PROGRAMME PROFILE

Educational Program	**Mathematics**
Degree Awarded	Master Diploma in Mathematics
Standard Length of Studies (Number of ECTS Credits)	2 years—4 semesters; 120 credits
Type of Study	Full-Time
Higher Education Institution	Babes-Bolyai University Cluj-Napoca, Romania
Faculty / Department	Faculty of Mathematics and Computer Science
Contact Person	Simion Breaz
Phone	+40 264 430500
Fax	+40 264 591906
E-mail	bodo@math.ubbcluj.ro
Website	cs.ubbcluj.ro
Profile of the Degree Program	Mathematics
Target Group / Addressees	Bachelor degrees in Mathematics, Computer Science, Physics, Philosophy, Economics, Engineering , Chemistry, Biology, etc.
Entrance Conditions	The overall three-year undergraduate average grade is taken into consideration as selection criterion. Candidates who graduated other than Mathematics, Computer Science or Engineering programmes should pass a test of general knowledge in Mathematics (at bachelor level)
Further Education Possibilities	The master' s programme purpose is to provide students with the appropriate tools for further doctoral studies and professional activity.
Description of Study	The programme concentrates in the core areas of algebra, analysis, geometry and topology, but it also spills into some specialized themes of pure mathematics, in order to focus the students' knowledge on certain modern themes and to continue their training in modern fields of Mathematics. Core courses: Groups Theory and Applications, Special Chapters in Functional Analysis, Riemannian Geometry, Special Chapters in Real Analysis, Module Theory, Convex Analysis, Analysis on Varieties, Special Chapters on Complex Functions.
Purposes of the program	This programme emphasizes mathematics used in other sciences, in teaching and in new applications of pure mathematics (in computational mathematics, optimization etc) through seminars and case studies. The students will be prepared for either a Ph.D. degree or employment in industry or public service.
Specialization / Area of Expertise	Specializations in various domains of pure mathematics: • Algebra (group theory, linear algebra), • Geometry (differential geometry, Riemannian geometry), • Mathematical Analysis (Functional analysis, optimization, complex analysis)

Extra Peculiarities	Science: Categories, number theory, Morse theory, applied functional analysis, complex functions. Teaching: Pedagogical theories in math education
Practical Training	Research in mathematics, practice in education
Final Examinations	A research thesis is defended in an oral examination. The student should demonstrate the ability to do independent analysis and research.
Gained Abilities and Skills	• Ability to understand and manipulate advanced concepts of fundamental mathematical structures. • Ability to transmit and value the studied knowledge and methods. • Ability to analyze, understand, approach and modelling problems of mathematical nature from other areas. • Ability to permanently learn, understand and apply the most recent scientific results. • Ability to work independently and/or in a team in order to solve problems in various professional contexts. • Ability in verbal and written communication of ideas and knowledge.
Job Placement, Potential Field of Professional Activity	Students who graduate this programme may activate in any institution or company of the economy and administration in positions requiring the ability to analyze, understand, approach and solve various practical problems whose solutions request a critical, creative and rigorous thinking. As well, the holder of this programme may activate, in the condition of graduating the pedagogical module, as a teacher of Mathematics in any state or private educational institution at all levels.

Date: October 25, 2010

Signature: