

MASTER'S DEGREE INTEGRATED MECHANICAL ENGINEERING DESIGN

IN ENGLISH

FIELDS OF APPLICATION

AUTOMOTIVE



CAD/CAE/CAM



AEROSPACE



DESIGN



**3D
PRINTING**



**INDUSTRIAL
EQUIPMENT**



BIOMECHANICS



**RENEWABLE
ENERGY**



DOUBLE DEGREE IN ITALY

Following the ongoing Double Degree agreement with the University of Tuscia (UNITUS), students have the opportunity to study a semester or one year in Italy and receive their master's degree diploma from both universities. Their mobility will be financed through the Erasmus+ program.



More information:
<https://masterupb.wixsite.com/imed>



IMED is the only English master's degree program in Romania in the field of mechanical engineering.

Having a general profile in the field of mechanical engineering, IMED is addressed to the undergraduates of the programs from the faculties with mechanical, industrial, or energetic profiles from the University "Politehnica" of Bucharest (FIMM, FILS, Transports, Aerospace Engineering, ISB, FIIR, Power Engineering) or from other university centers in Romania, but also to foreign students with undergraduate studies in these fields.

The overall objective of the program is to provide future graduates with the theoretical foundations, skills and abilities needed to use modern, integrated, CAD methods to design mechanical engineering products in the light of future developments towards the fourth industrial revolution (Industry 4.0).

Through the acquired skills and abilities, graduates will be able to:

- design advanced mechanical components and systems,
- build their physical model to analyze and study them experimentally,
- create a virtual model to simulate their behavior using modern software applications (CATIA, Autodesk Inventor and Nastran, SolidWorks, Ansys and Fluent),
- select the most suitable materials and technologies (including additive manufacturing technologies - 3D printing) for the development of the studied mechanical products,
- evaluate their reliability and find innovative solutions for their optimization.

COURSES (SELECTION):

MODELLING AND SIMULATION IN MECHANICAL ENGINEERING
NUMERICAL SIMULATION OF HEAT AND MASS TRANSFER
FINITE ELEMENT METHOD
SURFACES AND CONTACTS
ADVANCED CALCULUS OF STRUCTURES
VIRTUAL PROTOTYPE FOR PRODUCT DEVELOPMENT
PRODUCT DEVELOPMENT
RELIABILITY OF COMPLEX PRODUCTS
MECHANICAL DESIGN OF RENEWABLE ENERGY SYSTEMS
COMPUTER AIDED DESIGN OF PLASTIC COMPONENTS



More information:
<https://masterupb.wixsite.com/imed>
nicolae.stoica@upb.ro