

**FACULTY OF
MECHANICAL
ENGINEERING
AND
DESIGN**

- Bachelor's degree programme of **MECHANICAL ENGINEERING**
- Bachelor's degree programme of **MECHATRONICS**
- Bachelor's degree programme of **VEHICLE ENGINEERING/
AVIATION ENGINEERING**
- Courses from the Bachelor's degree programme
FASHION ENGINEERING/ TEXTILE 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 ENGINEERING/ TEXTILE ENGINEERING

DISCRETE COURSES

**Bachelor's degree programme
MECHANICAL ENGINEERING**

1st semester (autumn)

Course code	Course title	ECTS Credits
P130B001	Mathematics 1	6
T210B198	Engineering Drawing	6
P175B166	Information Technologies for Mechanical Engineers	6

2nd semester (spring)

P130B002	Mathematics 2	6
P190B101	Physics 1	6
P190B231	Theoretical Mechanics	6
T450B103	Materials Science and Engineering	6
H570B104	Academic and Technical Communication in English (Level C1)	6

3rd semester (autumn)

P190B504	Mechanics of Materials	6
T210B199	Computer-Aided Design	6
P160B003	Theory of Probability and Statistics	6
T130B178	Technological Machines and Tools	6
P401B401	General Chemistry	6

4th semester (spring)

T200B109	Applied Thermodynamics and Hydromechanics	6
T170B168	Fundamentals of Electrotechnic and Electronic	6
T210B147	Structural Integrity	6
T210B200	Machine Dynamics	6

5th semester (autumn)

T210B116	Machine Elements	9
T110B405	Measurements	6
P240B100	Thermal Hydromechanics	6
T130B012	Manufacturing Engineering	6

Bachelor's degree programme MECHATRONICS

1st semester

Course code	Course title	ECTS Credits
P130B001	Mathematics 1	6
T130B177	Introduction to Speciality	6
T210B198	Engineering Drawing	6
S183B001	Sustainable Development	6
P175B166	Introduction to Programming for Engineers	6

2nd semester

P130B002	Mathematics 2	6
P190B101	Physics 1	6
P190B231	Theoretical Mechanics	6
T210B001	Fundamentals of Mechatronics	3
T450B102	Materials Engineering	3
H570B104	Academic and Technical Communication in English (Level C1)	6

3rd semester

P190B504	Mechanics of Materials	6
T500B002	Human Safety	3
T450B112	Technologies of Structural Materials	3
P160B003	Theory of Probability and Statistics	6
P401B401	General Chemistry	6
P210B199	Computer-Aided Design	6

4th semester

T170B168	Fundamentals of Electrotechnic and Electronic	6
T210B147	Structural Integrity	6
T200B109	Applied Thermodynamics and Fluid Mechanics	6
T120B008	Signals Theory	3
T125B005	Computer-aided Devices Control Systems	3

5th semester

T130B012	Manufacturing Engineering	6
T110B405	Measurements	6
T210B403	Machine Elements 1	6

6th semester

T120B007	Microprocessor Technique	6
T125B001	Automatic Control Fundamentals	6
T130B147	Robotic Manufacturing Systems	6

7th semester

T210B424	Quality Assurance	6
T125B112	Semester Project	6
T210B024	Mechatronic System Design	6
T130B147	Robotic Manufacturing Systems	6
T210B133	Technologies of Mechatronic Systems	9

Courses from the Bachelor's degree programme

Course code	Course title	ECTS Credits	Semester
T150B195	Fashion collection	6	autumn
T470B148	Technologies of Functional and Smart Textiles Manufacturing	6	autumn
T470B149	Development of New Textile Product	6	autumn
T150B189	Computer-aided Design of Clothing 1*	6	spring
T150B171	Clothing Technology*	9	spring
T470B131	Design and Technology of Knits*	6	spring
T150B144	Clothing Manufacturing*	6	spring

***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
 VEHICLE ENGINEERING/ AVIATION
 ENGINEERING

Course code	Course title	ECTS	Semester
T310B010	Air Low*	3	autumn
T310B109	Aviational Materials*	6	autumn
T310B103	Elements of Aircraft Structures*	6	autumn
T310B100	Human Factors in Aviation*	6	autumn
T200B115	Fluid Mechanics and Thermodynamics*	6	spring
T310B113	Aerodynamics of Aircrafts and Dynamics of Flight	9	spring
T310B107	Fundamentals of Aerodynamics	6	autumn
T310B115	Avionics	6	autumn
T190B302	Electric Drives	6	spring
T280B613	Road Vehicles Theory	6	spring
T280B101	Sustainable Transport: Technologies, Environment and Interaction	6	autumn

***Important note!**

Particular elective course will be offered only if a sufficient number of students register for the course.

 Master's degree programme
 FASHION ENGINEERING/ TEXTILE ENGINEERING*

Course code	Course title	ECTS Credits	Semester
T000M240	Research Project	6	autumn
T150M121	Sustainable Textile and Clothing Technology*	6	autumn
T470M128	Mechanics and Design of Textile Materials*	6	autumn
T470M125	Advanced and Specialized Textile Processing	6	autumn/ spring
T150M128	Simulation of Clothing Exploitation Processes*	6	spring
T000M186	Research Project 1	6	spring
T470M133	Engineering of Functional and Interactive Textile*	6	spring

***Important note!**

Particular elective course will be offered only if a sufficient number of students register for the course.

 Master's degree programme
 INDUSTRIAL ENGINEERING AND
 MANAGEMENT

1st semester

Course code	Course title	ECTS Credits
T210M136	Product Development	6
T130M009	Manufacturing Planning and Control	6
T130M008	Industrial Production	6
T130M020	Engineering Operations Strategy	6
S181M004	Managerial Finance	6

2nd semester

T210M134	Industrial Maintenance	6
T130M016	Quality Management	6
S191M013	Industrial Marketing	6
T210M023	Computer-Aided Analysis of Structures	6

3rd semester

T130M125	International Industry and Business	6
T130M833	Computer Integrated Manufacturing	6
S190M102	Engineering Projects Management	6

Master's degree programme
MECHANICAL ENGINEERING

1st semester

Course code	Course title	ECTS Credits
T210M150	Basics of Scientific Research	6
T210M435	Mechanical Vibrations	6
T210M015	Experimental Mechanics	6

2nd semester

T210M203	Applied Fluid Dynamics	6
T210M513	Computational Solid Mechanics	6

Master's degree programme
MECHATRONICS

1st semester

Course code	Course title	ECTS Credits
T130M833	Computer Integrated Manufacturing	6
T210M009	Finite Element Method	6
T130M100	Methods of Research and Quality Control	6
T210M015	Experimental Mechanics	6

2nd semester

T125M262	Computer-Aided Control of Technological Equipment	6
T210M032	Integrated CAD/CAE/CAM Systems	6
T210M134	Industrial Maintenance	6

Course code	Course title	ECTS Credits	Semester
Bachelor's level courses			
W240B111	Design Workshop	6	autumn
W240B102	Bionics & Design	3	autumn
W240B010	Product Design	6	spring
W240B001	Methods of Prototyping	3	autumn

***Important note!**

Particular discrete course will be offered only if a sufficient number of students register for the course.