

A Doctoral Programme in the domain of medical and health sciences, in the discipline of pharmaceutical sciences

Field of study: Domain: **medical and health sciences; discipline: pharmaceutical sciences**

Programme type: a doctoral programme in the domain of medical and health sciences, in the discipline of pharmaceutical sciences, stationary programme

Tuition fee: education at the Doctoral School of Medical and Health Sciences is free

Number of semesters: 8 semesters

Admission period: 30.06.2021-30.09.2021

Number of participants: 9

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Language: Polish and English (optional courses only in English)

How to apply: electronic registration OAS (the Jagiellonian University Online Application System), excluding a special competition procedure

Programme description:

Education at the Doctoral School of Medical Sciences and Health Sciences (DSMHS) of the Jagiellonian University lasts 8 semesters (4 years) and ends with the submission of a doctoral dissertation and prepares for obtaining a doctoral degree in the field of: Medical Sciences and Health Sciences, in the disciplines of: Pharmaceutical Sciences. The education in DSMHS is following the Doctoral Programmes based on the Study Programme and the Individual Research Plan (IRP). The IRP has to be presented to the DP Head within 12 months from the start of the education. Study programmes offered by the School are characterised by an interdisciplinary approach to teaching Medical Sciences and Health Sciences, comprising basic courses and a broad selection of optional courses from various disciplines. Courses are run in Polish and English by the academic staff of the JU Medical College Faculty of Medicine, Faculty of Pharmacy, and Faculty of Health Sciences as well as specialists from other institutions.

Graduate's profile:

In the Doctoral School of Medical and Health Sciences, a PhD student acquires the following competences: competences covering advanced theoretical issues relevant to the scientific DSMHS profile and methodological competences preparing for conducting and publishing scientific research; academic competences (e.g. scientific publications, scientific communication, fundraising for research, research ethics, dissemination of research results, etc.); professional and soft competences (e.g. career planning, preparation for teaching, project management, managerial skills, business communication, etc.). The graduate is prepared to be employed at a research and teaching position at every academic centre in Poland and abroad.

For whom:

Persons with a degree of MA/MSc., MSc. Engineer or equivalent in any other discipline and persons referred to in Article 186(2) of the Act may apply to DSMHS. The candidate should demonstrate knowledge or interests in the field of the selected research topic (announced on the School's website) in the discipline in which she/ he is going to prepare a doctoral dissertation.

Entry requirements:

Formal conditions for participation in the recruitment procedure

Persons with a degree of MA/MSc., MSc. Engineer or equivalent in any other discipline and persons referred to in Article 186(2) of the Act may apply to DSMHS.

Doctoral candidates with projects requiring PhD student's independent performance of medical procedures for patients must be: 1. graduates from medical and dental faculties with current medical licence valid in the Republic of Poland or those declaring the completion of a post-graduate traineeship by the end of the calendar year in which the recruitment is carried out and the completion of Final Medical Examination/ Final Medical-Dental Examination, 2. graduates from nursing, obstetrics and physiotherapy faculties with current licence for the profession of nurse, midwife, physiotherapist in the Republic of Poland.

Each document submitted to the Doctoral School of Medical and Health Sciences must be accompanied by a certified translation into Polish if not in the Polish language. A certified translation into Polish means a translation that is certified by:

- *a Polish certified translator (a person included in the list of certified translators in the Polish Ministry of Justice) or,*
- *a certified translator registered in a country of the European Union, Iceland, Liechtenstein, Norway or Switzerland, or another OECD country (if there is such institution as a certified translator), or*
- *the consul of the Republic of Poland, competent for the state on which territory or in which education system the document was issued, or*
- *a Polish accredited diplomatic mission or consular office of the country on which territory or education system the document was issued.*

The recruitment proceeding comprises two phases: In phase 1, the committee shall assess the documents submitted by the candidate (including average grade from the studies, as obtained by the candidate during the MA studies, long-cycle MA studies or equivalent, calculated according to the rules of the university issuing the diploma). The 2nd stage recruitment is interview, the interview will consist of two parts: a. candidate's research interests and the academic achievements so far; b. professional competency assessment: interview on one of the five pre-selected by the recruitment commission English language articles, chosen by a candidate, in the discipline of a given doctoral programme. The articles will be posted on the school's website at least one month before the start of the recruitment.

Scholarships:

Each PhD student receives a scholarship in the amount set by law or more, depending on the source of funding. The statutory (minimum) scholarship amounts are:

-before the mid-term evaluation (up to 24th month): PLN 2 104.65 net (that is: PLN 2,371.70 gross minus the compulsory pension disability pension contribution)

-after a positive mid-term evaluation (after four semesters): PLN 3 242.29 net (that is: PLN 3,653.70 gross minus the compulsory pension and disability pension contribution)

The amount of the doctoral scholarship paid from the grant depends on the amount specified in the agreement, but may not be lower than the statutory scholarship specified above. The doctoral scholarship is not taxed.

Conducted research:

Main areas of research at the Jagiellonian University Medical College

Research on diseases and treatment options:

- Prevention of cardiovascular diseases (preventive cardiology)
- Biological basis of selected mental illnesses (depression and schizophrenia), hormonal disorders (fertility determinants) and other civilization disorders (aging determinants)
- Health education and promotion, experimental gastroenterology, health psychology, technologies and e-health problems, human resource management in nursing - development of modern assumptions of the policy of effective employment and management of nursing staff in a hospital
- Development of individualized medicine - creating a therapy tailored to the needs of a specific patient, taking into account genetic, environmental and lifestyle factors
- New research directions in various fields of medicine - setting new development strategies in the field of oncology, including the development of modern breast cancer diagnostics based on conventional and digital mammography, ultrasound examinations and biopsy systems
- Research on finding biologically active chemical compounds and research on natural medicine (qualitative and quantitative phytochemical analysis of plant raw materials, testing the biological activity of pharmacologically active compounds isolated from medicinal plants and fungi - pharmaceutical biotechnology - in vitro cultures of medicinal plants and mycelial cultures of higher fungi, research accumulation of therapeutically important metabolites) and a synthetic drug (drug design, chemical synthesis, in vitro and in vivo studies on the activity of chemical compounds and their mechanisms of action, pharmacokinetic and pharmacological and chemical studies, research in the field of drug form technology, including labeling of pharmaceutical preparations; determination of impurities in drugs, stability testing of pharmaceutical preparations)
- Toxicological studies, including the assessment of environmental pollution - in vivo and in vitro studies; determination of the toxicity of organic solvents; standardization of the admissible occupational exposure levels for chemical substances
- Research using modern computer techniques - artificial neural networks to optimize drug formulation technology, computer-aided design of drugs.

Programme structure:

1. Programme of Studies at the Doctoral School of Medical and Health Sciences (DSMHS) was developed in accordance with the Act of July 20, 2018, Law on Higher Education and Science, and the current JU guidelines.

2. The education in DSMHS lasts for eight semesters and following the Doctoral Programmes (hereinafter DP) based on the Study Programme (SP) and the Individual Research Plan (IRP).
3. DPs are offered in one or more disciplines in which the Jagiellonian University has the authority to award a doctor's degree.
4. The IRP has to be presented to the DP Head within 12 months from the start of the education. After consulting the supervisor, the programme committee and the doctoral committee, if appointed, the DP Head approves the plan.
5. The study programme in DSMHS leads to learning outcomes for qualifications at level 8 of the Polish Qualifications Framework.
6. The languages of the study programme are Polish and English.
7. Persons with a degree of MA/MSc., MSc. Engineer or equivalent in any other discipline and persons referred to in Article 186(2) of the Act may apply to DSMHS. The requirement is verified at the registration stage.
8. The number of ECTS credits assigned to the programme is at least 40 ECTS credits, of which: minimum 30 ECTS credits are related to preparing a PhD student to conduct and publish scientific research, including 25 ECTS credits obtained by the end of the IV semester.
9. PhD students may choose optional courses at other faculties outside of JU Medical College in a total maximum of 3 ECTS credits.
10. The specific requirements and eligibility criteria for the doctoral programme are specified in the DSMHS Recruitment Procedures, approved by the JU Senate.

The DSMHS Study Programme consists of four modules:

Module I: Methodological education (compulsory part);

Module II: Education in secondary scientific competences (compulsory part);

Module III: Specialist education in the discipline in which the Individual Research Plan is implemented (optional courses);

Module IV: Complementary professional and soft skills education (optional courses).

The Study Programme is implemented by selecting courses belonging to a particular module.

An obligatory research internship of at least two weeks, conducted at a research centre abroad, is introduced into the Doctoral School's Study Programme. The internship will be financed under the available JU programmes within bilateral agreements or other programmes, including Erasmus plus. The internship will be implemented after the mid-term evaluation. After agreeing with the supervisor, a PhD student applies to a foreign research centre and requests for its funding.