

**FACULTY OF**

**Mechanical  
Engineering  
and  
Design**

- Courses from the Bachelor's degree programme **MECHANICAL ENGINEERING**
- Courses from the Bachelor's degree programme **MECHATRONICS**
- Courses from the Bachelor's degree programme **AVIATION ENGINEERING /VEHICLEENGINEERING**
- Courses from the Bachelor's degree programme **FASHION ENGINEERING**
- Courses from the Bachelor's degree programme **INDUSTRIAL DESIGN ENGINEERING**
- Master's degree programme of **INDUSTRIAL ENGINEERING AND MANAGEMENT**
- Master's degree programme of **MECHANICAL ENGINEERING**
- Master's degree programme of **MECHATRONICS**
- Courses from the Master's degree programme **FASHION INNOVATION TECHNOLOGIES**
- Courses from the Master's degree programme **VEHICLE ENGINEERING**

**\*Important note!**

Some courses will be offered only if a sufficient number of students register for the course.

**Courses from the Bachelor's degree programme  
MECHANICAL ENGINEERING**

**1<sup>st</sup> semester (autumn)**

Course code	Course title	ECTS Credits
<a href="#">P175B166</a>	Information Technologies for Engineers	6
<a href="#">P190B101</a>	Physics 1	6

**2<sup>nd</sup> semester (spring)**

Course code	Course title	ECTS Credits
<a href="#">P190B231</a>	Theoretical Mechanics	6
<a href="#">T450B103</a>	Materials Science and Engineering	6
<a href="#">T210B198</a>	Engineering Drawing	6

**3<sup>rd</sup> semester (autumn)**

Course code	Course title	ECTS Credits
<a href="#">T210B199</a>	Computer-Aided Design	6
<a href="#">P190B504</a>	Mechanics of Materials	6
<a href="#">T130B178</a>	Technological Machines and Tools	6

**4<sup>th</sup> semester (spring)**

<a href="#">T200B109</a>	Applied Thermodynamics and Hidromechanics	6
<a href="#">T170B168</a>	Fundamentals of Electrotechnic and Electronic	6
<a href="#">T210B147</a>	Structural Integrity	6
<a href="#">T210B200</a>	Machine Dynamics	6

**5<sup>th</sup> semester (autumn)**

Course code	Course title	ECTS Credits
<a href="#">T210B116</a>	Machine Elements	9
<a href="#">T130B012</a>	Manufacturing Engineering	6
<a href="#">T110B405</a>	Measurements	6
<a href="#">P240B100</a>	Thermal Hydromechanics	6

### 7<sup>th</sup> semester (autumn)

Course code	Course title	ECTS Credits
<a href="#">T130B114</a>	Computer Numerical Control Programming	6
<a href="#">T210B436</a>	Fluid Power Systems	3
<a href="#">T210B191</a>	Product Aesthetics	6
<a href="#">T210B424</a>	Quality Assurance	6

## Courses from the Bachelor's degree programme MECHATRONICS

### 1<sup>st</sup> semester (autumn)

Course code	Course title	ECTS Credits
<a href="#">P175B166</a>	Information Technologies for Engineers	6
<a href="#">P190B101</a>	Physics 1	6

### 2<sup>nd</sup> semester (spring)

Course code	Course title	ECTS Credits
<a href="#">P190B231</a>	Theoretical Mechanics	6
<a href="#">T130B186</a>	Fundamentals of Digital Manufacturing and Mechatronics	6
<a href="#">T210B198</a>	Engineering Drawing	6

### 3<sup>rd</sup> semester (autumn)

Course code	Course title	ECTS Credits
<a href="#">T210B199</a>	Computer-Aided Design	6
<a href="#">P190B504</a>	Mechanics of Materials	6
<a href="#">T450B112</a>	Technologies of Structural Materials	6
<a href="#">P160B003</a>	Theory of Probability and Statistics	6

### 4<sup>th</sup> semester (spring)

<a href="#">T170B168</a>	Fundamentals of Electrotechnic and Electronic	6
<a href="#">T210B147</a>	Structural Integrity	6
<a href="#">T200B109</a>	Applied Thermodynamics and Fluid Mechanics	6
<a href="#">T120B008</a>	Signals Theory	3
<a href="#">T125B005</a>	Computer-aided Devices Control Systems	3

### 5<sup>th</sup> semester (autumn)

Course code	Course title	ECTS Credits
<a href="#">T210B403</a>	Machine Elements	6
<a href="#">T130B012</a>	Manufacturing Engineering	6
<a href="#">T110B405</a>	Measurements	6

### 6<sup>th</sup> semester (spring)

<a href="#">T120B007</a>	Microprocessor Technique	6
<a href="#">T125B001</a>	Automatic Control Fundamentals	6
<a href="#">S190B121</a>	Project Management	6
<a href="#">T130B147</a>	Robotic Manufacturing Systems	6

### 7<sup>th</sup> semester (autumn)

Course code	Course title	ECTS Credits
<a href="#">T210B024</a>	Mechatronic System Design	3
<a href="#">T210B133</a>	Technologies of Mechatronic Systems	9
<a href="#">T210B424</a>	Quality Assurance	6
<a href="#">T130B183</a>	Digitalization in Design and Manufacturing*	6

\*Important note!

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Courses from the Bachelor's degree programme  
**FASHION ENGINEERING**

Course code	Course title	ECTS Credits	Semester
<a href="#">T150B017</a>	Basics of Technical Design and Modelling of Clothing	6	autumn
<a href="#">T470B133</a>	Textile Technology	9	autumn
<a href="#">T470B131</a>	Design and Technology of Knits	6	spring
<a href="#">W200B104</a>	Fundamentals of Fashion Design	6	spring
<a href="#">T470B125</a>	Materials Science	9	spring
<a href="#">T150B189</a>	Computer-aided Design of Clothing 1	6	spring
<a href="#">T150B168</a>	Fashion Visualization	6	spring
<a href="#">T150B171</a>	Technology of Clothing	9	spring

Courses from the Bachelor's degree programme  
**AVIATION ENGINEERING/ VEHICLE ENGINEERING**

Course code	Course title	ECTS	Semester
<a href="#">T310B109</a>	Aviation Materials	6	autumn
<a href="#">T310B108</a>	Aviation Engines	6	autumn
<a href="#">T310B113</a>	Aerodynamics of Aircrafts and Dynamics of Flight	9	autumn
<a href="#">T310B115</a>	Avionics	6	autumn
<a href="#">T310B107</a>	Fundamentals of Aerodynamics	6	spring
<a href="#">T310B106</a>	Types, Constructions and Systems of Aircrafts	6	spring
<a href="#">T310B100</a>	Human Factors in Aviation	3	spring
<a href="#">T280B105</a>	Alternative Fuels and Hybrid Powertrains in Vehicles	6	autumn
<a href="#">T280B106</a>	Technical Maintenance of Vehicles	6	autumn
<a href="#">T130B028</a>	Machining Technologies of Means and their Components of Locomotion	6	autumn
<a href="#">T280B111</a>	Traffic Engineering and Safety	6	autumn
<a href="#">T280B107</a>	Diagnostics of Vehicles and Their Systems	6	autumn

Courses from the Bachelor's degree programme  
**INDUSTRIAL DESIGN ENGINEERING**

Course code	Course title	ECTS	Semester
<a href="#">W240B001</a>	Methods of Prototyping	6	autumn
<a href="#">W240B107</a>	Bionics and Biomimicry in Design	6	autumn
PR00B248	Professional Internship	15	Autumn/spring

**Courses from the Master's degree programme  
Fashion Innovation Technologies \***

Course code	Course title	ECTS Credits	Semester
<a href="#">T150M121</a>	Smart Textiles and Wearable Technologies	6	autumn
<a href="#">T000M134</a>	Design of Scientific Fashion Research	6	autumn
<a href="#">T150M136</a>	Digital Fashion Technologies	6	autumn
<a href="#">T150M146</a>	Smart Textiles and Wearable Technologies	6	autumn
<a href="#">T150M121</a>	Sustainable Fashion Technology	6	autumn
<a href="#">T000M161</a>	Research Project	6	autumn/spring
<a href="#">T150M147</a>	Fashion Product Exploitation Modelling	6	spring
<a href="#">W230M010</a>	Innovations in Fashion Design	6	spring
<a href="#">T470M125</a>	Advanced and Specialized Textile Processing	6	spring
<a href="#">T470M133</a>	Innovations of Functional Textile and Product Development	6	spring

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**Courses from the Master's degree programme  
INDUSTRIAL ENGINEERING AND MANAGEMENT**

**1<sup>st</sup> semester (autumn)**

Course code	Course title	ECTS Credits
<a href="#">T130M008</a>	Industrial Production	6
<a href="#">S181M004</a>	Managerial Finance	6
<a href="#">T130M009</a>	Manufacturing Planning and Control	6
<a href="#">T130M100</a>	Methods of Research and Quality Control	6
<a href="#">T210M136</a>	Product Development	6

**2<sup>nd</sup> semester (spring)**

Course code	Course title	ECTS Credits
<a href="#">T210M134</a>	Industrial Maintenance	6
<a href="#">S191M013</a>	Industrial Marketing	6
<a href="#">T130M016</a>	Quality Management	6
<a href="#">T210M023</a>	Computer-Aided Analysis of Structures *	6

**3<sup>rd</sup> semester (autumn)**

Course code	Course title	ECTS Credits
<a href="#">T130M125</a>	International Industry and Business	6
<a href="#">T130M833</a>	Computer Integrated Manufacturing	6
<a href="#">S190M102</a>	Engineering Projects Management	6
<a href="#">S189M015</a>	Productivity Management *	6

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**Courses from the Master's degree programme  
MECHANICAL ENGINEERING**

Course code	Course title	ECTS Credits	Semester
<a href="#">T210M151</a>	Digitization in Engineering	6	autumn
<a href="#">T130M833</a>	Computer Integrated Manufacturing	6	autumn
<a href="#">S190M102</a>	Mechanical Vibrations	6	autumn
<a href="#">T210M032</a>	Integrated CAD/CAE/CAM Systems	6	autumn
<a href="#">T210M136</a>	Product Development	6	autumn
<a href="#">T210M134</a>	Industrial Maintenance	6	spring
<a href="#">T210M110</a>	Dynamics of Mechatronic Systems	6	spring
<a href="#">T210M023</a>	Computer-Aided Analysis of Structures*	6	spring

**Important note!**

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**Courses from the Master's degree programme  
MECHATRONICS**

Course ode	Course title	ECTS credits	Semester
<b>1st semester (autumn)</b>			
<a href="#">T130M833</a>	Computer Integrated Manufacturing	6	autumn
<a href="#">T210M015</a>	Experimental Mechanics	6	autumn
<a href="#">T210M153</a>	Adaptive Mechanics and Mechatronic Systems	6	autumn
<a href="#">T210M109</a>	Microelectromechanical Systems Design *	6	autumn
<b>2nd semester (spring)</b>			
<a href="#">T125M262</a>	Computer-Aided Control of Technological Equipment	6	spring
<a href="#">T210M032</a>	Integrated CAD/CAE/CAM Systems	6	spring
<a href="#">T210M023</a>	Computer-Aided Analysis of Structures *	6	spring
<a href="#">T210M110</a>	Dynamics of Mechatronic Systems*	6	spring
<b>3rd semester (autumn)</b>			
<a href="#">T125M125</a>	Robotics	6	autumn
<a href="#">T125M123</a>	Programmable Logical Controllers	6	autumn
<a href="#">T152M010</a>	Design and Production of Composite Structures	6	autumn
<a href="#">S190M182</a>	Models of Multiphysics Systems	6	autumn

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**Courses from the Master's degree programme  
VEHICLE ENGINEERING**

Course ode	Course title	ECTS credits	Semester
<a href="#">T280M634</a>	Design of Vehicles	6	autumn
<a href="#">S190M102</a>	Engineering Projects Management	6	autumn
<a href="#">T280M004</a>	Quality in Transport	6	autumn
<a href="#">T280M633</a>	Safety of Vehicles and Road	6	autumn
<a href="#">T280M107</a>	Unmanned Ground Vehicles Systems	6	autumn
<a href="#">T280M002</a>	Vehicle Dynamics, Interaction and Energy Efficiency	6	autumn