

Study program: Master in Mathematics Teaching(MP)
Level: master
Course title: The teaching of mathematics2 (MP-05)
Lecturer: Dr Dragoslav Đ. Herceg, full professor
Status: obligatory
ECTS: 5
Learning objectives This course teaches students knowledge and skills necessary for the teaching of mathematics.
Learning outcomes Students will learn to apply contemporary methodical principles and modern educational techniques and technology for preparation and teaching of mathematics.
Syllabus <i>Theoretical instruction</i> Analysis of the curriculum for elementary school mathematics. Analysis of curricula for middle school mathematics, with special emphasis on the mathematical sciences. Technical and methodological aspects of some important topics in mathematics for elementary and secondary schools. Basic concepts of teaching. Didactic principles. Teaching forms. Types of modern teaching and learning models. Problem-programmed, differentiated and individualized teaching. Comparison. Analysis and Synthesis. Generalizations and abstractions. Organisation of teaching mathematics. Lesson plans. Mathematics class as a basic form of teaching. Education system of preparation for class. Educational technology. The classification of educational and technical resources. The use of calculators and computers in the teaching of mathematics. Complementary and supplementary education and extracurricular activities of students in mathematics. The method of work in schools with high volume of mathematics and its performance. Problems of modernization of the teaching of mathematics. Monitoring and evaluating the work and achievements of students. The aim and objectives of evaluation in education. Characteristics evaluation and assessment methods. Assessment Criteria and Standards. <i>Exercises</i> The written preparation of class, demonstration lesson and students lecturing in elementary and secondary schools, analysis of teaching and instruction.

Literature

<ol style="list-style-type: none"> 1. Zech, F.: <i>GrundkursMathematik didaktik–theoretische und praktische Anleitungen fur das Lehren und Lernen von Mathematik</i>, Beltz Verlag – Weinheim und Basel, Berlin, 1999. 2. Marjanović, M. : <i>Metodika matematike I</i>, Učiteljski fakultet, Beograd, 1996. 3. Marjanović, M. : <i>Metodikamatematike II</i>, Učiteljskifakultet, Beograd, 1996.
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Weekly teaching load

Lectures 2	Exercises 2	Other forms of teaching	Student research	Other
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Teaching methods

Lectures, written analysis prepared for classes and class demonstrations. Analysis of classes held in the elementary and secondary schools. Tests.

Grading method (maximal number of points 100)
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Pre-exam obligations	points	Final exam	points
Activity during Lectures	2	Oral exam	40
Activity during Exercises	8	Practical exam	20
Colloquia	30		