

THEORY OF MATHEMATICS EDUCATION

Characteristics of the study program

- *Title of the study program:* Theory of mathematics education
- *Study field:* 9.1.8 Theory of mathematics education
- *Degree of the study:* doctoral
- *Duration of study:* 3 academic years
- *Degree:* philosophiae doctor (PhD.)
- *Guarantor of the program:* prof. RNDr. Pavol Hanzel, CSc.

Scope of the study program

The main focus of the program is the study and research of educational and methodologic aspect of mathematics education mainly at the levels of age groups 10-20, but including also many aspects of life-long learning. The research topics cover a wide area from general questions, like assessment in mathematics or misconception in mathematical education to methodological problems of particular areas like set theory or infinitesimal calculus. The students are encouraged to individual and team scientific work as well as to practical work in mathematics education. A plan of the study is prepared by the supervisor, and should be approved by a committee.

Profile of a graduate

A graduate has a wide overview of modern educational methods in mathematics, is able to work with contemporary technology used in education and has the skills necessary for effective teaching. He is aware of the methods of research in education, is familiar with current international trends in his selected area and follows the respective scientific literature. He is able to use statistical methods for educational research. He is able to achieve the original research results and present them of scientific community in the form of publications and outputs on conferences and any professional events. He is able to apply theoretical knowledge in practice in the educational process, in preparing teaching materials and creative use of educational software.

Requirements on applicants

An applicant is required to have completed the master degree in education of mathematics or in mathematics and possess a good knowledge in mathematics at the level of an undergraduate study. Masters in other subjects are considered on case-by-case basis. All applicants have to pass an entrance exam, consisting of written and oral part. The applicant should have English language skills at least on the level necessary to read a scientific text. The exam committee is appointed by the Dean of the Faculty of Natural Sciences. Supervisor of a prospective graduate student is a member of the exam committee.

Members of the Mathematics Methodology division of the Graduate School:

Prof. Pavol Hanzel, CSc.

Assoc. Prof. Vladimír Janiš, CSc.

Assoc. Prof. Miroslav Haviar, CSc.

Mgr. Daniela Guffová, PhD.

Mgr. Katarína Sebínová, PhD.

Fees: 4000€ per ac. year

Fee does not cover living expenses at the place. Students may apply for accommodation at the dormitories of Matej Bel University (see <http://www.umb.sk>).

Contact:

Prof. Pavol Hanzel, CSc.

Department of Mathematics

e-mail: pavol.hanzel@umb.sk

Phone: 00421/48/446 7223

Assoc. Prof. Vladimír Janiš, CSc.

Department of Mathematics

e-mail: vladimir.janis@umb.sk

Phone: 00421/48/446 7228