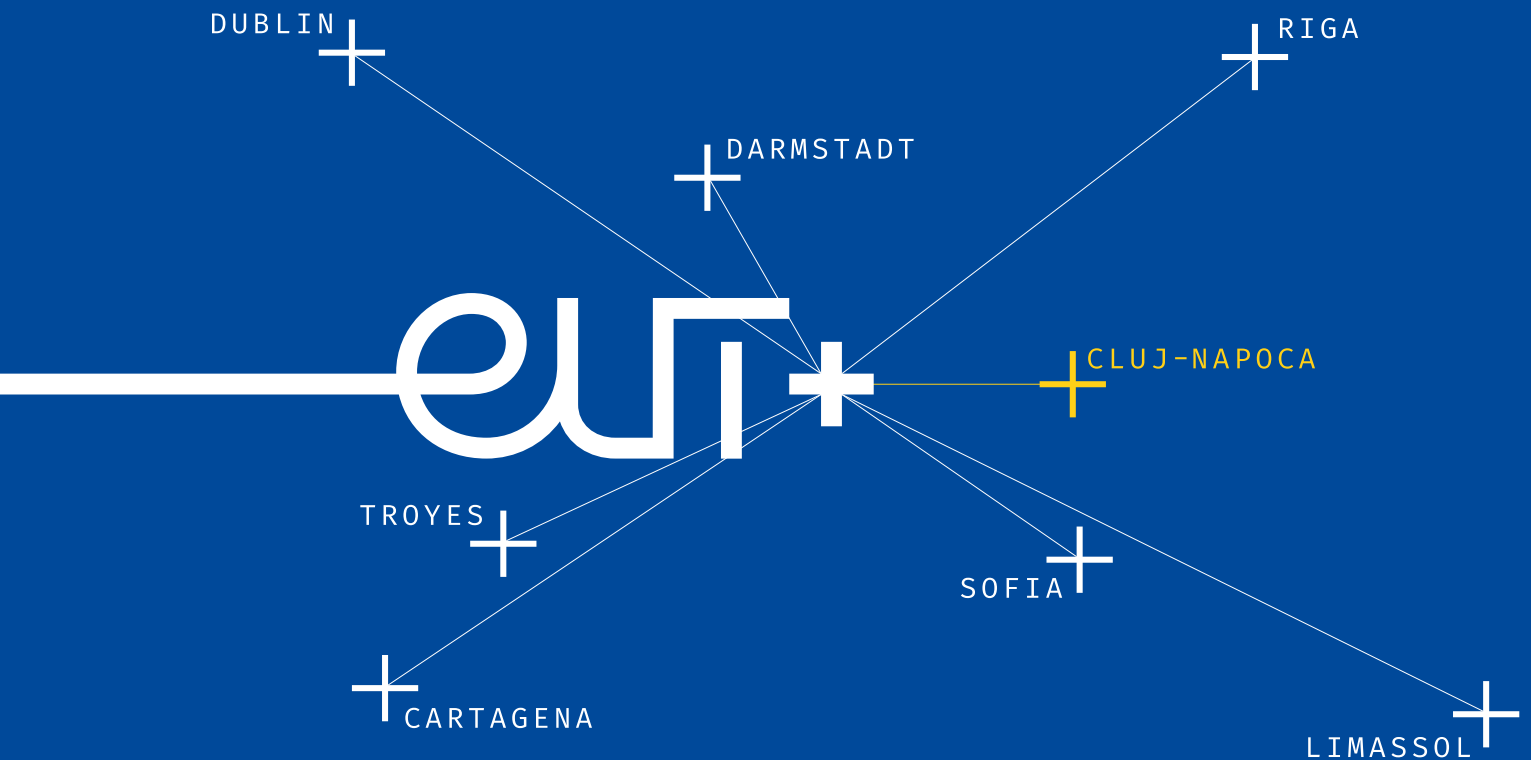




***STUDY PROGRAMMES
IN ENGLISH, GERMAN AND FRENCH***

EUROPEAN VALUES *EMPOWERING TECHNOLOGY*



As a University of Technology, our mission is first and foremost to serve society. Europe requires top-quality education for diverse groups, where talents translate into ability to act and react, experiment and invent, anticipate and transform. We empower our students to become technologically literate professionals and active European citizens.

We ensure that they are well-qualified to enjoying rewarding careers playing a fruitful role in society, aware of the broader implications of technological development and of their responsibility towards global challenges. Everybody, regardless of background, should be able to study and succeed in our university.

We are proud to make a difference that is direct, measurable and impactful.

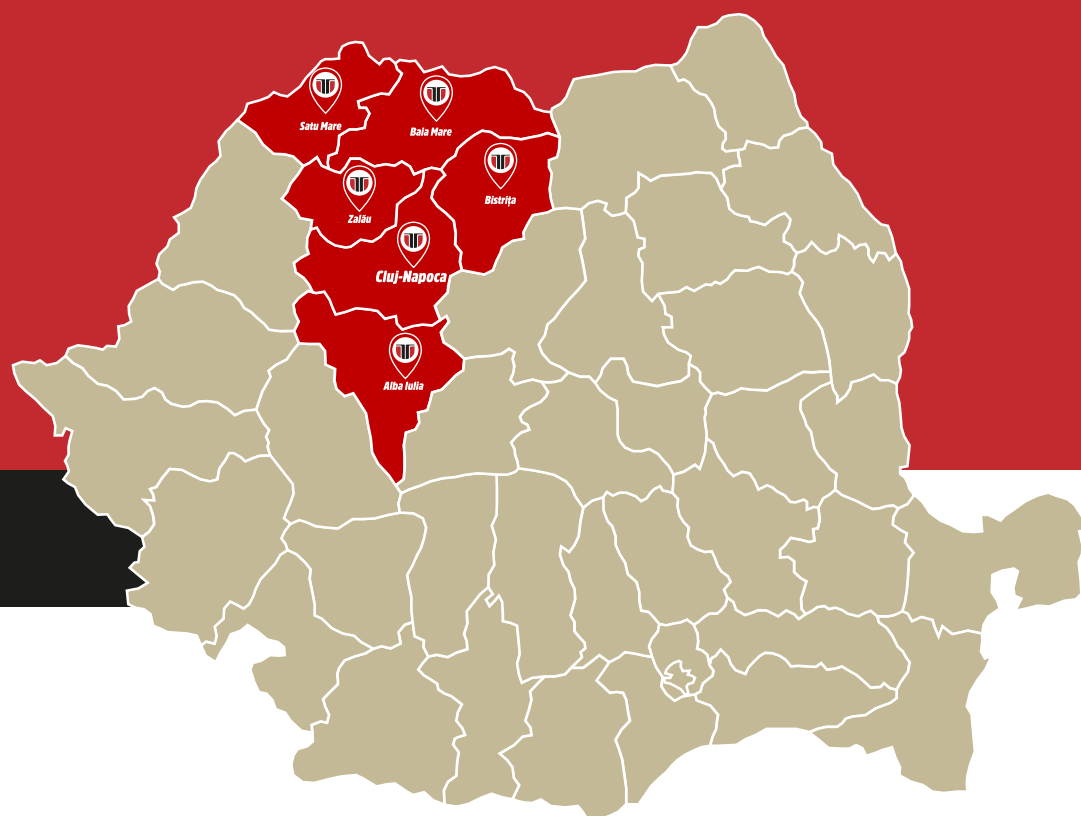
STUDY PROGRAMMES

IN ENGLISH, GERMAN AND FRENCH



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Welcome to UTCN



The Technical University of Cluj-Napoca, an “Advanced Research and Education University” is today a tertiary educational institution having both tradition and national and international recognition.

The Technical University of Cluj-Napoca comprises twelve faculties in the two academic centres, Cluj-Napoca and Baia Mare, as well as in locations such as Alba-Iulia, Bistrița, Satu Mare and Zalău. The educational offer, aligned to the Bologna system, includes Bachelor's, Master's and Doctoral Programs, as well as continuous training programs.

The fields of study have a wide range, from Engineering to Architecture, Fundamental Sciences, Socio-human Sciences and Arts. Also, within the Technical University, the Department for Continuing Education, Distance Learning and with Reduced Frequency organizes and conducts continuous education activities and programs, postgraduate courses, continuous professional development programs or courses or based on occupational standards.



The Technical University of Cluj-Napoca is concerned with the international exchange of scientific values, and this trend is found in the over 400 inter-university collaboration agreements or in the large number of student mobilities. Opening up towards the European and world space of education and research through a steady process of internationalization is one of the major objectives of the university.

Research is, along with education, the main priority of the Technical University of Cluj-Napoca. In all faculties of the university there are research structures, from collectives, groups and laboratories, to research centers and platforms.

The performance anchored in the socio-economic environment, the international visibility and cooperation as well as the scientific novelty and interdisciplinarity are some of the characteristics of the research environment of the Technical University of Cluj-Napoca.



Open research directions are oriented towards global priorities and perspectives: from the Information and communications technology to Renewable Energy and Ecology; from Superconductivity, Spintronics and Nanomaterials, to Management and Robotics; from Mechatronics and Electrical Engineering, to the Automobile and the Home of the future, or to Urbanism and Society.





Applied Electronics

OBJECTIVES

- Learning ability.
- Ability to understand technological solutions for electronics and making decisions based on logic and critical thinking.
- Ability to understand technical requirements and solutions proposals in electronics.
- The ability of working in a team and interact with specialists from other domains.

FACULTY

Faculty of Electronics,
Telecommunications and
Information Technology

FIELD OF STUDY

Electronic Engineering,
Telecommunications and
Information Technologies

LANGUAGE

English

DEGREE AWARD

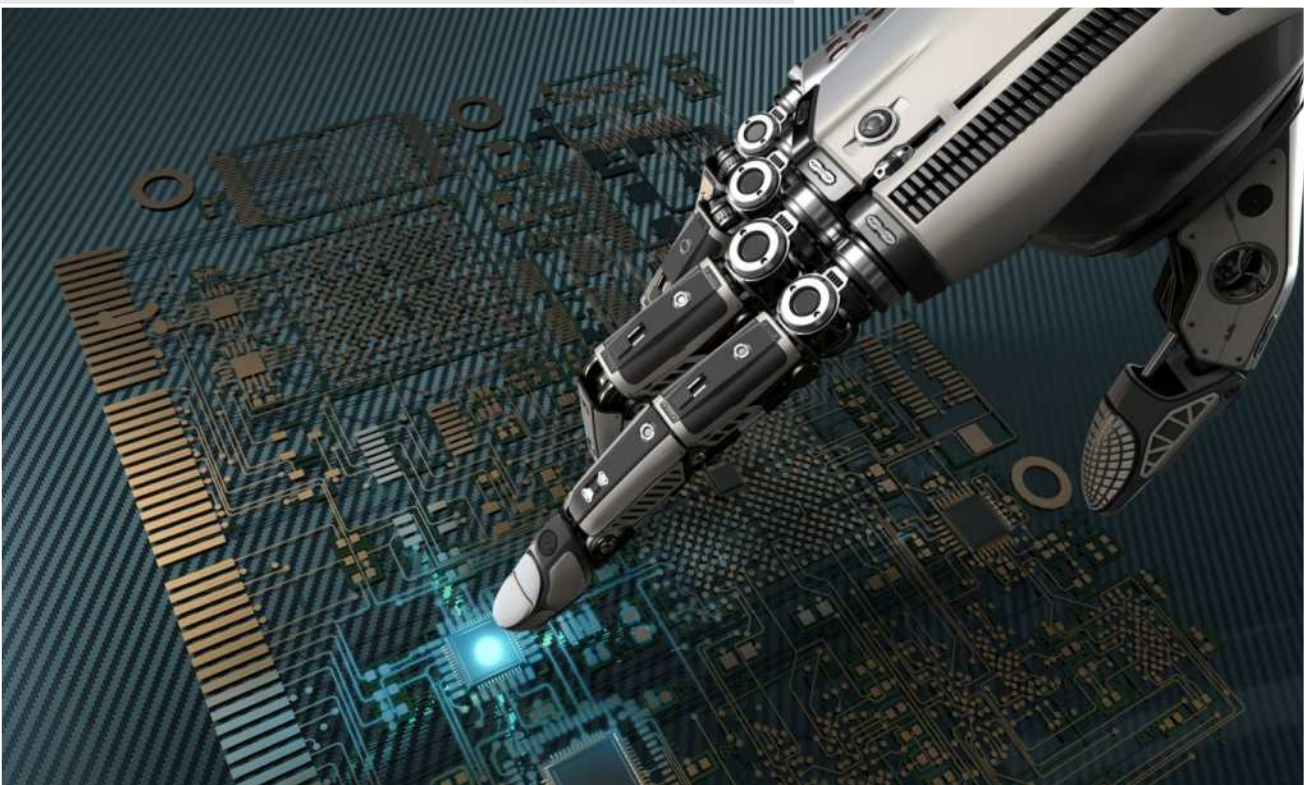
Bachelor of Science (BSc)

DURATION

8 semesters/4 years

CREDIT POINTS

240 ECTS

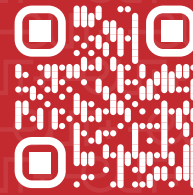


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Cluj-Napoca, CJ

SCAN ME



bit.do/UTCN-AE

GRADUATES

Analysis and testing of analog and digital electronic systems; Signal analysis and processing (data, text, voice, images). Usage of specific technologies for electronic equipment fabrication. Design knowledge at chip, board, system levels. Functional principles usage for the electronic system control in telecommunications, automation, medicine, automotive, power systems. Use of information technology in electronics. Use of CAD/CAM/CAE tools in design activities. Implementation of hardware systems with microprocessors, microcontrollers and signal processors. Assembly, high level and object oriented programming.

MAIN TEACHING AREAS

- Computer Programming – Languages and Algorithms
- Applied Informatics
- Electronics
- Microwaves
- Microprocessors
- Microcontrollers
- Theory of Information and Coding
- Power Electronics
- Switch Mode Power supplies
- Radio Communications
- Television
- Control
- FPGA circuit
- Analysis and Synthesis of circuits
- Computer Aid Design
- Materials of Electronics
- Sensors and Transducers
- Virtual Instrumentation
- Microelectronics

INDUSTRIAL & ACADEMIC PARTNERS

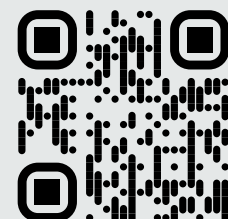
Telekom Romania
Net Brinel Cluj-Napoca
Orange Romania
Vodafone Romania
Frequentis Romania
NTT Data Romania
Emerson Romania
Samsung Electronics
Nokia Romania
Cisco Romania
Huawei Technologies
Betfair Romania Development
Siemens Romania
Robert Bosch Romania
Rohde & Schwarz Romania

JOB OPENINGS

Embedded Systems Engineer, Software engineer, Hardware engineer

ADMISSION REQUIREMENTS AND PROCESS, TUITION FEES

Check the information posted on the International Relations Office:



bit.do/UTCN-BRI



TECHNICAL UNIVERSITY
OF CLUJ-NAPOCA

Automation and Applied Informatics

OBJECTIVES

Everything about us means experience, an experience valued and harnessed by more than 30 graduate classes. The teaching staff, prepared to a high standard, successfully interweaves youthful enthusiasm and experience, the average age being around 39 years. The passion for discovery, experiment and study, the continuous desire to be a part of the technological development and growth, and the openness toward interpersonal communication are the strengths of our staff. Above all, the Automation or Applied Informatics fields represent a form of knowledge.

The terms describe those areas that luckily intertwine dedication and professionalism, and the joy of understanding the interaction complexity between system components, created by man or nature, at micro and macro scale pr /and between hardware and software.

FACULTY

Faculty of Automation and Computer Science

FIELD OF STUDY

Systems Engineering

LANGUAGE

English

DEGREE AWARD

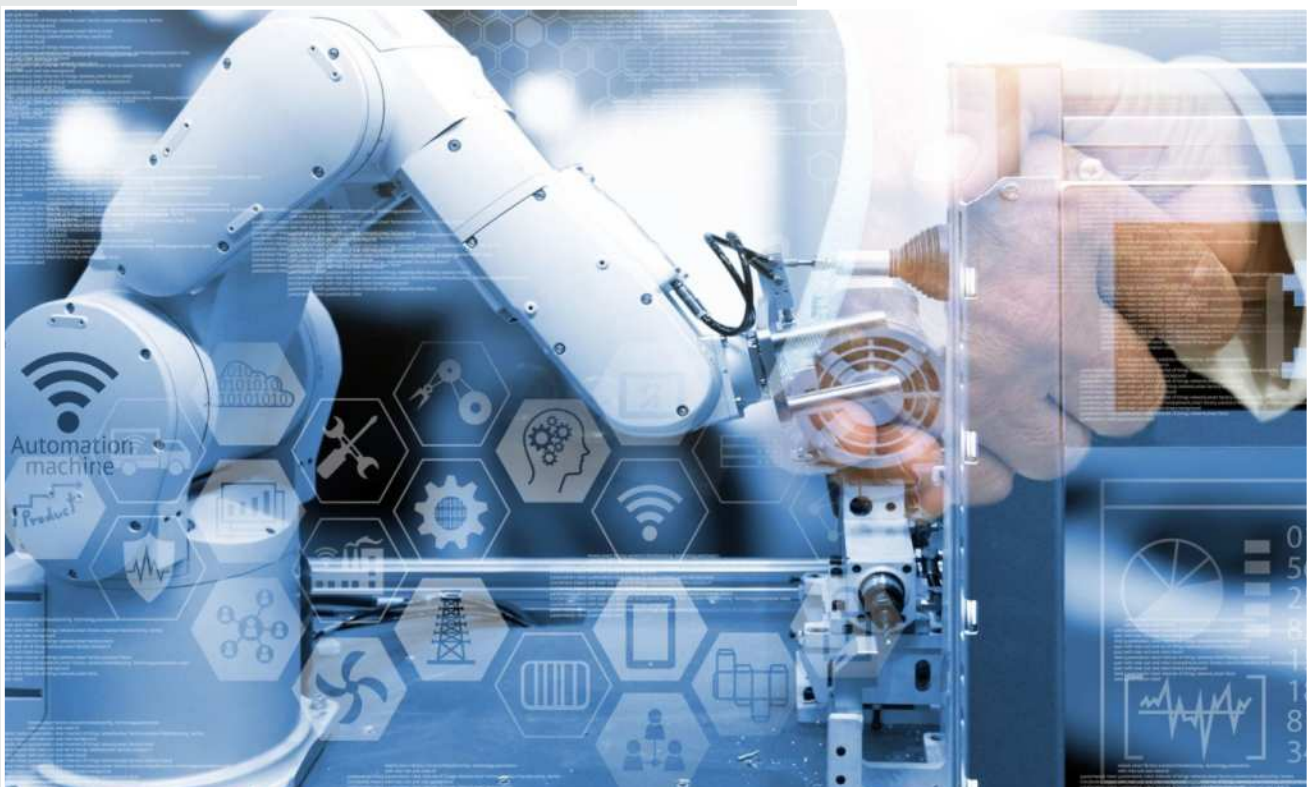
Bachelor of Science (BSc)

DURATION

8 semesters/4 years

CREDIT POINTS

240 ECTS



CONTACT

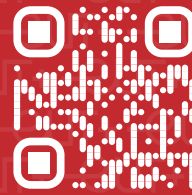
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SCAN ME



bit.do/UTCN-AAI

GRADUATES

Make use of fundamental knowledge in mathematics, physics, measurement techniques, technical design, engineering (mechanics, chemistry, electric and electronics) in the context of systems' engineering.

Work with fundamental concepts in computer science and information technology.

Make use of fundamental concepts in automatics, in modeling and simulating methods, in processes simulation, identification and analysis.

Design, implement, test, use and maintain digital and analogic equipment developed for general or specific use, including computer networks in the context of automated driving and applied informatics applications.

Develop applications and implement specific algorithms and automatized structures using microcontrollers based systems, signals processors etc.

Apply fundamental concepts of legislation, economy, project management, marketing, business and quality assurance in different economics and management contexts.

MAIN TEACHING AREAS

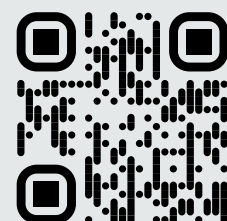
- Computer Aided Process Control
- Application Oriented Programming Languages
- Computer Aided Design
- Process Modelling and Simulation
- Electronics basics and electronic circuit design
- Robot Control Systems and Computer Integrated Manufacturing
- Data Transmission

INDUSTRIAL & ACADEMIC PARTNERS

Emerson Romania
Siemens Romania
Continental Automotive Romania
Hanna Instruments Romania
National Instruments Romania
Bosch Romania

ADMISSION REQUIREMENTS AND PROCESS, TUITION FEES

Check the information posted on the International Relations Office:



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TECHNICAL UNIVERSITY
OF CLUJ-NAPOCA

Civil, Industrial and Agricultural Buildings

OBJECTIVES

The curricula of the Civil, Industrial and Agricultural Buildings specialization combine the theoretical knowledge with practical concepts.

In the first two years, basic studies and fundamental knowledge are provided, while in the last two years advanced level of knowledge and scientific training is planned, in order to acquire the necessary specific skills (building components and details, masonry constructions, reinforced concrete, steel, timber and composite structures etc.)

FACULTY Faculty of Civil Engineering

FIELD OF STUDY Civil Engineering

LANGUAGE English

DEGREE AWARD Bachelor of Science (BSc)

DURATION 8 semesters/4 years

CREDIT POINTS 240 ECTS

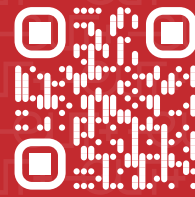


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SCAN ME



bit.do/UTCN-CIAB

GRADUATES

Graduate students acquire skills in building design, execution, maintenance, monitoring and rehabilitation, or in marketing and administration of buildings.

Other professional skills: development of feasibility studies, of technical and economic documentation for investments in companies licensed for design activities; analysis of technical and economical solutions to achieve construction works; building monitoring and control etc.



MAIN TEACHING AREAS

- Technical Drawing
- Building Materials
- Strength of Materials
- Mechanics of Constructions
- Geology
- Geotechnical Engineering
- Soil Mechanics
- Foundations
- Numerical Analysis
- Statics
- Dynamics and Stability
- Hydraulics
- Building Physics
- Computer Programming
- Reinforced and Prestressed Concrete
- Structural Engineering
- Seismic Engineering
- Design of Steel and Composite Structures
- Reinforced Concrete and Buildings
- Technology and Construction Management

INDUSTRIAL & ACADEMIC PARTNERS

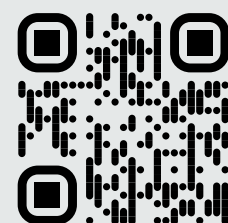
The Faculty of Civil Engineering has partnerships with local companies in construction fields. The international academic cooperation is based on over 40 bilateral agreements within the Erasmus + Program.

JOB OPENINGS

The engineer graduating the courses of the Civil Engineering Faculty will be prepared to answer and sustain the synergy of large-scale forces and processes at all levels, of the public-private partnership in the complex process of construction and management of the civil engineering works. The students with a degree in civil engineering can apply for a large number of jobs, like project designers, engineers in building construction, managers, building surveyors, researchers in constructions, teachers in educational institutions etc.

ADMISSION REQUIREMENTS AND PROCESS, TUITION FEES

Check the information posted on the International Relations Office:



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Computer Science

OBJECTIVES

The specific objectives of this educational program are:

- the study and design of computer and network system's components from both hardware and software perspectives and
- to offer multiple specialization alternatives such as: computer architecture design, software engineering, artificial intelligence, operating systems, database design, compiler design, transactional systems, computer networks and distributed systems. As a result, our graduates could equally work as researchers and designers of basic hardware and software components, as designers of complex application software or as systems engineers and network administrators.

Our Curriculum is based on the ACM curriculum and syllabi guidelines for computer science and engineering.

A periodical curriculum improvement and updating is carried out based on the experience and high competence of the department academic staff. The education provided by the Computer Science Department ensures the engineering specific of the training, the

FACULTY

Faculty of Automation and Computer Science

FIELD OF STUDY

Computer Science and Information Technology

LANGUAGE

English

DEGREE AWARD

Bachelor of Science (BSc)

DURATION

8 semesters/4 years

CREDIT POINTS

240 ECTS

balance between the general technical, domain undamental and narrow specialization disciplines and the integration both of theoretical and practical aspects. The formative type of education fosters an easy integration and adaptation to the dynamic market requests for all our graduates.



CONTACT

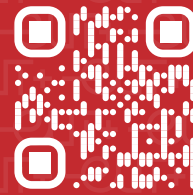
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SCAN ME



bit.do/UTCN-CS

GRADUATES

Operating with the basics of Mathematical, Engineering and Computer Science

Designing hardware, software and communication components

Problems solving using specific Computer Science and Computer Engineering tools

Improving performances of hardware, software and communication systems

Design, lifecycle management, integration and integrity of hardware, software and communication systems

Designing intelligent systems

MAIN TEACHING AREAS

- Computer Programming
- Data Structures and Algorithms
- Fundamental Algorithms
- Programming Techniques
- Digital system design
- Databases
- Object Oriented Programming
- Elements of Computer Assisted Graphics
- Computer Architecture
- Numerical Calculus
- Image Processing
- Formal Languages and Translators
- Computer Networks
- Operating Systems
- Distributed Systems

INDUSTRIAL & ACADEMIC PARTNERS

Microsoft Romania

IBM Romania

HP Inc Romania

IQUEST Technologies

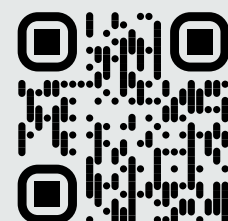
MSG Systems Romania

Endava Romania

Emerson Romania

ADMISSION REQUIREMENTS AND PROCESS, TUITION FEES

Check the information posted on the International Relations Office:



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Industrial Economic Engineering

OBJECTIVES

The program is framed within the University strategic plans with respect to:

- the integration in the European Area of Higher Education
- adapting the educational offer to the dynamics of the market and
- the increase in the efficiency and competitiveness of the teaching process.

The program answers the need for development of the human capital and the increase of economic competitiveness of the Romanian organizations. Through its content and spirit, the program creates a training environment which allows the students to assimilate fundamentals and to acknowledge engineering and economic abilities, required in order to achieve individual objectives of professional development.

The mission of the economic engineering field education and the industrial economic engineering specialization is to train with the help of interdisciplinary studies (engineering, managerial, economic) specialists that will be able to design, organize and

FACULTY

Faculty of Industrial Engineering, Robotics and Production Management

FIELD OF STUDY

Engineering and Management

LANGUAGE

English

DEGREE AWARD

Bachelor of Science (BSc)

DURATION

8 semesters/4 years

CREDIT POINTS

240 ECTS

manage productive systems or their components as well as to generate relationships that connect these systems to the social-economic environment in which they evolve.

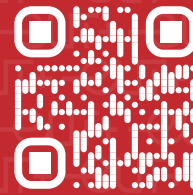


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SCAN ME



bit.do/UTCN-IEE

GRADUATES

The competencies of this specialization graduates are:

- Design, evaluation and management of production systems
- Design and control the organizations' management system
- Use of the informational system in exercising the managerial roles
- Design, implementation and monitoring functional strategies
- Counseling in the business field

MAIN TEACHING AREAS

Thus, the main teaching areas include:

- fundamental areas: Mathematics, Physics, Chemistry, Mechanics, Programming, Electrotechnics, Infographics and Technical design;
- economic and managerial areas: management, marketing, human resources, communication, managerial culture, finances, accounting, working and commercial law, project management, logistics, quality management;
- engineering areas: Manufacturing technologies, Electronics, Materials, Mechanisms, Machines and manufacturing equipments, Engineering of production systems.

JOB OPENINGS

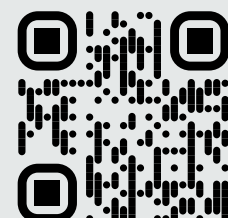
The graduates of Industrial Economic Engineering can have a well-paid job in high competency sectors, such as: engineer-economist, manager, human resources manager, marketing manager, supply chain manager, project manager, small and medium size enterprise manager, chief of different departments, engineer in the extractive industry, specialist in the quality field, production programmer, instructor of production systems, marketing referent, specialist in improvement processes, production engineer, process responsible, analyst, mechanical engineer, teacher for technical subjects, assistant director, research assistant.

INDUSTRIAL & ACADEMIC PARTNERS

Silcotub SA, BT Securities SA, Napomar SA, Sinterom SA, Emerson SRL, Eckerle Automotive SRL, Unio SA, Comelf SA, Patria Bank SA, Inserco, Michelin România SA, Tecca Meccanisimi SRL, Meduman SA, Total Security SA, RAAL, Leoni Wiring Systems RO SRL, Compania de Apă Someș SA, Carbochim SA, NTT Data România SA, Jolidon Import Export SRL, Automobile Dacia SA, Nova Power & Gas SRL, S A I Broker SA, Diferit SRL, Prototip Construct SRL, Albaco Exim SRL, Star Transmission SRL, Bosch Rexroth SRL, Nova Grup SRL, I.A.M.U. SA, VCST Automotive Production Alba SRL, IPEC SA, T E A SRL, Supremia Grup SRL, Pema Electrotehnic SRL, H.P.T. Humbel Productionstechnik SRL, Alfsoft SA, Transart SRL, Technosam SRL

ADMISSION REQUIREMENTS AND PROCESS, TUITION FEES

Check the information posted on the International Relations Office:



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Manufacturing Engineering

OBJECTIVES

The program aims to prepare the students in the field of Industrial Engineering for the job market, in line with the current demands of the industrial environment. The TCM (in German language) program focuses on developing students' competencies in design, manufacturing, innovative technologies and communication, focusing on the accumulation of German language knowledge both through the courses provided by the Technical University and by stimulating to attend optional courses.

The department encourages, through the link with the University of Stuttgart, the multicultural development of students by offering DAAD scholarships and internships in German companies.

FACULTY

Faculty of Industrial Engineering, Robotics and Production Management

FIELD OF STUDY

Industrial Engineering

LANGUAGE

German

DEGREE AWARD

Bachelor of Science (BSc)

DURATION

8 semesters/4 years

CREDIT POINTS

240 ECTS

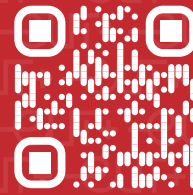


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Manufacturing Engineering Department

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Cluj-Napoca, CJ

SCAN ME



bit.do/UTCN-ME

GRADUATES

- Knowledge, understanding of the concepts, theories and basic methods of the domain and of the specialization area; their proper use in professional communication;
- Use basic knowledge to explain and interpret various types of concepts, situations, processes, projects, etc. associated with the domain;
- Apply basic principles and methods for solving well-defined problems / situations, typical of the field under qualified assistance;
- Appropriate use of standard criteria and methods of assessment to assess the quality, merits and limits of processes, programs, projects, concepts, methods and theories
- Developing professional projects with the use of established principles and methods in the field.

MAIN TEACHING AREAS

- Mathematics;
- Physics;
- Chemistry;
- Technical Design;
- Fabrication engineering;
- Mechanic;
- Mechanisms;
- Electro-technics;
- Material resistance;
- CNC manufacturing;
- Machine tools I and II;
- Heat treatments;
- Technical Programming;
- Management;
- Foreign language (German, English);
- Communication.

INDUSTRIAL & ACADEMIC PARTNERS

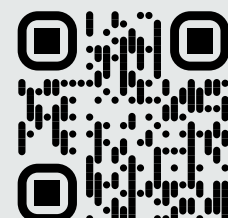
Industrial partners: Guhring SRL, PL Cluj, Robert Bosch SRL, Emerson SRL, Bielomatik Romania
Academic partners: University of Stuttgart, DAAD (Deutscher Akademischer Austauschdienst – German Academic Exchange Service), Matik Romania SRL

JOB OPENINGS

Manufacturing engineer, Production engineer, Mechanical engineer, Manufacturing process manager, Company manager, Designer for equipment, devices, moulds and technologies, Equipment programmer, CAD engineer, CAM engineer, Supply assurance engineer, Quality engineer, Teacher in industrial high schools. Upon completion of the TCM (in German) study program, most of the students find jobs in the domain. The partner companies are interested in the students, offering opportunities for practicing internships, some of the students managing to find their job during the student period. A high level of proficiency in German is an advantage, given the share of companies with German capital in the Cluj area.

ADMISSION REQUIREMENTS AND PROCESS, TUITION FEES

Check the information posted on the International Relations Office:



bit.do/UTCN-BRI



Manufacturing Engineering

OBJECTIVES

The mission of the Manufacturing Engineering program is to foster the development of different branches of industrial manufacturing in connection with the trends of the national and world wide economy.

The main objective is to train highly qualified specialists in the field of manufacturing technologies. Considering the curricula of the program, the training of the students in many branches of manufacturing is ensured and this is a strong necessity in a globalised market.

The lectures and applications are in English and this is a great advantage for working in multinational companies.

FACULTY

Faculty of Industrial Engineering, Robotics and Production Management

FIELD OF STUDY

Industrial Engineering

LANGUAGE

English

DEGREE AWARD

Bachelor of Science (BSc)

DURATION

8 semesters/4 years

CREDIT POINTS

240 ECTS

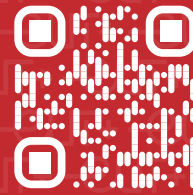


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Cluj-Napoca, CJ

SCAN ME



bit.do/UTCN-ME

GRADUATES

- Making calculations, demonstrations and applications to fulfill tasks specific to industrial engineering on the basis of the fundamental disciplines. Combination of knowledge, principles and methods of technical sciences field with graphics, for solving specific tasks.
- Using software applications and digital technologies for solving specific tasks of industrial engineering in general, and particularly, in aided design products.
- Develop manufacturing processes.
- • Design and maintenance of the manufacturing equipment.
- Planning, management and quality assurance of the manufacturing processes.

MAIN TEACHING AREAS

Mathematics, Physics, Chemistry, Technical Drawing, Computer Programming, Language and Linguistics Literature, Sports, Materials Science, Mechanics, Manufacturing Basics, Electrotechnics and Electrical Machine, Mechanism, Strength of Materials, Machine Elements, Tolerances and Dimensional Control, Heat Treatment, Thermotechnics, Fluid Mechanics, Fundamentals of Cutting and Surface Generation, Computer Aided Graphics, Product Design, Machine Tools, Statistics, Cutting Processing Technologies, Rapid Prototyping, CAD, CAM, Nonconventional Technologies, Finite Element Analysis, Ecology of Manufacturing Systems, Machine for Plastic Deformation, Fundamentals of Metal Forming, Metal Forming Technologies, Welding, Plastic Materials, Composite Materials, Cold Technique, Design of Devices, CNC Technologies, Logistics, Quality Control, Management, Quality Management, Marketing, Reliability and Maintenance.

INDUSTRIAL & ACADEMIC PARTNERS

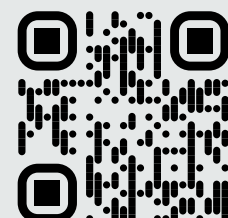
Academic partners: University in Loughborough – England, Aachen University – Germany, University of Stuttgart – Germany, Poznan University of Technology – Poland, University of Rijeka – Croatia, University of Calabria – Italy, University of Osijek – Croatia
Industrial partners: Sinterom SA, Transimont SRL, Porsche Engineering Romania SRL, Emerson SRL, Gemil Grup SRL, Napomar SA, Fibrex Co SRL, Bielo-matik SA, Guhring SRL, NIDEC, Continental, Silcotub SA, Siemens SRL, Comelf SA, Eckerle Automotive SRL, Armatura SA, Auto Nova SRL

JOB OPENINGS

Manufacturing engineer, Production engineer, Mechanical engineer, Manufacturing process manager, Company manager, Designer for equipment, devices, moulds and technologies, Equipment programmer, CAD/CAM engineer, Supply assurance engineer, Quality engineer, Teacher in industrial high schools.

ADMISSION REQUIREMENTS AND PROCESS, TUITION FEES

Check the information posted on the International Relations Office:



bit.do/UTCN-BRI



TECHNICAL UNIVERSITY
OF CLUJ-NAPOCA

Robotics

OBJECTIVES

The Specialization of Robotics is an interdisciplinary study program for engineers that deals with design, development and integration of robotic systems in industrial production and other application fields (e.g. services, health).

The goal is to provide adequate skills to handle complex systems that integrate mechanics, electronics, control, actuation, sensors and programming, as well as connectivity with other technical systems.

FACULTY

Faculty of Industrial Engineering, Robotics and Production Management

FIELD OF STUDY

Mechatronics and Robotics

LANGUAGE

English

DEGREE AWARD

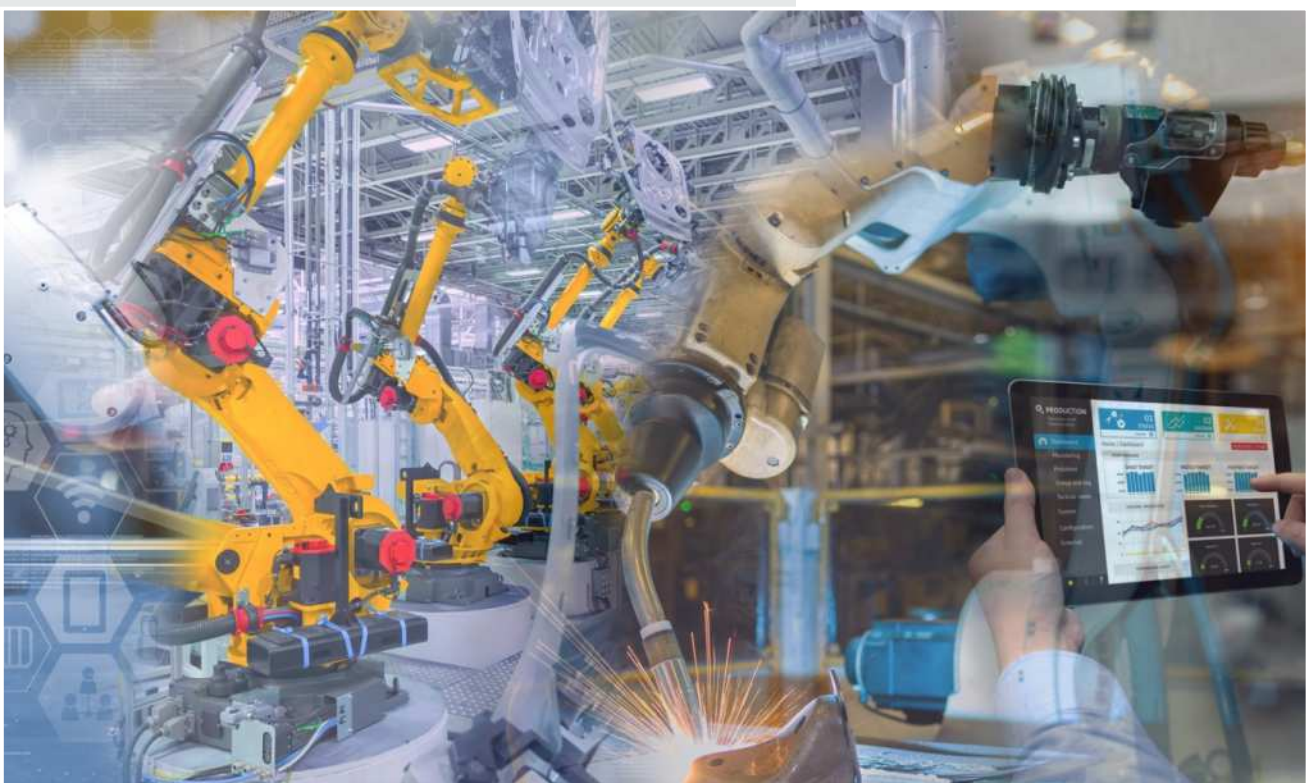
Bachelor of Science (BSc)

DURATION

8 semesters/4 years

CREDIT POINTS

240 ECTS



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SCAN ME



bit.do/UTCN-ROBOTICA

GRADUATES

- Competences in robot design (mechanics, electrical, control);
- Software technologies (Java, C#, C++, Python, Matlab, etc.);
- PLC programming;
- Manufacturing robotization;
- CAD. CAE/CAM (Catia, Delmia, AutoCAD, SolidWorks);
- HMI design;
- TIA;
- MES;

JOB OPENINGS

- CAD/CAE engineer;
- Process automation engineer;
- Robot designer;
- Robotic system engineer;
- Robotic automation engineer.

MAIN TEACHING AREAS

- Robot design;
- Robot integration in production processes;
- Actuation and sensors;
- Programming languages;
- HMI;
- Robot control;
- Digital production.

INDUSTRIAL & ACADEMIC PARTNERS

Industrial:

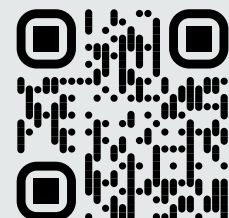
- Inno Robotics SRL
- Braintronix SRL
- e-Color
- CSI Romania SRL
- Comau
- RAAL
- Comelf SA
- Continental
- Kuka Systems SRL
- Fanuc Automation Romania SRL
- ABB SRL
- Robert Bosch SRL

Academic:

- University Politehnica of Bucharest

ADMISSION REQUIREMENTS AND PROCESS, TUITION FEES

Check the information posted on the International Relations Office:



bit.do/UTCN-BRI



TECHNICAL UNIVERSITY
OF CLUJ-NAPOCA

Telecommunications Technologies and Systems

OBJECTIVES

- Active learning ability
- Ability to understand technological solutions for telecommunications and making decisions based on logic and critical thinking
- Ability to understand technical requirements and solutions proposals in telecommunications
- Team working
- Ability to interact with specialists from other domains.

FACULTY

Faculty of Electronics,
Telecommunications and
Information Technology

FIELD OF STUDY

Electronic Engineering,
Telecommunications and
Information Technologies

LANGUAGE

English

DEGREE AWARD

Bachelor of Science (BSc)

DURATION

8 semesters/4 years

CREDIT POINTS

240 ECTS



CONTACT

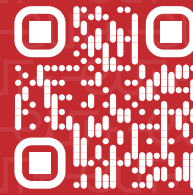
Prof.Eng. Virgil Dobrota, Ph.D
Faculty of Electronics, Telecommunications and Information Technology
Communications Department

Phone: +40-264-401226

Email: Virgil.Dobrota@com.utcluj.ro

Office: 26-28 George Baritiu Street, Room 364
Cluj-Napoca, CJ

SCAN ME



bit.do/UTCN-TTS

GRADUATES

- Analysis, design, testing and evaluation of local area/wide area networks, Internet, telecommunications systems and cloud
- Modeling and planning of telecommunications networks
- Installation, configuration, operation and hardware / software maintenance of telecommunications networks
- Multimedia signal processing (voice, data, text, image)
- Modulation, coding, compression systems design
- Telecommunications hardware implementation with microprocessors, microcontrollers, signal processors
- Web technologies and multimedia applications



MAIN TEACHING AREAS

- Computer Programming – Languages and Algorithms
- Applied Informatics
- Microwaves
- Microprocessors
- Theory of Information and Coding
- Modulation Techniques
- Programming Engineering
- Telephony
- Decision and Estimation in Information Processing
- Switching and Routing Systems
- Radio Communications
- Computer Networks
- Television Engineering
- Internet Protocols
- Cellular Radio Communications
- Mobile Communications
- Data Transmission
- Audio-Video Digital Techniques
- Digital Image and Speech Processing
- Multimedia Technologies
- Media and Digital Signal Processors

INDUSTRIAL & ACADEMIC PARTNERS

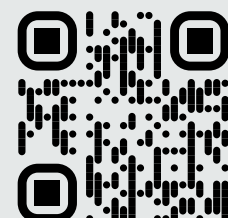
Telekom Romania, Net Brinel Cluj-Napoca, Orange Romania, Vodafone Romania, Frequentis Romania, NTT Data Romania, Emerson Romania, Samsung Electronics, Nokia Romania, Cisco Romania, Huawei Technologies, Betfair Romania Development, Siemens Romania, Robert Bosch Romania, Rohde & Schwarz Romania

JOB OPENINGS

Telecommunications Networks engineer, Computer Networks engineer, Radio Communications engineer, Network Planning engineer, Embedded Systems Engineer, Software engineer

ADMISSION REQUIREMENTS AND PROCESS, TUITION FEES

Check the information posted on the International Relations Office:



bit.do/UTCN-BRI



Advanced Techniques in Automotive Engineering

OBJECTIVES

Education must keep up the accelerating pace and equip vision and competence – young engineers who are characterized not only by outstanding technical competence, but also by their communicativeness and ability to work in a team. As a multi and interdisciplinary teamwork, due to the complexity of processes for designing, developing and industrializing modern vehicles.

- Continue the study in the Automotive Engineering domain;
- Understand and conceive technical solutions in the Automotive domain;
- Work in a team and interact with specialists from different domains;
- The ability to work with simulation programs such as AVL CRUISE, KULI, MATLAB Simulink, IPG CakMaker, CATIA, and AVL BOOST.

FACULTY

Faculty of Automotive, Mechatronics and Mechanical Engineering

FIELD OF STUDY

Automotive Engineering

LANGUAGE

English

DEGREE AWARD

Master of Science (MSc)

DURATION

4 semesters/2 years

CREDIT POINTS

120 + 10 ECTS



CONTACT

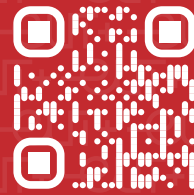
Prof.Habil.Eng. Bogdan Varga, Ph.D
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SCAN ME



bit.do/UTCN-ATAE

GRADUATES

The specialists trained in this program will:

- approach the automotive engineering problems;
- be able to address the design and product development issues by using advanced methods, methodologies and technologies;
- be able to carry out studies, research and design of some high performance vehicles and/or subassemblies;
- able to collaborate and interact with national and international teams of automotive engineering specialists;

CURRICULA

YEAR ONE

- Internal combustion engine electronic management
- Theory and automatization of the automotive components I
- Auxiliary internal combustion engine components
- Communication BUS architecture
- Manufacturing and Production in Automotive Engineering
- Research activity I
- Electric and Hybrid Powertrains
- Internal Combustion Engine and Transmission/Vehicle Powertrain CAD/CAE
- Theory and Automatization of the Automotive Components II
- Vehicle Dynamics
- Advanced Materials in Automotive Engineering
- Chemistry and Materials of Electric Vehicle Batteries
- Research Activity 2

YEAR TWO

- Internal Combustion Engine and Transmission/Vehicle Powertrain CAD/CAE
- Thermal Management of Vehicle Powertrain
- Vehicle Body Structures
- CAM Engineering in Manufacturing
- Academic Ethics and Integrity
- Research Activity 3
- Research activity IV
- Dissertation development
- Dissertation support

SCHOLARSHIPS

There is a scholarship program supported by Porsche Engineering Romania and it is destined especially for ATAE master students, valued at 250 Euro/month for the study period.

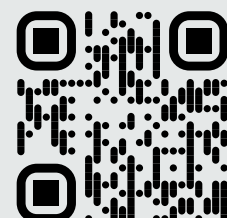
JOB OPENINGS

Simulation engineer;
Application engineer;
Test engineer;
Testbed engineer;
HIL/MIL engineer;

ADMISSION REQUIREMENTS AND PROCESS, TUITION FEES

Admission is based on an interview (English) and the average grade (project and knowledge) of the bachelor thesis/work.

Check the information posted on the International Relations Office:



bit.do/UTCN-BRI



Image and Signal Processing

OBJECTIVES

The master is oriented towards both fundamental and applied research and it aims to provide a well-founded and deep understanding of all the aspects related to digital media (voice, signal or genomics, images, video, multimedia): acquisition, filtering, reconstruction, recognition, interpretation, real-time implementation, security, data mining.

The highly specialized graduates will be able to continue their studies for a Ph.D degree or to access the labor market in the general field of ITC.

FACULTY

Faculty of Electronics,
Telecommunications and
Information Technology

FIELD OF STUDY

Electronic Engineering,
Telecommunications and
Information Technologies

LANGUAGE

French

DEGREE AWARD

Master of Science (MSc)

DURATION

4 semesters/2 years

CREDIT POINTS

120 + 10 ECTS



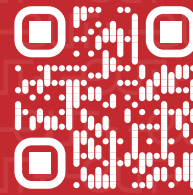
CONTACT

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Cluj-Napoca, CJ

SCAN ME



bit.do/UTCN-PSI

GRADUATES

The master programmed is designed to enhance the student's technical competencies in image and signal processing, in statistic and genomic signal processing, security, watermarking, embedded systems, database management, image and signal fusion and software engineering. The students will be involved in research activities in electronics and telecommunications engineering. The graduates will be able to design and implement complex real-time signal processing or imaging systems, to write and present research outputs in papers for journals and international conferences.

RESEARCH AREAS

Video and image processing, statistic signal processing, security techniques and algorithms, watermarking, software engineering, neural networks, reconfigurable computing, embedded systems, genomic signal processing, voice processing, multimedia technologies, multi-resolution signal and image processing, image classification.

MAIN TEACHING AREAS

- Advanced Image and Video Processing Techniques
- Software for Image and Signal Processing
- Statistic Signal Processing
- Mathematical Methods and Algorithms for Signal and Image Processing
- Wavelet-based Signal and Image Processing
- Genomic Signal Processing
- Computer Vision
- Speech Processing
- Fpgas
- Fusion Techniques
- Encryption and Watermarking
- Image and Video Coding
- Data Mining

INDUSTRIAL & ACADEMIC PARTNERS

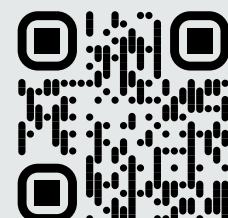
Université de Bordeaux
Université de Nice Sophia-Antipolis
Bordeaux Sciences Agro - École Nationale Supérieure des Sciences Agronomiques de Bordeaux
Enseirb-Matmeca Bordeaux
Agence universitaire de la Francophonie
Club Francophone d'Affaires de Cluj

JOB OPENINGS

ITC specialists, electronics and telecommunications engineers, software engineers, academic staff, researchers and research assistants in informatics, electronics and telecommunications, researchers in technical sciences, computing systems designers and consultants, research engineers in genomics and genetic engineering.

ADMISSION REQUIREMENTS AND PROCESS, TUITION FEES

Check the information posted on the International Relations Office:



bit.do/UTCN-BRI



Innovative Production Processes and Technological Management

OBJECTIVES

The program aims at improving the knowledge of engineers in the field of Industrial Engineering for the labour market, in line with the current demands of the industrial environment. The German-language Master focuses on the development of engineers' skills in design, manufacturing, innovative technologies, management, creativity and communication, focusing on the improvement of German language skills both through the courses provided by the Technical University, and by encouraging them to attend elective courses.

The department encourages the multicultural development of students by linking them to the Stuttgart University by providing scholarships. The Master is internationally recognized and will be awarded double degrees both in Technical University of Cluj-Napoca and in the University of Stuttgart.

FACULTY

Faculty of Industrial Engineering, Robotics and Production Management

FIELD OF STUDY

Industrial Engineering

LANGUAGE

German

DEGREE AWARD

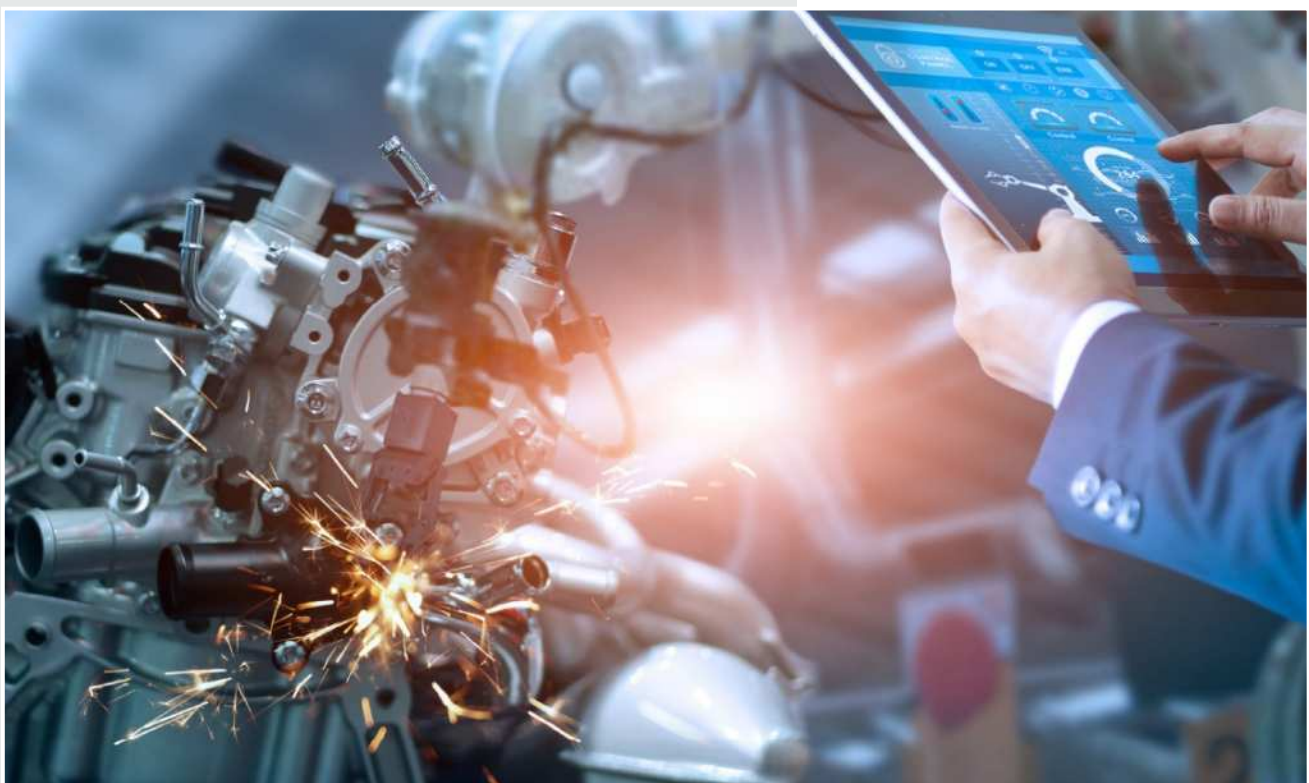
Master of Science (MSc)

DURATION

4 semesters/2 years

CREDIT POINTS

120+10 ECTS

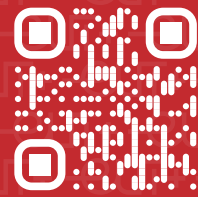


CONTACT

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Cluj-Napoca, CJ

SCAN ME



bit.do/UTCN-IPPRM

GRADUATES

- The in-depth knowledge of an area of specialization and, within it, of the theoretical, methodological and practical developments specific to the program; the proper use of specific language in communicating with different professional environments.
- Using specialized knowledge to explain and interpret new situations in wider contexts associated with the field;
- The integrated use of the conceptual and methodological apparatus, in full information conditions, to solve new theoretical and practical problems;
- Use tangible and relevant criteria and evaluation methods to formulate value judgments and substantiate constructive decisions;
- Professional and / or research design using a wide range of quantitative and qualitative methods

MAIN TEACHING AREAS

Applied Mathematics; Virtual Fabrication; Rapid Prototyping; Management; Computer aided Design(CAD); Computer Aided Manufacturing (CAM); Applied Mechanics; Advanced CNC manufacturing; FEMA; Communication and creativity.

RESEARCH AREAS

- Innovative fabrication processes;
- Concurrent engineering in innovative products development;
- Micro technologies;
- Modern production technologies;
- Non-conventional technologies and innovative production;
- CNC fabrication technologies;
- Computer aided manufacturing;
- Technological management.

INDUSTRIAL & ACADEMIC PARTNERS

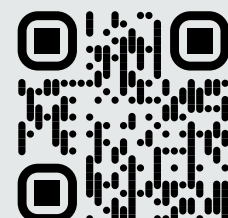
Industrial partners: Guhring SRL. PL Cluj, Robert Bosch SRL, Emerson SRL, Bielomatik Romania SRL
Academic partners: University of Stuttgart, DAAD (Deutscher Akademischer Austauschdienst – German Academic Exchange Service)

JOB OPENINGS

Upon completion of the study program, the students find jobs in the domain. Most of them are already working in the domain. The partner companies are interested in the students, offering opportunities for master thesis and after graduation they are interested in supporting the University in doctoral thesis. A high level of proficiency in German is an advantage, given the share of companies with German capital in the Cluj area. Also, the partnership with the University of Stuttgart gave the master program a double diploma, recognized also by the German University of Stuttgart.

ADMISSION REQUIREMENTS AND PROCESS, TUITION FEES

Check the information posted on the International Relations Office:



bit.do/UTCN-BRI



Robotics

OBJECTIVES

The Master's Degree Program in Robotics provides the continuation of bachelor studies on the Robotics specialisation. Its mission is to train specialists to be able to address practical problems, specific to the automation and robotization of production processes.

The major objective of the Master's Degree Program in Robotics is to provide advanced interdisciplinary training in industrial robotics technology.

FACULTY

Faculty of Industrial Engineering, Robotics and Production Management

FIELD OF STUDY

Mechatronics and Robotics

LANGUAGE

English

DEGREE AWARD

Master of Science (MSc)

DURATION

4 semesters/2 years

CREDIT POINTS

120+10 ECTS

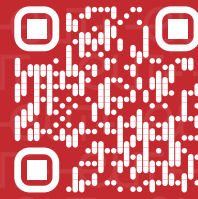


CONTACT

Prof.Eng. Stelian Brad, PhD
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Design Engineering and Robotics Department

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Cluj-Napoca, CJ

SCAN ME



bit.do/UTCN-ROBOTICA

GRADUATES

- Robot programming (Kuka, Fanuc, ABB, Motoman);
- Machine tools programming;
- CAD. CAE/CAM (Catia, Delmia, AutoCAD, SolidWorks);
- Distributed control in automatized systems

RESEARCH AREAS

- Robotics and IoT;
- Smart robots;
- Intuitive robot programming;
- Intelligent HMI;
- VR in Robotics;
- AR in Robotics;
- Smart factories;
- CPS;
- Robot vision;
- Service robot design;
- Virtual commissioning;
- Collaborative robots.

MAIN TEACHING AREAS

- Robot programming languages;
- PLC programming;
- CAM/CAR;
- Distributed control;
- ERP;
- Robot motion planning;
- Medical robots;
- Robot applications;
- Robot maintenance;
- Client-server apps;
- Process control and monitoring.

INDUSTRIAL & ACADEMIC PARTNERS

Industrial:

- Inno Robotics SRL
- Braintronix SRL
- e-Color
- CSI Romania SRL
- Comau
- RAAL
- Comelf SA
- Continental
- Kuka Systems SRL
- Fanuc Automation Romania SRL
- ABB SRL
- Robert Bosch SRL

Academic:

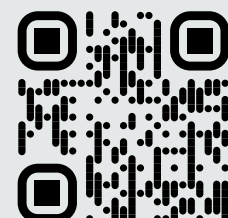
- University Politehnica of Bucharest

JOB OPENINGS

- Robot programmer
- Robot integrator
- Robotic automation Process Control Engineer
- PLC programmer
- Automation maintenance Engineer

ADMISSION REQUIREMENTS AND PROCESS, TUITION FEES

Check the information posted on the International Relations Office:



bit.do/UTCN-BRI



TECHNICAL UNIVERSITY
OF CLUJ-NAPOCA

Virtual Engineering for Competitive Manufacturing

OBJECTIVES

- The program aims to improve the knowledge of engineers in the field of Industrial Engineering for the labour market, by respecting the current demands of the industrial environment.
- The Master program is focused on the development of engineer's skills in the field of competitive manufacturing, virtual engineering, innovative technologies, constructive and technological design, management and creativity.
- The lectures and applications are presented in English language, due to the fact that the knowledge and use of English language is a great advantage for working in multinational companies in all countries nowadays.
- The department encourages the multicultural development of the students by linking them to the partner's universities from abroad by providing scholarships to the MSc students within prestigious universities from EU.

FACULTY

Faculty of Industrial Engineering, Robotics and Production Management

FIELD OF STUDY

Industrial Engineering

LANGUAGE

English

DEGREE AWARD

Master of Science (MSc)

DURATION

4 semesters/2 years

CREDIT POINTS

120+10 ECTS

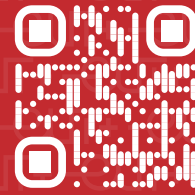


CONTACT

Prof.Eng. Nicolae Bâlc, PhD
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Manufacturing Engineering Department

Phone: +40-264-401614
Email: Nicolae.Balc@tcm.utcluj.ro
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Cluj-Napoca, CJ

SCAN ME



bit.do/UTCN-VECM

GRADUATES

- Technical knowledge for the analysis and interpretation of different situations in several contexts associated with the industrial domain;
- CAD / CAE / CAM applications techniques by using specific software programs for the analysis of the mechanical behaviour and the optimization of new developed products from the industrial domain
- Design of professional and / or research design by using a wide range of quantitative and qualitative methods
- Conceptual design of new products for competitive manufacturing
- Design and management of new or improved manufacturing systems and their logistic;
- Innovative manufacturing for rapid product development in the industrial domain

MAIN TEACHING AREAS

Applied Mathematics; Virtual Engineering; Computer aided Design(CAD); Computer Aided Manufacturing (CAM); Rapid Prototyping; Management; Applied Mechanics; Advanced CNC manufacturing; FEMA.

RESEARCH AREAS

- Computer aided manufacturing;
- Virtual engineering;
- Competitive engineering;
- Innovative manufacturing;
- Additive Manufacturing;
- Modern manufacturing technologies;
- CNC manufacturing technologies;
- Manufacturing technologies for car components;
- Mechanical behaviour of materials;
- Technological management.

INDUSTRIAL & ACADEMIC PARTNERS

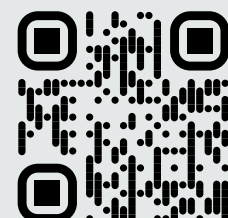
Industrial Partners: Napomar S.A., Emerson SRL, Automobile Dacia SA Guhring SRL. PL Cluj, Robert Bosch SRL, Bielomatik Romania
Academic partners: University of Loughborough

JOB OPENINGS

Upon completion of the Virtual Engineering for Competitive Manufacturing master study program (in English language), the students can easily find jobs in such a domain. Most of them are already working in the domain. The partner companies are interested about MSc. students, offering opportunities for master thesis and after graduation they are interested in supporting the University for their doctoral thesis, as well. A high level of proficiency in English is an advantage.

ADMISSION REQUIREMENTS AND PROCESS, TUITION FEES

Check the information posted on the International Relations Office:



bit.do/UTCN-BRI



TECHNICAL UNIVERSITY
OF CLUJ-NAPOCA

International Relations Office

International Relations Office (IRO) is an organizational structure of the university whose goals are:

- to develop academic international cooperation relations and scientific research with partner universities, governmental and nongovernmental organizations, centers of research as well as international companies and foundations;
- to facilitate efficient teaching staff and students exchange between universities at institutional level;
- to increase the high reputation of the engineering school in Cluj by widely disseminating its excellent results along the years.

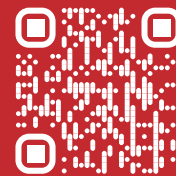
The development of the international cooperation is promoted through:

- establishing partnerships with universities, economic organizations, foreign governmental and private agencies, which can offer our teaching staff and students research, teaching and practice opportunities as well as study materials;
- affiliations to academic organizations and/or international scientific societies;
- informing teaching staff, research staff and students about international cooperation opportunities at academic level and about scientific research opportunities;
- organizing student and teaching staff exchanges as part of ongoing international cooperation programs;
- taking part in international academic and scientific events.

Quick links:



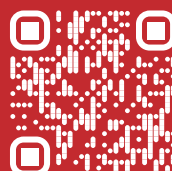
Admission EU citizens
bri.utcluj.ro/en/admission_eu.php



Admission non-EU citizens
bri.utcluj.ro/en/admission_neu.php



Free mover mobility
bri.utcluj.ro/en/free_mover_in.php



Tuition fees
bri.utcluj.ro/en/fees.php



Resources
bri.utcluj.ro/en/resources.php



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UTCW

