

Educational Programme	Distributed Systems in Internet
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
Contact Person	Prof. PhD Florian BOIAN
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Profile of the Degree Programme	Distributed Systems in Internet degree program
Target Group / Addressees	Graduates in Mathematics, Informatics, Economics, Electrical/Electronic Engineering, Physics, Chemistry, Biology, etc.
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	<p>The information technology is widely used in the global business environment. Virtual shops present in our homes through Web sites, provide the easiest way for the buyer to make everyday purchases. The Distributive Systems in Internet master's program offer theoretical and practical knowledge in this domain.</p> <p><i>Core courses:</i> Java Technologies and Platforms for Distributed Applications, Databases in Internet, Management of Software Projects, Modular Arithmetic and Cryptography, Web Services and Middleware Technology, Security Protocols in Communications, Grid, Cluster and Cloud Computing, Distributed Algorithms and Advanced Techniques in Distributed Systems, Formal Methods of Concurrency and Communications, Computational Statistical Models, Methodology of Scientific Research in Computer Science, Multimedia Streaming, Dynamic Networks and Specialised Operating Systems.</p>
Purposes of the Programme	In recent years there is a growing demand from the students to specialize in areas close to Internet communication, computer network applications in different environments. The program was created to respond to that demand, offering theoretical knowledge in information technology and application of theoretical knowledge in information security, communications and distributive systems.
Specialization / Area of Expertise	Internet communication, computer network applications, information security, open sources and commercial

	information technologies
Extra Peculiarities	Optional: Practice of Education.
Practical Training	In the 2 nd year (4 th semester) of the program the students participate in a research project in the field of Distributive 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"> - Knowledge and usage of actual Java platforms and technologies. - Developing applications of database in Internet. - Project management skills (special emphasis on IT projects). - Practices regarding Internet communication; - Knowledge and practices in middleware systems and web services. - Knowledge and practices in grid, cloud and cluster computing. - Concepts involved in specialized operating systems, adaptive networks, mobile and wireless systems, multimedia streamings. - Strong mathematical fundamentals for concurrent distributed systems; - Knowledge and simulation of some statistical models oriented on software products.
Job Placement, Potential Field of Professional Activity	<p>Experts in software companies. Research assistant in distributed informatics. Developer positions, tester positions. Administrator of web sites, data-base systems, networks.</p>

Head of the program,
Prof. dr. Florian BOIAN