



# Virtual Engineering for Competitive Manufacturing



<b>FACULTY</b>	<i>Faculty of Machine Building</i>
<b>FIELD OF STUDY</b>	<i>Industrial Engineering</i>
<b>LANGUAGE</b>	<i>English</i>
<b>DEGREE AWARDED</b>	<i>Master of Science (MSc)</i>
<b>DURATION</b>	<i>4 semesters/2 years</i>
<b>CREDIT POINTS</b>	<i>120+10 ECTS</i>

## 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.

## 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.

## 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](http://bri.utcluj.ro/RI2_en/admitere_eu_neu.php)

## INDUSTRIAL / ACADEMIC PARTNERS

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

## CONTACT

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