

Faculty of Mechanics and Technology

CONCEPT AND MANAGEMENT OF AUTOMOTIVE DESIGNING, Master Degree

Subject	Semester	Number of ECTS credits
<i>Self-propulsion and Driving Capabilities of the Car</i>	1 st Sem	8
<i>Self-propulsion and Driving Capabilities of the Car</i>	1 st Sem	4
<i>Modern Manufacturing Technologies for the Automotive Industry</i>	1 st Sem	6
<i>Regulations and Standards Used in the Automotive Design</i>	1 st Sem	8
<i>Computer Aided Design I - CATIA</i>	1 st Sem	4
<i>Theory and Practice of Automotive Engine</i>	2 nd Sem	8
<i>Ergonomics and Comfort of the Cars</i>	2 nd Sem	6
<i>Statistical Tools Used in the Automotive Industry</i>	2 nd Sem	4
<i>Calculation Models in the Mechanical Engineering</i>	2 nd Sem	8
<i>Computer Aided Design II - CATIA</i>	2 nd Sem	4
<i>Value Analysis</i>	1 st Sem	3
<i>Initiation in Creation of Innovative Products/Services</i>	1 st Sem	5
<i>Project Management</i>	1 st Sem	3
<i>Quality Management and Industrial Property</i>	1 st Sem	8
<i>Professional Communication</i>	1 st Sem	3
<i>Management and Marketing of Innovation</i>	1 st Sem	5
<i>Research, Documentation and Capitalization of Information</i>	1 st Sem	3
<i>Research stage</i>	2 nd Sem	30

AUTOMOTIVE ENGINEERING FOR SUSTAINABLE MOBILITY, Master Degree

Subject	Semester	Number of ECTS credits
<i>Advanced mathematics for automotive engineering</i>	1 st Sem	5
<i>Applied mechanics</i>	1 st Sem	6
<i>Applied thermodynamics and energy conversion</i>	1 st Sem	6
<i>Documentation and capitalization of information</i>	1 st Sem	4
<i>Operations management</i>	1 st Sem	6
<i>English language</i>	1 st Sem	3
<i>Materials and sustainable manufacturing</i>	2 nd Sem	4
<i>Road vehicle dynamics</i>	2 nd Sem	6
<i>Engine calibration</i>	2 nd Sem	8
<i>Transmissions and alternative drivetrains Hybrid vehicles</i>	2 nd Sem	4
<i>Numerical analysis in problems of fluid-structure interaction</i>	2 nd Sem	5
<i>English language</i>	2 nd Sem	3
<i>Vehicle mechatronics</i>	1 st Sem	8
<i>Vehicle thermal comfort</i>	1 st Sem	7
<i>Environmental problems of automotive engineering</i>	1 st Sem	8
<i>Vehicle reliability simulation of internal combustion engine (AVL Fire)op</i>	1 st Sem	7
<i>Simulation of vehicles (AVL Cruise, Simulink) - optional</i>	2 nd Sem	10
<i>Structural analysis (Matlab, LS Dyna)- optional</i>	2 nd Sem	10
<i>Simulation of vehicle thermal management (Theseus)- optional</i>	2 nd Sem	10
<i>Internship in a research center or lab - optional</i>	2 nd Sem	10
<i>Methology of the master's thesis preparation</i>	2 nd Sem	10

**ENGINEERING AND MANAGEMENT OF PRODUCT MANUFACTURING,
Master degree**

Subject	Semester	Number of ECTS credits
<i>Integrated product design</i>	1 st Sem	6
<i>Behaviour of materials under mechanical loads</i>	1 st Sem	4
<i>Finite element analysis</i>	1 st Sem	4
<i>Industrial management methods and tools</i>	1 st Sem	6
<i>Analysis of value</i>	1 st Sem	7
<i>French for technical and scientific field 1</i>	1 st Sem	3
<i>Finite Element Method in product design</i>	2 nd Sem	7
<i>Advanced cutting methods and systems</i>	2 nd Sem	6
<i>Integrated manufacturing of products</i>	2 nd Sem	8
<i>Quality and audit processes</i>	2 nd Sem	6
<i>French for technical and scientific field 2</i>	2 nd Sem	3
<i>Behaviour of products in operation</i>	1 st Sem	7
<i>Advanced methods and systems for forming</i>	1 st Sem	7
<i>Means and methods for experimental research</i>	1 st Sem	8
<i>Management of product manufacturing</i>	1 st Sem	8
<i>Research stage</i>	2 nd Sem	25
<i>Elaboration of dissertation thesis</i>	2 nd Sem	5

LOGISTICS MANAGEMENT, Master degree

Subject	Semester	Number of ECTS credits
<i>Knowledge of company</i>	1 st Sem	3
<i>Industrial management methods and tools</i>	1 st Sem	8
<i>Production and inventory management</i>	1 st Sem	8
<i>Logistics</i>	1 st Sem	8
<i>Scientific- technical french 1</i>	1 st Sem	3
<i>Production integrated management</i>	2 nd Sem	6
<i>Implantation of the logistics streams</i>	2 nd Sem	3
<i>Modeling and simulation of production systems</i>	2 nd Sem	8
<i>Quality and audit processes</i>	2 nd Sem	7
<i>Ergonomics of logistic systems</i>	2 nd Sem	3
<i>Scientific technical french 2</i>	2 nd Sem	3
<i>Project logistics management</i>	3 rd Sem	4
<i>Maintenance of the production systems</i>	3 rd Sem	4
<i>Research stage</i>	3 rd Sem	18
<i>Elaboration of the dissertation thesis</i>	3 rd Sem	4

**SCIENCE AND TECHNOLOGY
(INTERDISCIPLINARY FIELDS: AUTOMOTIVE ENGINEERING, CHEMISTRY), Master degree**

Subject	Semester	Number of ECTS credits
<i>Thermodynamics Applied in Metallurgy</i>	1 st Sem	4
<i>Phase Transformations and Materials Microstructure</i>	1 st Sem	8
<i>Materials Characterization</i>	1 st Sem	8
<i>Corrosion and Anti-Corrosive Protection</i>	1 st Sem	8
<i>Scientifical- tehcnical french</i>	1 st Sem	2
<i>Materials Mechanical Behavior</i>	2 nd Sem	6
<i>Surfaces Mechanical Properties</i>	2 nd Sem	6
<i>Technologies for Semi-products Manufacturing</i>	2 nd Sem	10
<i>Initiation in Research</i>	2 nd Sem	6
<i>Scientifical- tehcnical english</i>	2 nd Sem	2
<i>Thermal Treatment Technology</i>	3 rd Sem	4
<i>Nuclear Material Technology</i>	3 rd Sem	4
<i>Research Stage</i>	3 rd Sem	16
<i>Elaboration of the disertation thesis</i>	3 rd Sem	6

ROAD TRAFFIC AND ACCIDENTS EVALUATION, Master degree

Subject	Semester	Number of ECTS credits
<i>Self-propulsion Ability of Road Vehicles</i>	1 st Sem	8
<i>Environment Pollution by Automotive</i>	1 st Sem	8
<i>IT and Databases</i>	1 st Sem	6
<i>Road Infrastructure and Automatic Directing of Road Traffic</i>	1 st Sem	8
<i>Automotive Driveability</i>	2 nd Sem	7
<i>Road Traffic Flow Theory</i>	2 nd Sem	7
<i>Road Infrastructure and Automatic Directing of Road Traffic</i>	2 nd Sem	4
<i>Automotive's Active and Passive Safety</i>	2 nd Sem	5
<i>Road Traffic Accidents Evaluation</i>	2 nd Sem	7
<i>Project management</i>	3 rd Sem	8
<i>Comunication in Road Transport</i>	3 rd Sem	8
<i>Traffic Low</i>	3 rd Sem	6
<i>Research Stage</i>	3 rd Sem	8