

Educational Programme	<b>Intelligent Systems</b>
Degree Awarded	Master in Computer Science
Standard Length of Studies (Number of ECTS Credits)	2 years – 4 semesters – 120 ECTS
Type of Study	Full-time
Higher Education Institution	Babeş-Bolyai University
Faculty / Department	Faculty of Mathematics and Computer Science
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Profile of the Degree Programme	Intelligent Systems
Target Group / Addressees	Bachelor of Computer Science, Mathematics, Economics, Electrical Engineering, Physics, Chemistry, Biology, Psychology etc.
Entrance Conditions	The average grade of undergraduate studies is taken into consideration as the selection criterion.
Further Education Possibilities	Doctoral studies
Description of Study	<p>The programme structure covers the main topics in Intelligent Systems and related areas. Tools for developing real world applications are presented.</p> <p><i>Core courses:</i></p> <p>Evolutionary Algorithms  Machine Learning  Advanced Methods of Data Analysis  Knowledge Discovery in Wide Area Networks  Advanced Evolutionary Computing in Solving Complex Problems  Knowledge Based Systems and Language Technology  Unconventional Computing in Solving Real-World Problems  Knowledge Discovery and WEB Semantics  Cooperative Intelligent Agents  Genetic Programming and Applications  Methodology of Scientific Research in Computer Science  Software Architecture  Computational Approaches for Natural Language Semantics</p>
Purposes of the Programme	<p>The aims of the programme are</p> <ol style="list-style-type: none"> <li>i. to offer the main conceptual and computational tools of Artificial Intelligence</li> <li>ii. develop skills for coping with real world problems</li> <li>iii. develop research abilities</li> </ol>
Specialization / Area of Expertise	AI, Intelligent systems, Natural Computing, Metaheuristics, Evolutionary computation
Extra Peculiarities	Optional: Practice of Education.
Practical Training	In the 2 <sup>nd</sup> year (4 <sup>th</sup> semester) of the program the students participate in a research project in the field of Intelligent

	Systems.
Final Examinations	Research thesis
Gained Abilities and Skills	<p>Among the many, the following abilities and skills can be mentioned:</p> <ul style="list-style-type: none"> <li>- knowledge and usage of evolutionary computation methods and technologies;</li> <li>- developing applications that use metaheuristic methods;</li> <li>- strong mathematical fundamentals for intelligent systems;</li> </ul>
Job Placement, Potential Field of Professional Activity	<p>Experts in software companies;  Research, university.</p>