

Curriculum of the Doctoral School of Exact Sciences in the academic year 2021/2022

1. Education at the Doctoral School of Exact Sciences of Adam Mickiewicz University in Poznań is conducted on the basis of the present educational framework and the individual research plan and concludes with the submission of a doctoral dissertation.
2. The educational framework plan includes three types of course modules: obligatory, obligatory elective and optional.
3. A doctoral student studying at the Doctoral School of Exact Sciences pursues an individual path of study. The individual learning path consists of:
 - 1) courses from the compulsory course module;
 - 2) elective courses chosen by the doctoral student;
 - 3) Work experience in the form of teaching or participating in the teaching of courses;
 - 4) and the courses from the optional module provided that they were chosen by the doctoral student.
4. Upon commencing their doctoral training at the Doctoral School of Exact Sciences, doctoral students are required to undergo training on the rights and obligations of a doctoral student.

I. Framework curriculum

1. Obligatory courses

- 1) Interdisciplinary scientific seminar, total **90 hours**
- 2) Methodology of scientific research, total **15 hours**
- 3) Researcher's Workshop – total **30 hours**. It covers in particular the following topics: protection of intellectual property; publishing ethics and responsibility in scientific activities; scientific databases, scientific publication channels - books, journals and other forms; open science; knowledge transfer and commercialisation of research results; popularisation of science
- 4) Academic didactics – total **15 hours** of detailed didactics in the discipline of science, as well as Work experience in the form of teaching or participation in the teaching of classes, not exceeding **150 hours** in the entire education cycle. The minimum of Work experience in the entire training cycle is 30 hours The obligation of Work experience does not apply to doctoral students pursuing "doktorat wdrożeniowy" (Industry Doctoral Programme).

- 5) Interdisciplinary doctoral conference (doctoral forum) – active participation in the form of a presentation in a form agreed with the Director of the Doctoral School

The total programme comprises 150 hours and no more than 150 hours of Work experience in the form of teaching or participating in the teaching of courses amounting to a maximum of 60 teaching hours per year.

2. Obligatory elective courses

- 1) Specialist lectures, total **60 hours**
- 2) Specific nature of scientific work in the discipline of science – total **15 hours**. Classes developing professional skills, preparing a doctoral student for work of research or research and development nature. The classes cover in particular the following issues: scientific communication - presenting research results in Polish and in a foreign language; selection and evaluation of scientific journals; preparing scientific publications; methods of data analysis in scientific research; preparing research projects
- 3) Soft skills workshops – total **15 hours**. Classes cover in particular the following topics: communication and interpersonal skills; teamwork and study group management; decision-making, career planning and time management; intercultural competences

Total 90 hours.

3. Optional classes

Courses chosen individually by a doctoral student in agreement with a supervisor; selection from the offer of doctoral schools at Adam Mickiewicz University and from the offer of individual faculties.

II. Programme offer of the Doctoral School of Adam Mickiewicz University

The didactic offer of the Doctoral School of Exact Sciences of Adam Mickiewicz University is determined annually. Information about the offered courses is announced on the School's website two weeks before the start of the academic year. The information must include:

- 1) the status of the course (obligatory, obligatory elective);
- 2) the type and form of the course;
- 3) the language of instruction
- 4) the assumed learning outcomes
- 5) the educational contents leading to the achievement of the learning outcomes
- 6) the form of verification of the assumed learning outcomes
- 7) the number of contact hours with the academic teacher.

III. Types and forms of courses

1. Classes may take the form of lectures, exercises, workshops, laboratory classes, training courses, schools (summer/winter), seminars and field classes.
2. Classes are conducted in Polish or English. The programme offer of the Doctoral School of Exact Sciences at Adam Mickiewicz University enables a doctoral student not knowing the Polish language to fulfil the programme requirements.
3. The classes may take place on the premises of the University as well as outside it.

IV. Verification of the learning outcomes

1. The verification of the learning outcomes of a given course may take the form of a written and/or oral examination, a written and/or oral credit exam, or a public presentation.
2. Active participation in an interdisciplinary doctoral conference "doctoral forum", organised by the doctoral school, is an obligatory element of the educational framework.
3. The rules of participation in the "doctoral forum" and the requirements for doctoral students in particular years of training are determined by the director of the doctoral school of exact sciences.

Obligatory and obligatory elective courses	SEMESTER									Learning outcomes
	Hours	1	2	3	4	5	6	7	8	
Interdisciplinary scientific seminar	90	15	15	15	15	15	15			E_W01, E_U01, E_U02, E_U05, E_U06, E_K01, E_K03, E_K05, E_W08
Methodology of scientific research	15	15								E_W02, E_U01, E_U02
Academic didactics	15	15								E_W07, E_U10, E_U08
Researcher's workshop ^{**1)}	30		30							E_W03, E_W04, E_W06, E_U01, E_U02, E_U03, E_U07, E_U08, E_K02, E_K04
Specific nature of work in a discipline ^{**2)}	15			15						E_W05, E_U04, E_U05, E_U06, E_U07, E_U09, E_K05
Soft skills workshop ^{***1)}	15					15				E_K02, E_K05, E_U08
Specialist lectures	60	20		20		20				E_U02, E_U05, E_K04, E_K05
Work experience ²⁾	30-150			Max. 60		Max. 60		Max. 30		E_W07, E_U10, E_K02, E_K03
Interdisciplinary doctoral conference (doctoral students forum)			x				x			E_U01, E_U05, E_U06, E_U08, E_K01, E_K05
Optional classes										
Interdisciplinary block of elective courses			x	x	x		x	x		
Preparation of doctoral dissertation										
Achievement of the Individual Research Plan		x	x	x	x	x	x	x	x	E_W01, E_W02, E_W03, E_W04, E_W05, E_U01, E_U02, E_U04, E_U05, E_U06, E_U07, E_U08, E_K01, E_K02, E_K03, E_K04, E_K05
Mid-term evaluation					x					
Submission of doctoral dissertation									x	
TOTAL classes	240									

* problems: protection of intellectual property, copyright law, law on higher education, publishing ethics and reliability in academic activity, knowledge transfer and commercialisation of research results; popularisation of science, etc.

** classes developing professional skills, preparing the doctoral student for work of a research or research and development nature (raising funds for research, presentation of research results, elements of bibliometrics, preparation of scientific publications, etc.).

*** teamwork and research group management, interpersonal communication, intercultural competences, decision-making, career planning and time management, etc.

¹ In the case of doctoral students pursuing "doktorat wdrożeniowy" (Industrial Doctoral Programme), the module taught may be implemented in an enterprise and credited by the director of the Doctoral School on the basis of a detailed report from the enterprise indicating the educational results achieved.

² The Work experience obligation does not apply to doctoral students pursuing "doktorat wdrożeniowy" (Industrial Doctoral Programme)