

Study programme: BIOINFORMATICS AND COMPUTATIONAL BIOLOGY

ANNOTATION

Doctoral degree programme (DSP) Bioinformatics and Computational Biology is a combined study programme between the Faculty of Medicine and Dentistry, Palacký University Olomouc and Faculty of Electrical Engineering and Computer Science, VŠB-Technical University of Ostrava. This interdisciplinary study programme covers three fields, namely informatics, biology and general medicine and dentistry. The aim of the study is to educate experts with interdisciplinary domain knowledge of natural and medical sciences and informatics with an emphasis on practical experience and skills necessary for bioinformatics analysis of different types of large and small datasets, extraction of knowledge from data and database systems.

ADMISSION PROCEDURE 2025/2026

Contact details of the training department:

Department of Immunology, Faculty of Medicine and Dentistry, Palacký University Olomouc, Hněvotínská 3, Olomouc, tel. +420 585 632 752

Consultation and teaching of selected subjects take place at the cooperating university:

Faculty of Electrical Engineering and Computer Science, VŠB -Technical University of Ostrava, 17. listopadu 2172/15, Ostrava, tel.: +420 597 326 013

Dissertation topic/s of the training department:

1. Multiomic Analysis of Genomic and Proteomic Datasets

Supervisor: doc. Ing. Eva Kriegová, Dr.

1 position in the full-time form of study

2. Advanced Bioinformatics Tools in Clinical Metabolomics

Supervisor: prof. RNDr. David Friedecký, Ph.D.

1 position in the full-time form of study

3. Advanced Bioinformatics Tools in Clinical Lipidomics

Supervisor: prof. RNDr. David Friedecký, Ph.D.

1 position in the full-time form of study

4. Multivariate Analysis of Clinical Joint Replacement Registry Data

Supervisor: prof. MUDr. Jiří Gallo, Ph.D.

1 position in the full-time form of study

5. Genetic Analysis and Data Processing in Transplantation

Supervisor: assoc. prof. MUDr. František Mrázek, Ph.D.

1 position in the full-time form of study

Application deadline:

15 May 2025

Date and location of the entrance examination:

19 June 2025 at 10:00 a.m. in the seminar room of the Department of Immunology, Faculty of Medicine and Dentistry and University Hospital Olomouc (Dostavba - New building), Palacký University Olomouc, Hněvotínská 3, Olomouc

Alternative date of entrance examination:

26 June 2025 at 10:00 a.m. in the seminar room of the Department of Immunology, Faculty of Medicine and Dentistry and University Hospital Olomouc (Dostavba - New building), Palacký University Olomouc, Hněvotínská 3, Olomouc

Anticipated maximum number of admitted students:

Full-time form: 2 students

Examination format: oral (it may be also Zoom examination)

Contents of entrance examination:

The interview will focus on assessing the candidate's orientation in biology, genetics, immunology and related fields and/or computer science, statistics and applied mathematics in the extent of master's degree level. The topic of the doctoral thesis will be also discussed together with candidate's aptitude for work in experimental informatics, bioinformatics, computational biology and his/her motivation for study.

Graduates of Natural Sciences, Computer Science, Applied Mathematics, General Medicine or Dentistry study programmes are welcomed. Based on the submitted CV evaluation and motivation letter, candidates will be invited for an interview.

Evaluation criteria:

The condition for the admission into a PhD programme is the proper completion of studies in a master or follow-up master study programme of technical, natural science or medical specialization and an approval of the guarantor of the field. An applicant who duly submitted the application and delivered all the required documents as previous study results, CV, motivation letter, the list of published and unpublished works and previous professional experience will be assessed individually on the basis of the documents submitted. The supervisor's comments will be considered.

The annual tuition fee for the post-graduate study programme conducted in English is set at EUR 100.