

## **STUDY TRACK *QUANTITATIVE ANALYSIS***

as part of the curriculum of the Interdisciplinary Doctoral School at the University of Warsaw

QUANTITATIVE ANALYSIS (QA) is a new study track within the curriculum of the Interdisciplinary Doctoral School (MSD) at the University of Warsaw, which will start in October 2023. The QA study track offers PhD students the opportunity to conduct cutting-edge research in a rapidly growing interdisciplinary field combining economics and mathematics. The QA track aims to prepare PhD students to analyse and solve challenging problems in economic policy, finance and the business world. Its foundations can also be used to analyse specific issues in, for example, health economics, environmental economics or the economics of the energy sector.

Individuals who demonstrate analytical skills are invited to join the QA study track. A prerequisite for admission to the QA track is a degree in social sciences (preferably economics) or mathematical and natural sciences. Graduates of business and economics programmes often lack in-depth training in quantitative methods, and mathematicians and statisticians rarely have a background in economics. The QA study track allows a combination of knowledge from these two fields. The diverse skill set allows for a more in-depth and reliable analysis of data and thus a more effective solution to complex economic problems.

1. **NUMBER OF SEMESTERS AND HOURS OF TEACHING:** The study track is implemented from semester I to semester III or IV with 65 to 80 hours of additional teaching in relation to the compulsory classes for all MSD doctoral students (the difference in the number of hours depends on the length of individual courses within each block of classes).
2. **COURSES IN THE QA STUDY TRACK:** The study track consists of four thematic blocks (see: Table 1).
3. **LANGUAGE OF INSTRUCTION:** English.
4. **FINANCIAL SUPPORT:**
  - After getting the credit for all courses in the QA study track and after a positive mid-term evaluation of the PhD progress, the PhD student will receive an additional scholarship (above the basic MSD PhD scholarship), funded by the Faculty of Economic Sciences of the University of Warsaw (WNE). The amount of the monthly extra scholarship offered by WNE will be PLN 1000 gross (scholarship payable from semester V to semester VIII, once the above-mentioned conditions have been fulfilled (for no longer than - in total - 24 months).
  - WNE covers the costs of attending a course or workshop at a renowned foreign university. Participation in the course requires the approval of the supervisors, the QA study track coordinator and the Dean of WNE and the Director of MSD. The maximum cost of funding is PLN 15,000. The expenses that are covered include: the course fee and possible travel and accommodation costs.
  - PhD students of the QA study track may apply for funding for their research and travel abroad both at WNE and at the Faculty of Mathematics, Informatics and Mechanics UW (MUMUW).

5. LIMIT OF PLACES PER YEAR: 6 students. The prerequisites for admission to the QA study track include successful recruitment to the MSD in a given year, a degree in the social sciences (preferably economics) or in the mathematical sciences or natural sciences and a declaration of the willingness to join the QA study track. Admission is determined by place on the ranking list during the recruitment procedure to the MSD.
6. SUPERVISORS: at least one of the PhD supervisors should be a member of the faculty from WNE or MIMUW.

Table 1. Compulsory training activities for students joining QA study track

Theme block	Institution offering training	Courses	Number of hours	Semester	ECTS points	Source of education program description
<b>1. ECONOMICS</b>	SDNS (Social Sciences Doctoral School of the University of Warsaw)	One to be chosen out of the following: a) Advanced Microeconomics b) Advanced macroeconomics c) Advanced finance	20-30	I or II	2-3	Monitor UW Item 16 RESOLUTION NR 210 OF THE SENATE OF THE UNIVERSITY OF WARSAW of January 18, 2023 on the educational program in the Doctoral School of Social Sciences <a href="https://monitor.uw.edu.pl/Lists/Uchway/Attachments/6397/M.2023.16.U.210.pdf">https://monitor.uw.edu.pl/Lists/Uchway/Attachments/6397/M.2023.16.U.210.pdf</a> pages 11-12
<b>2. QUANTITATIVE METHODS</b>	SDNS (Social Sciences Doctoral School of the University of Warsaw)	One to be chosen out of the following: a) Spatial data analysis b) Time series and dynamic panels c) Unit level data d) Other courses (upon approval by the QA track coordinator)	20	I or II	2	See Appendix 1 for methodological and methodical activities.

<b>3. MATHEMATICS</b>	SDNŚiP (Doctoral School of Exact and Natural Sciences of the University of Warsaw)	Monograph lecture made available to doctoral students by the Faculty of Mathematics, Informatics and Mechanics of the University of Warsaw	15	I lub II	2	Monitor UW Item 16 RESOLUTION NO. 210 OF THE SENATE OF THE UNIVERSITY OF WARSAW of January 18, 2023 on the educational program in the Doctoral School of Exact and Natural Sciences <a href="https://monitor.uw.edu.pl/Lists/Uchway/Attachments/6398/M.2023.17.U.211.pdf">https://monitor.uw.edu.pl/Lists/Uchway/Attachments/6398/M.2023.17.U.211.pdf</a>  pages 9-10
<b>4. CLASSES CHOSEN TO MATCH THE PhD STUDENT'S RESEARCH TOPIC</b>	A reputable foreign university (online participation acceptable)	Training chosen upon consultation with PhD supervisors and QA track coordinator	10-15	II, III or IV	Min. 2	

Appendix 1. - Classes for doctoral students offered by the Faculty of Economic Sciences UW in the academic year 2023/2024.