

## Subject card

|                                             |                                                                                                                                                                                                                                                         |                                                          |                                         |                                     |                                                                          |            |     |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------------------------------|-------------------------------------|--------------------------------------------------------------------------|------------|-----|
| Subject name and code                       | Practical Teaching of Mathematics 1 in Secondary School I, PG_00207042                                                                                                                                                                                  |                                                          |                                         |                                     |                                                                          |            |     |
| Field of study                              | Mathematics                                                                                                                                                                                                                                             |                                                          |                                         |                                     |                                                                          |            |     |
| Date of commencement of studies             | October 2026                                                                                                                                                                                                                                            |                                                          | Academic year of realisation of subject |                                     | 2026/2027                                                                |            |     |
| Education level                             | Master's studies                                                                                                                                                                                                                                        |                                                          | Subject group                           |                                     | Obligatory subject group in the field of study<br>Optional subject group |            |     |
| Mode of study                               | full-time studies                                                                                                                                                                                                                                       |                                                          | Mode of delivery                        |                                     | at the university                                                        |            |     |
| Year of study                               | 1                                                                                                                                                                                                                                                       |                                                          | Language of instruction                 |                                     | Polish                                                                   |            |     |
| Semester of study                           | 2                                                                                                                                                                                                                                                       |                                                          | ECTS credits                            |                                     | 3.0                                                                      |            |     |
| Learning profile                            | academic                                                                                                                                                                                                                                                |                                                          | Assessment form                         |                                     | credit                                                                   |            |     |
| Conducting unit                             | Institute of Mathematics -> Faculty of Mathematics, Physics and Informatics -> Rector                                                                                                                                                                   |                                                          |                                         |                                     |                                                                          |            |     |
| Name and surname of lecturer (lecturers)    | Subject supervisor                                                                                                                                                                                                                                      |                                                          | dr Adrian Karpowicz                     |                                     |                                                                          |            |     |
|                                             | Teachers                                                                                                                                                                                                                                                |                                                          |                                         |                                     |                                                                          |            |     |
| Lesson types                                | Lesson type                                                                                                                                                                                                                                             | Lecture                                                  | Tutorial                                | Laboratory                          | Project                                                                  | Seminar    | SUM |
|                                             | Number of study hours                                                                                                                                                                                                                                   | 0.0                                                      | 30.0                                    | 0.0                                 | 0.0                                                                      | 0.0        | 30  |
|                                             | E-learning hours included: 0.0                                                                                                                                                                                                                          |                                                          |                                         |                                     |                                                                          |            |     |
| Learning activity and number of study hours | Learning activity                                                                                                                                                                                                                                       | Participation in didactic classes included in study plan |                                         | Participation in consultation hours |                                                                          | Self-study | SUM |
|                                             | Number of study hours                                                                                                                                                                                                                                   | 30                                                       |                                         | 6.0                                 |                                                                          | 39.0       | 75  |
| Subject objectives                          | The aim of the internship is to gain experience related to the didactic and educational work of a teacher and to confront the acquired knowledge in the field of subject-specific didactics with the pedagogical reality through practical application. |                                                          |                                         |                                     |                                                                          |            |     |

| Learning outcomes | Course outcome | Subject outcome                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Method of verification                                                                                                                                            |
|-------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   |                | <p>The student knows and understands:</p> <p>the teaching tasks carried out by a school or educational institution;</p> <p>the functioning and organization of teaching work at a school or educational institution;</p> <p>the types of documentation of teaching activities conducted at a school or educational institution.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <p>[SW1] oral statement/conversation/discussion</p> <p>[SW3] text preparation/written work</p>                                                                    |
|                   |                | <p>The student is able to:</p> <p>draw conclusions from observing the teacher's teaching, their interactions with students, and the way teaching is planned and conducted;</p> <p>actively observe the teacher's methods and work formats, the teaching aids used, as well as the methods of assessing students and assigning and checking homework;</p> <p>plan and conduct a series of lessons or activities under the supervision of the internship supervisor;</p> <p>analyze, with the assistance of the internship supervisor and academic teachers conducting classes in the field of psychological and pedagogical preparation, pedagogical situations and events observed or experienced during the internship. The student is ready to:</p> <p>effectively collaborate with the internship supervisor and teachers to expand their teaching knowledge and develop their educational skills.</p> | <p>[SU1] oral statement/conversation/discussion</p> <p>[SU6] demonstration of practical skills</p> <p>[SU8] observation of student's independent or team work</p> |
|                   |                | <p>The student is ready to:</p> <p>effectively collaborate with the internship supervisor and teachers to expand their teaching knowledge and develop their educational skills.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <p>[SK8] observation of student's independent or team work</p>                                                                                                    |

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|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Subject contents                                               | <ul style="list-style-type: none"><li>• The organization of the mathematics teaching process in secondary school.</li><li>• Structure and types of lessons. Practical exercises in preparing lesson plans.</li><li>• Various classroom work methods, including individual student work and group work.</li><li>• Adjusting teaching methods, didactic materials, and language of instruction to the student's developmental stage and level of mathematical proficiency.</li><li>• Issues related to monitoring and assessing students work.</li><li>• Supporting the development of gifted students and those interested in mathematics. Measures to support students struggling with mathematics.</li><li>• Observation and teaching of lessons by students; analysis of these lessons. Documentation of activities.</li><li>• Introducing students to the content found in secondary school textbooks and problem sets.</li><li>• Practical exercises in solving tasks (both typical and more challenging) and in writing down reasoning in a clear, correct, and student-accessible manner.</li></ul> |                                                                                                                                                                                                                                                                                                                                                                                                                        |                               |
| Prerequisites and co-requisites                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                        |                               |
| Assessment methods and criteria                                | Subject passing criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Passing threshold                                                                                                                                                                                                                                                                                                                                                                                                      | Percentage of the final grade |
|                                                                | Conducting lessons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 51.0%                                                                                                                                                                                                                                                                                                                                                                                                                  | 60.0%                         |
|                                                                | Activity in discussion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 51.0%                                                                                                                                                                                                                                                                                                                                                                                                                  | 20.0%                         |
|                                                                | Observation of the student's attitude                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 51.0%                                                                                                                                                                                                                                                                                                                                                                                                                  | 0.0%                          |
|                                                                | Lesson plans                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 51.0%                                                                                                                                                                                                                                                                                                                                                                                                                  | 20.0%                         |
| Recommended reading                                            | Basic literature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <ul style="list-style-type: none"><li>• Core curriculum, teaching programs, methodological guides, and other materials for teachers.</li><li>• School textbooks, workbooks, problem sets, and other resources for students.</li><li>• Popular science books and articles.</li><li>• Journals for mathematics teachers (e.g., <i>Matematyka</i>, <i>Matematyka w Szkole</i>, <i>Nauczyciel i Matematyka</i>).</li></ul> |                               |
|                                                                | Supplementary literature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Websites dedicated to didactic theory as well as practical solutions and best practices used in teaching at the secondary school level.                                                                                                                                                                                                                                                                                |                               |
|                                                                | eResources addresses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                        |                               |
| Example issues/<br>example questions/<br>tasks being completed | none                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                        |                               |
| Work placement                                                 | Field exercises                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                        |                               |

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