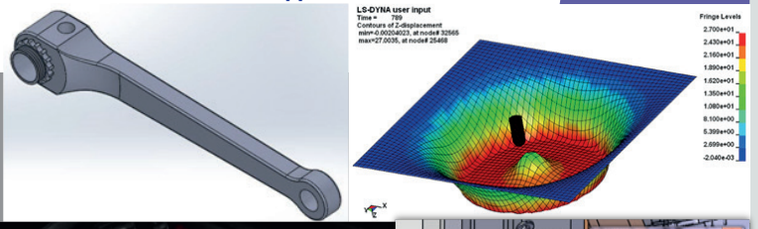
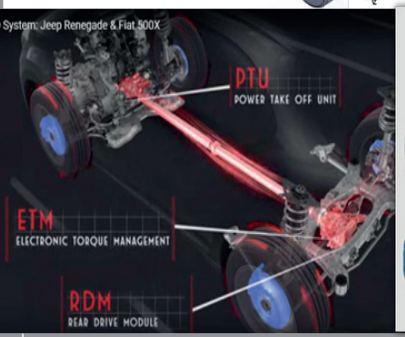
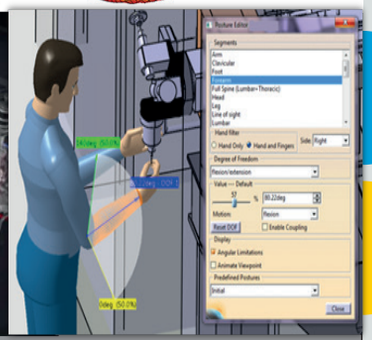
WHY TO ENROLL ?

The Master of Science Degree Course in Mechanical Engineering for Design and Production (LM IMPP) is aimed at training a mechanical engineer with specific skills in the sector of Mechanical Design and
Production.
It is a studying path that guarantees the student to form himself by obtaining the high technical skills required by the market as demonstrated by the number of employed three years after the Degree, which was for the year 2018 equal to 96.3% and with an unemployment rate of 1.3% (AlmaLaurea database 2018).
The strength points of the Master of Science degree course in Mechanical Engineering for Design and Production are to be found in the wide educational offer, in the possibility of activating curricular internships and master theses in a company or at international research institutions for all students through agreements or exchange programs international (Erasmus+ programs, bi-lateral agreements among Universities).

Some fields of application







Links

General Info for International student mobility
www.international.unina.it/welcome-message/

School "Politecnica e delle Scienze di Base"
www.scuolapsb.unina.it

Department of Industrial Engineering
www.dii.unina.it

Master's in Mech. Eng. for Design and production
meccanica.dii.unina.it

For more info: mail to the course coordinator
Antonio Langella **antonio.langella@unina.it**

neapōlis

neapōlis

UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II
SCUOLA POLITECNICA E DELLE SCIENZE DI BASE

ENGINEERING

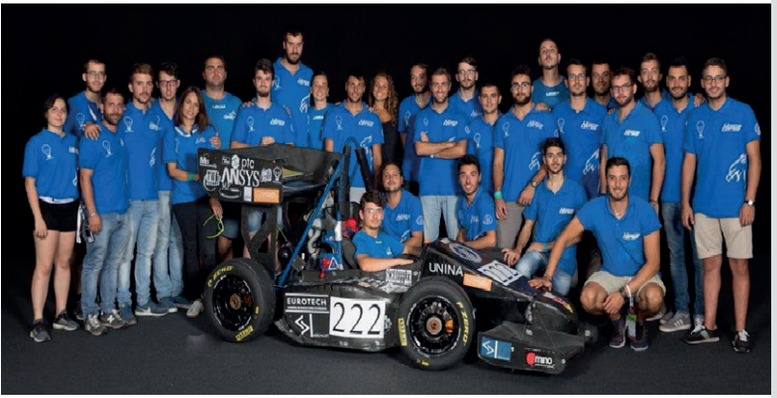
MASTER'S DEGREE IN
MECHANICAL ENGINEERING FOR DESIGN AND PRODUCTION
IMPP

DIPARTIMENTO DI INGEGNERIA INDUSTRIALE

updated to May 2020

LEARNING OUTCOMES

The course of study foresees a first common year with five compulsory exams to create a solid basic preparation and a second year in which the student follows a "path of specialization" in design or production topics and issues. 5 training courses have been identified with specific study plans in: Advanced Mechanical Design, Advanced Manufacturing, Road Vehicle Design, Technological Processes, Mechatronics, and a Curriculum in Railway Mechanics.
The offer of traineeships reaches all graduating students, by way of example, the major companies involved are : ADLER Plastic spa, CRF spa, FCA spa, GE Avio spa, Hitachi Rail spa, Leonardo spa, Laminazioine Sottile spa, Aerosoft spa, Abete srl, DEMA spa, LMC spa, De Iulis Macchine spa, OMPM srl, LAER Aeronautica srl, CAM srl, Nashira Harmetals srl etc.



UNINA racing team supported by students and teachers of the IMPP course - Hockenheim 2018

Great attention is paid to carry-out educational activities to enrich transversal knowledge and skills (CAD drawing, industrial automation, electronics), the placement (meetings with experts) and the acquisition of soft skills (English language, teamwork, lab activities, use of software: Ansys, MSC Nastran/Patran, MSC Marc/Mentat, Matlab, Comsol, etc.).

TRAINING PLAN

FIRST YEAR	**CFU**
Computer Aided Design of Mechanical Structures	9
Dynamics of Mechanical Systems	9
Operations Management	9
Geometrical Modelling and Virtual Prototyping	9
Non-Conventional Manufacturing Technologies	9
Courses chosen from list A below	0≤A≤12
Courses chosen from list B below	0≤B≤18

SECOND YEAR	
Courses chosen from list A below	12-A
Courses chosen from list B below	27-B
Elective Courses	9
Placement	9
Other educational activities	3
Master thesis	15

LIST A
Surface Engineering, Statistics for Technology, Electrical Machines, Economics and management engineering part I Economics and management engineering part II

LIST B
Path 'Advanced Mechanical Design'
Complement of Machines Design, Experimental Mechanics, Product Design and Development

Path 'Advanced Manufacturing'
Computer Aided Manufacturing, Project Management for Industrial Production, Safety and maintenance of industrial plants, Management and Control of Manufacturing System

Path 'Road Vehicle Design'
Automotive Design, Vehicle Dynamics, Tribology and Diagnostics of Mechanical Systems

Path 'Technological Processes'
Simulation and Modelling of Plastic Deformation Processes, Welding and Joining Tecnology, Non Conventional Materials Technologies

Path 'Mechatronics'
Control of Mechanical Systems, Advanced Systems Integration in Industrial Production, Robot Mechanics, Modelling and simulation of mechatronic systems

Railway Mechanics Curriculum
Compulsory Courses:
Railway vehicle dynamics, Railway construction, Railway product management elements, Railway technologies, Railway propulsion, Geometric modeling and virtual prototyping, Organization and operational safety of railway networks
Elective Courses
Path 'Design'
Applied Acoustics, Experimental Mechanics, Tribology and diagnostics of mechanical systems, Control of mechanical systems, Air-conditioning systems, Product Design and Development, Mechanical Design, Railway construction technology
Path 'Production '
Management and Control of Processing Systems, Project Management for Industrial Production, Welding and Joining Technique, Computer Aided Manufacturing, Safety and Maintenance of Industrial Plants.

JOB AND CAREER OPPORTUNITIES

The Master's Degree in Mechanical Engineering for Design and Production allows you to have a profile of:
- mechanical engineer designer who finds employment in the field of study and products development (from simple elements to complex machines) with advanced drawing techniques (CAD, virtual reality) and design (FEM) for mechanical and mechatronic components and products of general use in the various industrial sectors (vehicles, machines and production plants, sports equipment, leisure time, etc.);
- mechanical production engineer who finds employment in every type of industry as regards the development of manufacturing and manufacturing processes with particular attention to the most modern processes with innovative technologies (such as additive technologies: 3D printing), in management of production lines, planning of manufacturing processes, maintenance of industrial plants, etc.

CAMPUS AREA

Teaching activities, labs, libraries and offices of the Department of Industrial Engineering are located in Napoli (Fuorigrotta) close to the San Paolo stadium