

Educational Programme	<b>Didactic Mathematics - in Hungarian</b>
Degree Awarded	Master in Mathematics
Standard Length of Studies (Number of ECTS Credits)	2 years, 4 semesters, 120 ECTS
Type of Study	Full-time
Higher Education Institution	Babes Bolyai University
Faculty / Department	Faculty of Mathematics and Computer Science
Contact Person	dr. Anna Soos
Phone	+40264405327
Fax	+40264591906
E-mail	<a href="mailto:asoos@math.ubbcluj.ro">asoos@math.ubbcluj.ro</a>
Profile of the Degree Programme	Didactic Mathematics degree program
Target Group / Addressees	Graduated in Mathematics, Computer Science, Physics, Engineering, Chemistry, Biology
Entrance Conditions	The overall three-year undergraduate average grade is taken into consideration as selection criterion
Further Education Possibilities	The master's program aims at providing students with the appropriate tools for further doctoral studies and professional activity.
Description of Study	Teaching modern mathematics and carrying out various training programmes and methods; drawing up and assessing methods and textbooks for primary and lower secondary education; [lanning and evaluation of teaching – learning processes, as well as in research methods applied to modern mathematics. Core courses: Special Topics in Modern Didactics I, Algorithmic Geometry, Analysis of Stochastic Phenomena, Methodical Aspects in Elementary Analysis I, Complex Numbers and Applications in Geometry, Groups and Symmetries, Number Theory and Combinatorics, Differential Equations with Applications, Classical Theorems in Elementary Geometry, Resolving Methods of Computer Science Problems, Geometrical Constructions Groups and Symmetries, The Role of Counterexamples in Teaching of Mathematical Analysis
Purposes of the Programme	This Master Programme has the purpose of broadening the horizon of knowledge and raising the level of competence in Mathematics and its Teaching.
Specialization / Area of Expertise	Teacher in Mathematics (different levels), researcher in Mathematics
Extra Peculiarities	Problem solving in informatics
Practical Training	In the 4 <sup>th</sup> semester of the program the students participate to work in schools.
Final Examinations	Disertation thesis
Gained Abilities and Skills	Professional and transversal competencies: Ability to understand and manipulate basic and advanced concepts, results and theories in the fields of mathematics. Ability to understand methodical and scientific papers in the fields of mathematics, to put new problems and to

	<p>initiate new methodical and scientific research.</p> <p>Ability to inform themselves, to work independently or in a team in order to realize studies and to solve complex problems.</p> <p>Ability to use mathematical software in the teaching process.</p> <p>Ability to communicate in a scientific language and to make methodical and scientific reports and papers.</p> <p>Ability to motivate and communicate current results from mathematics by using models from other sciences, economics and engineering.</p> <p>Ability to communicate and teach fundamental and advanced knowledge from the fields of mathematics.</p> <p>Ability to use basic and complementary knowledge in pursuing a doctoral program in the fields of Mathematics.</p> <p>Ability to adapt and integrate themselves in different environments from education, research and economy.</p> <p>Ability for continuous self-perfecting and study.</p>
Job Placement, Potential Field of Professional Activity	Teachers to different levels: elementary schools, secondary schools, high schools, post high school and university.

Date: October 25, 2010

Signature: