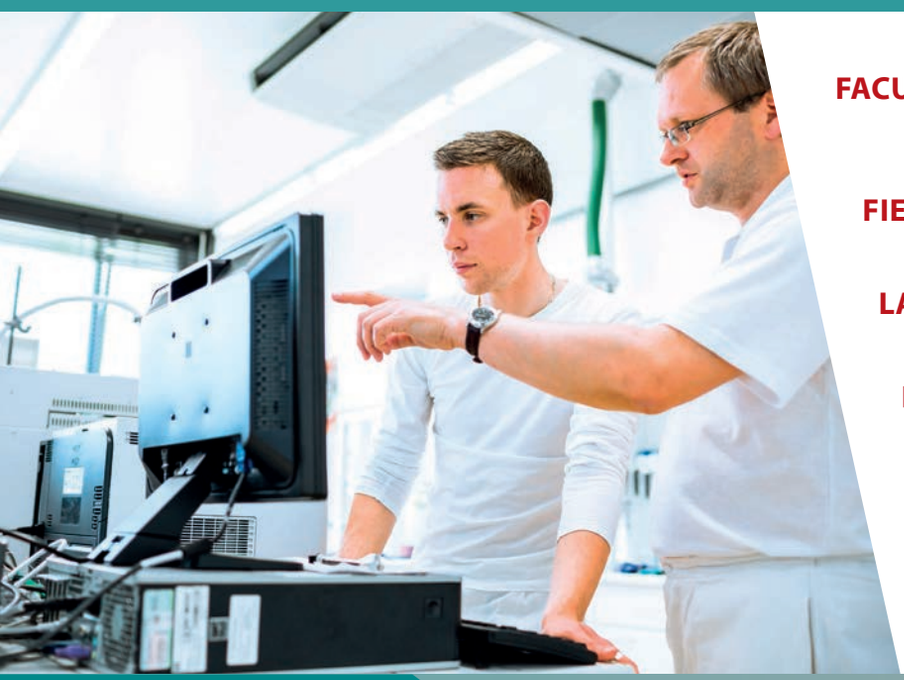
TECHNICAL UNIVERSITY OF CLUJ-NAPOCA ROMANIA

# Computer Science And Software Engineering



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| **FACULTY** | ***Faculty of Science*** |
| **FIELD OF STUDY** | ***Informatics*** |
| **LANGUAGE** | ***English*** |
| **DEGREE AWARDED** | ***Master of Science (MSc)*** |
| **DURATION** | ***4 semesters/2 years*** |
| **CREDIT POINTS** | ***120+10 ECTS*** |

## OBJECTIVES

The CSSE master program offers solid theoretical knowledge and familiarization with the tools and implementation methods in the field.
Main objectives:

- Opening to the new and innovative trends in computer science and software engineering by updating new knowledge in informatics
- Use of innovation in informatics and communication technologies
- Addressing a pluri-, inter- and transdisciplinary approach by making connections between computer science and informatics topics and other areas
- Focusing on the structural and procedural connections of each topic.
- Expressing a reflexive and self-evaluative behavior regarding the current activity
- Designing a professional self-development plan
- Involving in research activities
- Training IT specialists with the capacity to act independently and creatively in solving concrete problems, but also with the ability to coordinate efficient working groups and communication in interdisciplinary contexts
- Training teachers and scientific researchers in the field of informatics for future PhD studies

## GRADUATES

General competences

- Understanding and working with basic concepts in software engineering;
- Capability of analysis and synthesis;
- Modeling and solving real-life problems;
- Developing IT projects in an interdisciplinary context

Specific competences

- Assimilation of mathematical concepts and formal models to understand, verify and validate software systems;
- Analysis, design, and implementation of software systems;
- Proficient use of methodologies and tools specific to programming languages and software systems;
- Organization of software production processes;
- Projecting, designing and implementing of Web systems;
- Transversal Competences
- Ethic and fair behavior, commitment to professional deontology;
- Team work capabilities;
- Professional communication skills; concise and precise description, both oral and written, of professional results;
- Entrepreneurial skills; working with economical knowledge; continuous learning;
- Good English communication skills.

## MAIN TEACHING AREAS

- Algorithms for combinatorial optimization
- Advanced techniques for modeling and simulation
- Intelligent embedded systems
- Web technologies
- Java technologies

## ADMISSION REQUIREMENTS AND PROCESS, TUITION FEES

Check the information posted on the International Relations Office:
http://bri.utcluj.ro/RI2_en/admitere_eu_neu.php

## RESEARCH AREAS

- Software Engineering
- Software Modelling
- Software Architecture
- Project Management
- Combinatorial OIptimization

## JOB OPENINGS

The cognitive and professional relevance of the study program is defined by the flux of recent knowledge and technology development, the requirements of the labor market and the corresponding qualifications: programmers, networks and databases administrators, web technology specialists, etc.
The graduates will be able to work in software companies, economic and business environments (banks, insurance companies), hospitals, companies / technical firms and researchers and teaching staff in informatics.

## CONTACT

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