (forestry) should after graduation enable the students to have the knowledge, skills, developed abilities and therefore have the competence to:

- Independently solve practical and theoretical problems in the field of biotechnical sciences (problems of forests and forestry and the manner of their solving, particularly at the national level) to organize and realize scientific and development research;
- To be able to engage in the realization of scientific projects related to the global concept of sustainable management and forest management;
- Be able to implement the development of new technologies and procedures within the forestry profession, and to understand and use the most advanced knowledge in specific scientific areas;
- Think critically, and work creatively and independently;
- Respect the principles of ethical codes of good scientific practice;
- Communicate at a professional level in the communication of scientific research results, and are able to announce the results at scientific conferences and have them published in scientific journals, through patents and other scientific achievements;
- Possess thorough knowledge and understanding of specific disciplines within the professions: forestry, wood processing, horticulture and protection of soil and water resources;
 - Monitor and solve contemporary problems

related to forestry, wood processing, landscape architecture and horticulture and ecological engineering in the protection of soil and water resources, using scientific methods and procedures;

- Connect various knowledge from different fields (applied biology, biotechnology and technology) and their application;
- Follow the latest developments in the chosen scientific field;
- Develop skills and expertise in the use of knowledge in the area of forests and forestry and environmental protection in general;
- Use information and communication technologies (especially geoinformation).

Modules

Study program of doctoral studies of Forestry is organized within four fields:

- Field: Forestry elective groups:
 - Forest Protection
 - Forestry Economics and Organization
 - Forest management planning
 - Seed science, nursery production and afforestation
- Field: Wood Processing-elective groups:
 - Timber trade and wood processing economics
 - Furniture and Wood Products
 - Chemical and Mechanical Wood Processing

- Machines and Apparatus in Wood Processing

- Field: Landscape Architecture and Horticulture
- Field: Ecological Engineering in the Protection of Soil and Water Resources

Admission requirements

Admission requirements:

Study programs of Doctoral Academic Studies can be enrolled by persons who:

 Graduated from master academic studies i.e. the integrated studies from article 80, with at least 300 ECTS credits and an average grade point of at least (8) in bachelor and master academic studies;

- Persons who graduated from master academic studies with at least 300 ECTS credits and published scientific papers, as defined by a general act of the Faculty;
- Persons with the academic title Master of Science, if their doctoral dissertation is not applied in accordance with article 128 of the Law on Higher Education;
- Persons who graduated from bachelor academic studies in accordance with the regulations which were valid until the entry into force of the Law on Higher Education, with an average grade point of at least 8 (eight) if another procedure is not defined by the specific enrolment terms of a specific study program.

The student of postgraduate master studies enrolled in compliance with the regulations which were valid until the entry into force of the Law, can be transferred to the study program of doctoral studies in the course of their studies, within the program of the same or related fields, in compliance with the terms defined by the Scientific and Educational Council of the Faculty, i.e. the Council of Multidisciplinary Studies.

Doctoral studies can be enrolled by a person who has knowledge of a foreign language for the use of foreign literature.

Contact

Head of the study program: for the field of Forestry - **Prof. Dr. Dragica Vilotić** for the field of Wood Processing - **Prof. Dr. Milan Jaić** for the field of Landscape Architecture and Horticulture - **Prof. Dr. Dragica Obratov-Petković** for the field of Ecological Engineering in the Protection of Soil and Water Resources - **Prof. Dr. Stanimir Kostadinov**

> Telephone: +381 11 30 53 990 Contact email: <u>dragica.vilotic@sfb.rs</u> <u>milan.jaic@sfb.rs</u> <u>dragica.obratov-petkovic@sfb.rs</u> <u>stanimir.kostadinov@sfb.rs</u>

Multidisciplinary Studies

BOM

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History and Philosophy of Natural Sciences and Technology

at University of Belgrade, 1 Studentski trg, 11000 Belgrade, www.bg.ac.rs

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

Study program content

Doctoral studies of History and Philosophy of Natural Sciences and Technology last three years. The classes will be conducted with the use of all contemporary forms of teaching: lectures, consultations, team work, research projects, group and individual study visits, guest lectures by prominent experts in the field, e-learning (with appropriate software and organizational support), debate, discussion forums and other electronic services, professional and scientific practice.

Study program goals

Study program History and Philosophy of Natural Sciences and Technology aims at education of professional historians and philosophers of science trained primarily for the multidisciplinary study of our scientific and technical-technological heritage, the history of development of science in our region and the relation of its development with the European and world trends.

Through this program students will master the specific theoretical and multidisciplinary knowledge in history and philosophy of science, studying the importance of science for the development of civilization, especially its aspects related to technical culture. Sets of ideas underlying specific sciences, as well as the effects of changes of those ideas reflected on the development of society and civilization in general, are paid special attention. Simultaneously, the connections of science with technology, arts, philosophy and culture in general will be studied.

Study program outcomes

Mastering this curriculum students obtain general and subject-specific skills that contribute to the quality of training for operation and management of museology, archival science, research and educational work. Mastering the program of study of History and Philosophy of Science and Technology students obtain the following general capabilities:

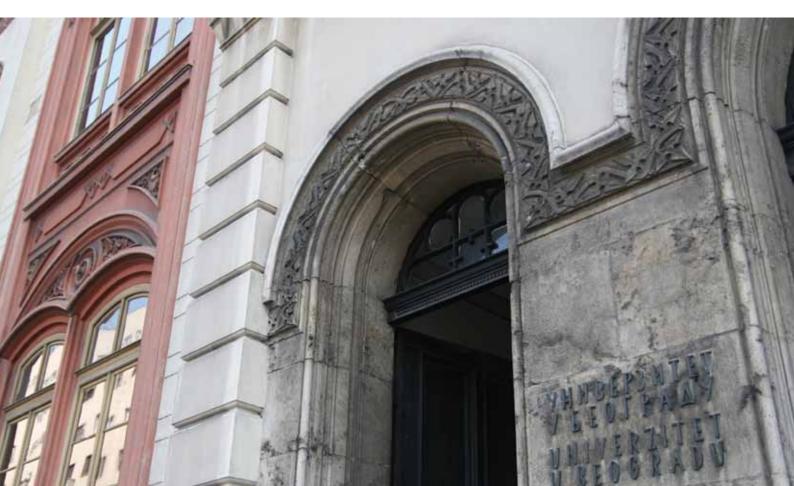
- Analysis and synthesis, views, study and reconstruction of material and textual legacy, archaeological artifacts, archaeological-architectural drawings, photographic material, everyday objects and works of art;
- Mastery of traditional and modern methods of multidisciplinary research and writing papers;
- Involvement in the research process;
- The development of critical thinking and traditional research approaches;
- Application of acquired multidisciplinary knowledge to resolve specific historical problems and philosophical stands;
- Communication and cooperation in domestic and international environment;
- Local initiative and creative action in terms of cultural changes and new scientific and technical achievements;
- Training and updating of historical assumptions and the potential use of new research results;
- Correlation and implementation of various historical and philosophical interpretation of the new learning and research processes;
- Review of historical facts, contemporary assumptions and theories in different systems of thought and cultural matrix;
- Knowledge and understanding of the essence and characteristics of scientific theory and practice;
- Understanding of the role of history and philosophy of science in the context of national and global culture;
- Greater awareness of the importance and significance of historical, philosophical and cultural problems in the natural sciences and technology;
- Consideration of a broader cultural context of studying history and philosophy of science, their multidisciplinary interpretation and results;
- Connection of knowledge from various fields of history and philosophy of science with technology, arts and cultural directions;
- The ap plication of knowledge in museological, educational and scientific-research practices.

Admission requirements

Students with college and masters degree in related areas with GPA 8 and above are eligible to apply.

Contact

Head of the study program: **Prof. Dr. Ljubinka Trgovčević-Mitrović** Contact email: <u>ljubinka.trgovcevic@fpn.bg.ac.rs</u>



Biomedical Engineering and Technology

at University of Belgrade, 1 Studentski trg, 11000 Belgrade, www.bg.ac.rs

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

Study program content

This program leads to the acquisition of scientific name Ph.D. in Biomedical Engineering and Technology.

The study program is three years or six semesters, and has a total volume of 180 ECTS. Study program consists of compulsory courses and two elective blocks of 8 and 6 elective courses, of which the student chooses two.

The first three semesters are dedicated to teaching and beginning work on doctoral dissertation. It is mandatory that a student pass eight exams, which made a total of 75 ECTS. Special course in biomedical engineering (15 ECTS) following the deposit in the compulsory subjects and optional subjects of the Plan. The program is modular and individual, tailored to the subject of doctoral theses, selected in accordance with mentors and approved by the Program Council directions of biomedical engineering and technology. Special Course consists of three modules: a) Introduction to scientific research (5 ECTS), b) work which explains in detail the proposal of the doctoral thesis (5 ECTS), v) defense of doctoral thesis before the Commission Council of the Programme (5 ECTS).

Doctoral thesis is in the fourth, fifth and sixth semester after passing the exams, and the Special Course.

Study program goals

Biomedical engineering and technology have grown as a major interdisciplinary fields in modern science. Biomedical engineers apply modern approaches to the experimental study of the living world combined with theoretical and computational methods in the field of engineering sciences, mathematics, biology, physics to the solution of fundamental problems of fundamental importance for medicine. This program is designed to provide students practice using concepts that were adopted at the edge of reality and the limits of nature. In the framework of multidisciplinary education in the field of biomedicine will be developed methods of monitoring and implementing the highest standards of similar standards applied in the leading educational institutions in Europe and worldwide. Quality of work will be monitored through the quantified criteria (publications in journals with high impact factor, participation in projects financed by the European Community, and potentially the National Institutes of Health, National Science Foundation and other North American institutions. One form of recognition is integration and organization of joint programs with European schools.

Modules

Compulsory courses: Principles of biomedical instruments and measurement; Signals and systems in the human body: Functional Anatomy and Physiology; Fundamentals of Biomedical Engineering; Modeling of biomedical processes and phenomena.

Elective courses: Bioengineering Cell and Tissue; Biomechanics; Biosistem and radiation; Physics, Technology and characterization of biomaterials; Instrumentation for electrophysiology; Medical image processing; Telemedicine; Motor Control and Rehabilitation; Neural networks; Special robotic systems; Selected methods of physiological signals; Artificial Intelligence; Systems of decision making in medicine; Neural prosthesis.

Study program outcomes

Students who complete the program in biomedical engineering are becoming prepared for research, development of new methods, work in a multidisciplinary team, translation of basic research results in the field of biomedical engineering in the development of new devices in the domain primarily of health technologies. The program provides the basis for the integration of fundamental research in biomedical science. Students who complete this program must be at work on his dissertation prove that they are able to give results of their work in ways that are at the highest level compared to international standards by publishing at least two papers in journals that are on the list of Web of Science (ISI).

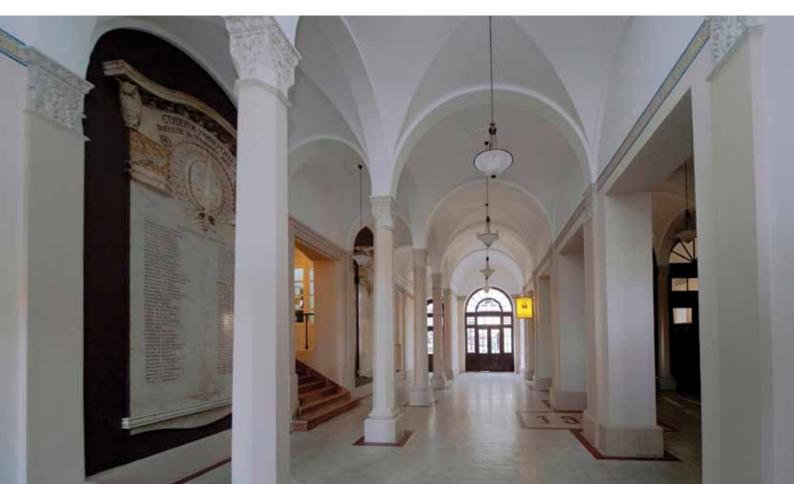
Admission requirements

Students with college and masters degree in related areas with GPA 8 and above are elligible to apply.

Contact

Head of the study program: **Prof. Dr. Dejan Popović** Telephone: +381 11 320 74 46 +381 11 320 74 66 Contact email: <u>dbp@etf.bg.ac.rs</u>





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