

## Conditions for admission for the study

### In university study programmes at VŠB - Technical University of Ostrava for the academic year 2017/2018 - Doctoral type of study

Doctoral degree programmes (fields of study), which will open in the academic year 2017/2018 at VŠB - Technical University of Ostrava:

- Doctoral degree programme **Nanotechnology** with the field of study Nanotechnology in the full-time and combined form of study, the candidates are admitted for the field of study,
- Doctoral degree programme **Computational Sciences** with the field of study Computational Sciences in the full-time form of study, the candidates are admitted for the field of study,
- Doctoral degree programme **Physics** with the field of study Applied Physics in the full-time and combined form of study, the candidates are admitted for the field of study.

The general conditions for admission follow from Section 48 to Section 50 of the Act 111/1998 Coll. The Act on higher Education institutions and on the amendment and supplement to some other Acts (The Higher Education Act), as subsequently amended (hereinafter referred as the "Act"), which are further specified in the Admission Procedure Rules of the VŠB-Technical University of Ostrava (hereinafter referred to as "VŠB TUO"). The condition for admission in a Doctoral degree programme (field of study) is to complete the Master study (or its equivalent) at a higher education institution in the Czech Republic or abroad and to pass the admission procedure successfully.

### Doctoral study

#### 1. The characteristics of the study

Doctoral degree programmes are intended for graduates of the follow-up Master study of the same or related fields of study at universities in the Czech Republic or at foreign universities.

Doctoral degree programme **Nanotechnology** follows up the Master's programme Nanotechnology, which is accredited by VŠB - TUO. The study is also intended for graduates of Master's fields of study focused on applied physics, applied chemistry, advanced materials and technologies. Thus, it is the next stage of education in the field of nanotechnology.

The aim of the study is to deepen the theoretical basis of the particular field of study. Theoretical subjects include a detailed study of the electronic structure of materials, optical and magnetic properties of atoms and molecules and the relationship of these characteristics to the functionality of nanomaterials. An essential part of the degree programme is also studying applied mathematics, molecular modelling and computer design

of nanomaterials. The programme includes advanced experimental methods for studying nanostructures and the properties of nanomaterials, which are based on the dissertation thesis topic. The study guides the student in independent creative scientific work. The achieved level of knowledge is evidenced by a doctoral state examination. The ability to achieve original research results and develop them further is evidenced by elaborating the dissertation thesis and its defence.

The study is realized in the full-time form of studies within the degree programme Nanotechnology with the field of study Nanotechnology in a proper study period of four years. The field of study is accredited in Czech and English.

Doctoral degree programme Computational Sciences follows up the Master's programme Computational Sciences, which is accredited by VŠB - TUO. The study is also intended for graduates of the Master study in mathematics, computer science, engineering mechanics, physics and chemistry or a related field of study.

The aim of the study is thorough grounding in the field of high performance computation and supercomputing, and the related mathematical and informatics disciplines, enabling the graduate to fully exploit the potential of the most powerful computing systems of the level *peta-scale* and *exa-scale*. The partial aim is to provide the theoretical background in the area of the dissertation topic (*HPC, computational mathematics, computer science, computational mechanics and computational physics and chemistry*) at the level usual for the Doctoral degree studies and practical training in the use of supercomputing in this area. Yet another objective is to provide language training for effective communication in the field in both Czech and English or another foreign language, provide a grounding in basic general skills required for a career in high-tech companies and in academic career (communication and reporting, teamwork, project management). The achieved level of knowledge is evidenced by a doctoral state examination. The ability to achieve original research results and develop them further is evidenced by elaborating the dissertation thesis and its defence.

The study is realized in the full-time and combination form within the degree programme Computational Sciences with the field of study Computational Sciences with a proper study period of four years. The field of study is accredited in Czech and English.

Doctoral degree programme **Physics** follows up the Master's programme **Physics**, which is accredited at VŠB - TUO. The study is also intended for graduates of the Master study in related fields that are focused on applied physics, especially optics, magnetism, nuclear physics or special materials and technology. Thus, it is the next stage of education in the field of physics.

The aim of the study is to acquire knowledge of modern physical theories and experimental methods and apply the acquired knowledge in solving real problems, to actively communicate with professionals and establish new procedures and methods in the fields of applied physics. During the study, students will gain highly motivated and professional approach both through theoretical studies and a systematic participation in various projects and solving practical problems. An integral part of the graduates' knowledge is adopting new trends in applied physics that are related to the involvement of our country into European structures and their research activities.

The achieved level of knowledge is evidenced by a doctoral state examination. The ability to achieve original research results and develop them further is evidenced by elaborating the dissertation thesis and its defence.

The study is realized in the full-time and combination form within the degree programme Physics with the field of study Applied Physics with a proper study period of three years. The field of study is accredited in Czech.

## 2. The application for the study

- The application has to be submitted electronically (electronic application), it is available on the website of VŠB - TU Ostrava ([www.vsb.cz](http://www.vsb.cz)), then it has to be **printed and together with the enclosures sent to the address:**

VŠB - Technical University of Ostrava  
University Study Programmes  
The Study Department  
17. listopadu 15  
708 33 Ostrava – Poruba

The application must be accompanied by a **certified copy of the diploma and diploma supplement** (if it is a diploma from a university other than VŠB - TUO). **Candidates who have completed the Bachelor study at a foreign university will demonstrate a certified copy of the achieved education (it does not apply to the Slovak Republic).** If the candidate cannot produce the aforementioned documents at the time of the application submission, s/he will bring them to the entrance interview.

A medical certificate of health for studying and for the practice of the profession is not required.

If the application has formal shortcomings, the study office of the university study programmes will ask the candidate in writing to make the corrections and additions. The admission procedure will not be initiated if the candidate does not remove the shortcomings in the application within a time limit which shall be established.

The deadline for submission of the applications is from **1 March 2017 to 30 June 2017.**

- There is a fee for the operations associated with the admission procedure amounting to **CZK 500.00.**

The fee shall be paid to the account:

- The account number:100954151/0300
- Variable symbol: generated on the electronic application
- Constant symbol: 0308
- The account name: VŠB-TU Ostrava, 17. listopadu 15, 708 33 Ostrava - Poruba
- IBAN: CZ51 0300 0000 0001 0095 4151

- The fee for the study in a foreign language

The fee for the study in the Doctoral degree programme (field of study) in a foreign language for each academic year amounts to **EUR 3,500.00.**

### **3. Entrance examination**

The essence of the admission procedure is an overall assessment of the preconditions of the candidate for the study of the selected study programme (field of study) at VŠB - Technical University of Ostrava.

Part of the entrance procedure is:

- evaluation of the Master's study
- entrance examination realized in the form of an interview;
- the verification of the ability of the candidate to study in the language of the degree programme.

#### **3.1 Invitation for the entrance interview**

The candidate is invited for the entrance interview in writing by a letter dispatched to the address indicated in the application for the study.

#### **3.2 Entrance interview**

The essence of the admission procedure is an overall assessment of the preconditions of the candidate for the study of the selected Doctoral degree programme (field of study).

The admission procedure consists of an individual assessment of the submitted results of previous studies and a personal interview with the entrance examination board.

Upon arrival to the entrance interview, the candidate shall demonstrate his/her identity to the authorised personnel of the university. If s/he has not produced a certified copy of the diploma and diploma supplement, s/he will submit those documents to the entrance examination board. During the entrance interview, the candidate shall inform the entrance examination board of the selected topic of dissertation thesis and answer questions asked by the members of the entrance examination board.

#### **3.3 Verification of the ability of the candidate to study in the language of instruction for the degree programme.**

Only a candidate who demonstrates the ability to study in the language of instruction for the degree programme (Czech and English) can be admitted for the study. The proof of the ability to study in the Czech language is particularly the school-leaving examination in the Czech language or the Slovak language. The Vice-Rector of VŠB-TU Ostrava in charge may recognize an official document of the examination in the relevant language in the state-recognized (accredited) educational facility as a proof of ability to study in the appropriate language. In other cases (English language), the ability to study in the language of the degree

programmes is demonstrated by the examination in the relevant language within the previous education. In special cases, the Vice-Rector of VŠB - TU Ostrava in charge may remit this exam in the case of the candidate.

### **3.4 Assessment of excuses for the absence at the entrance examination**

The candidate has to apologize for his/her absence at the entrance interview in writing within 5 days from the date of the entrance examination at the latest. The Vice-Rector of VŠB - TU Ostrava in charge makes decisions concerning excuses for the absence.

### **3.5 Preliminary date of the entrance interview**

Preliminary date of the entrance interview is:

Nanotechnology:	13 July 2017
Computational Sciences:	13 July 2017
Physics:	13 July 2017

## **4. Deciding on admission to the study**

### **4.1 Procedure when deciding on admission**

On the announced date (published on the university website) the appointed entrance examination board will meet the Vice-Rector for the Study; the entrance examination board will examine the application without the participation of the candidates and recommend the Vice-Rector for the Study admission/rejection in the record in the Section *The Proposal of the Entrance Examination Board*. Based on the recommendation of the board, the Vice-Rector for the Study decides on the admitting or rejection of the candidate; the candidate is informed about the decision and the date of enrollment in writing. The decision may be appealed under Section 50 Subsection 7 of the Act.

### **4.2 Notification of candidates on admission procedure results**

The candidate is notified of the results of the admission procedure in writing within 30 days from the date of the entrance examination.

### **4.3 The maximum number of admitted students**

#### **a) Programme Nanotechnology, field of study Nanotechnology**

Full-time Doctoral study - study in Czech	20 students
Full-time Doctoral study - study in English	5 students

Combined Doctoral study - study in Czech	10 students
Combined Doctoral study - study in English	5 students

**b) Programme Computational Sciences, field of study Computational Sciences**

Full-time Doctoral study - study in Czech	10 students
Full-time Doctoral study - study in English	10 students
Combined Doctoral study - study in Czech	5 students
Combined Doctoral study - study in English	5 students

**c) Programme Physics, field of study Applied Physics**

Full-time Doctoral study - study in Czech	10 students
Combined Doctoral study - study in Czech	5 students

**5 Related documents**

Statute of VŠB - Technical University of Ostrava

Study and Examination Rules and Regulations for Doctoral degree programmes at VŠB - Technical University of Ostrava.

Topics of dissertation theses published on [www.vsb.cz](http://www.vsb.cz).

**6 Final Provisions**

Conditions for admission for the university degree programmes (fields of study) at VŠB-TU Ostrava for the academic year 2017/2018 were approved by the Academic Senate of VŠB-TU Ostrava on 13 December 2016. The validity of the document expires on announcing the conditions for admission for the university degree programmes for the next academic year.