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RESOLUTION NR 12

**of the TEACHING COUNCIL FOR THE FIELDS OF STUDY OF COMPUTER SCIENCE,
MATHEMATICS AND COMPUTATIONAL ENGINEERING**

of 9 June 2021

**on the adoption of detailed graduation rules and requirements for the
field of study Machine Learning**

Pursuant to Article 68 section 2 of the Statute of the University of Warsaw (Monitor UW of 2019, item 190)

in conjunction with Article 1 section 8 of the Rules of Study at the University of Warsaw (Monitor UW of 2019, item 186) and the Resolution nr 4 of the University Education Council on the guidelines for the diploma process at the University of Warsaw (Dziennik UW URK of 2020, item 4), the Teaching Council resolves as follows:

§ 1

The Detailed graduation rules and requirements for the field of study of Machine Learning are hereby adopted and appended to the present Resolution.

§ 2

The resolution shall enter into force on the day of its adoption.

Chairperson of the Teaching Council: *P. Goldstein*

Detailed graduation rules and requirements for the field of study of *Machine Learning*

1. The diploma examination process.

- 1.1. The graduation process consists of:
 - a) completion of two one-year cycles of a master seminar,
 - b) preparation of the master thesis,
 - c) taking the diploma examination.
- 1.2. A student who has received an unsatisfactory grade in the diploma examination on both dates is obliged, in case of resuming the studies, to go through the diploma process again in the scope indicated by the Head of the Educational Unit (hereafter: EUH).

2. Master seminars

- 2.1. The condition to obtain credit for master seminar is:
 - a) in the first year of studies: having an approved topic for the master thesis,
 - b) in the second year of studies: submitting the master thesis, positively evaluated by the thesis supervisor, in the Archive of Diploma Theses (APD).
- 2.2. Conducting master seminars, supervising magister (master) degree theses, and carrying out diploma examinations shall be entrusted to the academic teachers holding at least a doctoral degree.
- 2.3. Unless otherwise decided, the supervisor of the thesis shall be the person conducting a master seminar in which the student participates.
- 2.4. An academic teacher from the University of Warsaw (hereinafter: UW), not employed at the Faculty of Mathematics, Informatics and Mechanics (hereinafter: MIM), may supervise a diploma thesis if, due to the subject of the thesis, his/her competences and experience speak for it.
- 2.5. In justified cases, at the student's request, the Teaching Council may also authorise a specialist from outside the University to supervise the preparation of the thesis. In such a case, the Teaching Council, at the request of the Head of the Educational Unit (hereinafter: EUH), shall additionally appoint a co-supervisor of the thesis on behalf of the Faculty of MIM.
- 2.6. Co-supervising the preparation of diploma theses is also entrusted to academic teachers not employed at the University of Warsaw who co-run master seminars at the Faculty of MIM. The supervisor of the preparation of the diploma thesis on behalf of the Faculty of MIM within

- the meaning of point 2.5 is, in that case, the academic teacher employed at the Faculty of MIM co-teaching these classes.
- 2.7. Unless the management of the relevant institute in agreement with EUH decides otherwise, an academic teacher employed at Faculty of MIM may supervise no more than 10 theses per academic year, including a maximum of 6 master theses.
 - 2.8. A change of master thesis supervisor requires the approval of EUH, unless the new supervisor is the co-teacher of the seminar for which the student is registered.

3. Diploma thesis topic

- 3.1. The student determines the topic of the thesis with the thesis supervisor, then the topic is approved by a Master thesis committee appointed by the Teaching Council.
- 3.2. When approving or rejecting a thesis topic, the assessment is based on:
 - a) the compatibility of the thesis topic with the study field and level of study,
 - b) the planned scope of the thesis,
 - c) the ability to complete the thesis within the planned time frame.
- 3.3. A change of the thesis topic requires its re-approval. This does not apply to a change of topic that does not affect the content of the thesis.
- 3.4. In the case of joint preparation of the diploma thesis, a precise specification of the contribution of each co-author shall be clearly specified in the introduction or in a separate part of the thesis. Information on the division of tasks between authors should allow an individual assessment of the effects of the work of each of them.
- 3.5. The thesis supervisor may request the EUH to cancel the approved thesis topic if at least two years have passed since the thesis topic was approved and the student has not maintained contact with the supervisor or made progress in the thesis.

4. Diploma (master) thesis

- 4.1. Diploma thesis should address research issues and problems - theoretical and/or practical - and may be in the form of a project, analytical or systematizing study. Preparation of the diploma thesis should demonstrate the student's ability to actively use the knowledge acquired during the studies, analytical thinking and logical reasoning, as well as the ability to conduct scientific research and independent search for source materials.
- 4.2. Diploma thesis shall be prepared based on the approved template available at the Faculty of MIM website.
- 4.3. The first page of the thesis should contain a short summary, keywords and the subject classification of the thesis according to [AMS](#)

[Mathematical Subject Classification 2000](#) or [ACM Computing Classification System](#).

- 4.4. The thesis must be archived in the [Archive of Diploma Theses \(APD\)](#).
- 4.5. If the diploma thesis includes programme code, this should also be archived in the APD.
- 4.6. If the thesis contains information protected by the law, the EUH may grant it the status of confidential at the student's request. Rules for the handling and archiving theses with confidential status are laid down in separate regulations.

5. **The tasks of thesis supervisor**

- 5.1. The supervisor of a diploma thesis is obliged to:
 - a) determine with the student the topic of the diploma thesis in accordance with the level, field and specialisation of the student's studies,
 - b) verify systematically the student's progress in writing the thesis,
 - c) discuss the rules for the use of literature and third-party works and theses and inform about the consequences in case of copyright infringement,
 - d) award the grade for the diploma thesis based on the criteria indicated under point 6 and the degree of the author's independence in preparation of the thesis,
 - e) examine the thesis with the Uniform Anti-Plagiarism System and refer to the report results.
- 5.2. The co-supervisor of the thesis on behalf of the Faculty of MIM is obliged to take over, if necessary, the duties of the supervisor from outside the UW, including replacing him/her at the diploma examination.

6. **The assessment of the diploma thesis**

- 6.1. A reviewer of a diploma thesis should be a specialist in the subject of the thesis, holding at least a PhD degree. In justified cases, the EUH may appoint as a reviewer a person without a degree or academic title.
- 6.2. Reviewers of theses are appointed by the EUH taking into account suggestions put forward by the supervisor of the thesis.
- 6.3. The review of a thesis should include:
 - a) an assessment of whether the topic is properly formulated and the consistency of the content with the topic,
 - b) evaluation of the thesis layout and structure,
 - c) assessment of the thesis content,
 - d) assessment of innovative approach to the problem,
 - e) evaluation of the choice of sources used,
 - f) evaluation of the formal aspect of the thesis,

- g) information on how the thesis can be used (as a publication, source material, material for students),
 - h) in the case of jointly prepared theses, an assessment of the student's unique contribution and the significance of this contribution to the overall diploma thesis,
 - i) assessment of the student's ability to independently solve the problems posed.
- 6.4. The student has the right to read the thesis reviews at least 3 days before the scheduled date of the diploma examination, unless the thesis has been submitted in violation of the deadline referred to in §47 of the Rules of Study at the University of Warsaw.
- 6.5. In the event of a difference in the grades of both reviews exceeding 1 grade, the student may apply to the EUH for the appointment of an additional reviewer, unless the appointment of such a reviewer would make it impossible to conduct the diploma examination by the scheduled graduation date or the date set in accordance with §47, section 2 of the Rules of Study at the University of Warsaw.

7. Admission to the diploma examination

- 7.1. Admission to the diploma examination shall be conditional upon:
 - a) obtaining all credits required by the study programme and obtaining the number of ECTS credits required in the particular field of study,
 - b) obtaining two positive grades for the thesis, awarded by the thesis supervisor and at least one thesis reviewer.

8. The diploma examination Committee

- 8.1. The diploma examination shall be conducted by a committee appointed by EUH and consisting of at least the chairperson of the diploma examination committee, the supervisor of the diploma thesis and the reviewer(s).
- 8.2. The list of persons authorised by EUH to chair the diploma examination committee is published on the Faculty of MIM website. In particularly justified cases, the EUH may authorise a person from outside this list to chair a particular diploma examination.
- 8.3. The task of the chairperson of the examination committee is to ensure the proper conduct of the examination, to settle disputes, to document the course of the examination and to announce the results of the examination.
- 8.4. In particularly justified cases, with the consent of the EUH, the thesis supervisor or reviewer may be replaced by another academic, teaching or research and teaching staff member of the Faculty.

9. **Diploma examination**

- 9.1. The master diploma examination consists of an oral presentation of the master thesis (up to 15 minutes) and answers to a total of three examination questions on the subject of the thesis.
- 9.2. The diploma examination Committee decides the final grade by a majority vote, taking into account all the elements of the examination. The examination Committee may assess each of the student's responses separately and may award a grade based on the average of the grades.
- 9.3. In justified cases, EUH, on the basis of an opinion of OPD (Office for Persons with Disabilities), may modify the form of the diploma examination, preserving, however, its substantial scope.

10. **Detailed rules for monitoring the diploma examination process**

- 10.1. Monitoring of the diploma examination process is entrusted to the Faculty Team for the Quality of Education, hereinafter referred to as the Team, operating at the Faculty of MIM and appointed by the Teaching Council. Within two months of the end of the academic year, the Team shall review graduation records from at least 10% of the student portfolios of the graduates who completed their studies in the previous academic year. At the request of the competent students' self-government body, the Team may additionally review the theses of designated graduates.
- 10.2. When analysing diploma theses, the Team pays particular attention to:
 - a) the required time frames for submitting diploma thesis by the student and for making the review of the thesis available to the student,
 - b) the relevance, completeness and accuracy of the justification for the thesis assessment,
 - c) differences in evaluations of the thesis and their validity,
 - d) the content-related scope of examination questions,
 - e) complying with the procedure of conducting diploma examinations described in the graduation rules and requirements at the Faculty of MIM.
- 10.3. The Team shall present a report to the Teaching Council showing the results of the analyses by the end of the calendar year.
- 10.4. If the Team's report shows irregularities, the Teaching Council shall draw up a corrective action plan and forward it, together with information on the outcome of the analyses, to the University Education

Council (UEC) by the end of the semester following the academic year that has been subject to these analyses.

- 10.5. A corrective action plan is created in consultation with the college of chairpersons of diploma examinations.