



# Faculty of Physical Chemistry

# Physical Chemistry

at Faculty of Physical Chemistry, 12–16 Studentski trg, 11000 Belgrade, [www.ffh.bg.ac.rs](http://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

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