Programme of study at the AGH Doctoral School

Resolution no. 81/2019 of the AGH UST Senate of 29 May 2019 introducing the official programme of study at the AGH Doctoral School.

Legal basis: The Higher Education and Science Law Act of 20 July 2018 (Journal of Laws for the year 2019 item 1668 as further amended), Ordinance of the Minister of Science and Higher Education of 14 November 2018 on second degree characteristics of learning outcomes prescribed for qualifications at levels: 6-8 of the Polish Qualifications Framework (Journal of Laws for the year 2018, item 2218).

§1 Doctoral programme

1. The course of education at the AGH Doctoral School, hereinafter referred to as the School, is delivered over 8 semesters, early completion being possible subject to satisfying all requirements prescribed in the study programme and achieving all learning outcomes.
2. The doctoral programme at the School is delivered in Polish and English.
3. The course of education provided for doctoral students (hereinafter referred to as students) concludes with the submission of doctoral dissertation.
4. Disciplines, in which the programme is provided, have been set out in the School Foundation Order issued by the AGH UST Rector.

§2 Learning outcomes

The School enables doctoral students to achieve learning outcomes corresponding to level 8 qualification according to the Polish Qualifications Framework for a discipline or disciplines within which the doctoral dissertation is pursued.
During the course of study at the School, students achieve the following learning outcomes (codes for respective competencies supplied in brackets are in accordance with the MNiSW Ordinance of 14.11.2018).
Student knows and understands:
EU1 (P8S_WG) to an extent that allows effective revision of existing paradigms - the global body of work including theoretical foundations as well as general issues and selected specific problems typical of the scientific discipline(s) within which the student pursues doctoral dissertation;
EU2 (P8S_WG) main development trends in scientific discipline(s) in which the programme is provided;
EU3 (P8S_WG) methodology of scientific research;
EU4 (P8S_WG) principles of disseminating the results of scientific activity, including the open access mode;
EU5 (P8S_WK) fundamental problems of contemporary civilisation;
EU6 (P8S_WK) economic, legal, ethical and other relevant factors affecting scientific activity;

EU7 (P8S_WK) basic principles related to the transfer of knowledge to business and social domains as well as the commercialisation of the output of scientific activity and the know-how related to this output.
Student can:

EU8 (P8S_UW) use the knowledge from various areas of science for creative identification, formulation and innovative handling of complex research problems, as well as - specifically - define the purpose and subject of scientific research, formulate research assumptions, develop research methods, techniques and tools and creatively use these; draw conclusions based on the output of scientific research; perform critical analysis and evaluation of research output, expert activity and other work of creative nature and its contribution to the development of knowledge; transfer the output of scientific activity to business and social domains;
EU9 (P8S_UK) communicate on specialist topics to an extent that will enable active contribution to the international scientific community;
EU10 (P8S_UK) disseminate the output of scientific activity, including popular forms;

EU11 (P8S_UK) initiate debates and take active role in the scientific discourse;
EU12 (P8S_UK) use a foreign language at CEFR B2 level to an extent that allows active contribution to an international research and professional community;
EU13 (P8S_UO) plan and implement – both individually and as part of a team – research and creative projects, also in an international environment;
EU14 (P8S_UU) independently plan and act towards personal development as well as inspire and organise the development of other people; plan classes or courses and deliver them using modern methods and tools.
Student is prepared to:

EU15 (P8S_KK) critically review the body of work produced to date within a given scientific discipline, critically review one's own contribution to the development of the discipline, recognise the importance of knowledge in addressing problems of cognitive and practical nature;
EU16 (P8S_KO) fulfill social obligations imposed on the researcher, initiate actions for the benefit of the public, to think and act in an entrepreneurial manner;
EU17 (P8S_KR) preserve and foster the values represented by the community of researchers and creators, including independent pursuit of research and respect for the principle of public ownership of research output while demonstrating compliance with the principles of intellectual property protection.
Student is obliged to document the achievement of all learning outcomes as well as satisfying all requirements prescribed in the programme of study adopted by the School prior to the submission of the doctoral dissertation.

§3 Forms of education

1. The School develops soft skills and specialist skills, some of which may fall outside the scope of the discipline selected for the doctorate as well as teaching and language skills.

2. The programme of study at the School is delivered in the form of:
(a) modules including lectures, seminars, regular, lab or project-based classes delivered in Polish or English,

(b)research work conducted in cooperation with supervisor(s),
(c)student participation in scientific conferences,
(d) preparation by students of scientific publications and the doctoral dissertation.
3. Students pursue an individual programme of study covering a course load corresponding to at least 26 ECTS points and 390 contact hours referred to in §3.2(a).

4. The School shall provide students with conditions allowing the extension of the programme of study beyond the minimum number of class hours set out in §3.3.

§4 Compulsory modules

During the course of study at the School, students are required to complete compulsory modules. The following are deemed to be compulsory modules:
(a) Doctoral seminar (Seminarium doktoranckie): 30 hours / 2 ECTS credits, delivered in years: 2, 3 and 4. The School Director may exempt a doctoral student from compulsory attendance in a given year of study for valid reasons, such as foreign work placement, internship programme etc..
(b) Module: Research skills: 64 hours / 4 ECTS credits.
(c) Module: Critical thinking – fundamental problems of contemporary civilisation :15 hours / 1 ECTS credit.

§5 Teacher training foundation

Students may, during any year of study at the School, complete a set of teacher training foundation courses in preparation for assuming the role of an academic teacher. The teacher training foundation courses include:
1. module: Teacher skills development: 41 hours / 4 ECTS credits;
2. teaching practice involving delivering or participation in delivering classes to a total of 60 hours, of which at least 15 hours should be delivered by the student.

§6 Elective modules

Students can choose from a list of elective modules updated by the School every semester.

The list will include:

1. modules provided by AGH UST units;

2. modules provided by visiting professors invited by the School Director or by individual faculties;

3. specialised English course, successful completion of which should lead to C1-level language proficiency;

4. patent law and patent procedures module.

Elective modules related to the discipline and topic area of the scientific research pursued under the programme should correspond to at least 180 hours and 12 ECTS credits, of which classes taught in English should cover not less than 45 hours and earn at least 3 ECTS credits.
The School Director may consent to a doctoral student attending modules provided by other higher education institutions (including foreign ones), as well as to adding a given module to the student's individual programme of study.

§7 Individual programme of study

Individual programmes of study drawn up in accordance with a template officially prescribed by the School Director must be submitted by students for approval. Programmes may be updated prior to the commencement of each semester. The programme of study must be approved by advisor/supervisor of the doctoral dissertation and must guarantee achievement of all prescribed learning outcomes as set out in §2.
At the end of each year of study, students are obliged to:
1. obtain all required course credits as provided for in the individual programme of study

2. submit a relevant report indicating the progress made on the dissertation, signed by the supervisor(s). The report template is announced by the School Director through an official order.

Prior to the submission of doctoral dissertation, each student should participate as a presenting author in at least one conference and publish – as an author or co-author – at least one article in a scientific journal or one post-conference paper or one chapter or one monograph. The published work referred to herein should be featured on the publications lists drawn up by the Ministry of Science and Higher Education (MNiSW) for the purpose of evaluating scientific activity in accordance with provisions issued pursuant to Section 267 (2) (2) of the Higher Education and Science Law Act of 20 July 2018 (Journal of Laws for the year 2018 item 1668 as further amended).

§8 Contents of modules listed explicitly in the programme

1. Research skills (64h, 4 ECTS) leading to the following learning outcomes: EU3-4,6-7, 13, 16-17 and covering problem areas as listed below:
1.1 Ethics in research and scientific work (10 hours),
1.2 Copyright law and intellectual property protection (10 hours),
1.3 Workshop in writing and preparation of scientific publications (12 hours),
1.4 Workshop in preparation of grant applications (12 hours),
1.5 Research planning and methodology (20 hours).

Problem areas 1.1-1.2 are studied jointly by all students, areas 1.3 – 1.5 are specialised for particular disciplines in which individual doctoral dissertations will be pursued.

2. Critical thinking – fundamental problems of contemporary civilisation (15 hours / 1 ECTS credit): a seminar leading to learning outcome no. EU5.
3. Doctoral seminar (30 hours and 2 ECTS credits in years 2,3 and 4 respectively) leading to learning outcomes no. EU9,10,15 and others. The scope of the seminar includes: discussion of the subject matter of the research undertaken for the purpose of doctoral qualification, presentation of progress made on research work and its critical evaluation; review of scientific publications related to the doctoral programme, overview of computer tools supporting work on the doctoral dissertation; preparation for the defence of the doctoral dissertation, preparation of a popular science text related to the dissertation.

3. Teacher skills development (entitling students to attend teaching practice: 4 ECTS credits, 41 class hours, including 9 hours of lesson observation).
Participating students will be introduced to the following problems: fundamentals of teaching in higher education institutions, psychological foundations of education and an overview of trends in higher education (8 hours of lectures) accompanied by a series of workshops on course design, teaching methods and applications of digital technologies in teaching, interpersonal communication, voice production and e-learning (24 hours). The course features obligatory lesson observations followed by discussion and feedback (3 hours) as well as 6 hours of peer observations.
4. Specialised English course (elective) (45 hours/3 ECTS credits). Introduction and practical usage of specialist vocabulary and terminology in a variety of contexts, with special emphasis on the discipline chosen for the purpose of the doctoral dissertation, including:

4.1. reading comprehension for academic purposes, including academic texts and articles;

4.2. developing autonomy in writing academic texts and publications: title, summary (abstract), presentation of research results, references to bibliographic data, precis etc.;

4.3. developing skills in preparing speeches and slides for seminars and conferences;
4.4. presentation skills;

4.5. developing skills in writing descriptions for grant applications.