



**UNIVERSITY OF BIELSKO-BIALA**  
**FACULTY OF MECHANICAL ENGINEERING AND COMPUTER SCIENCE**

**Internship for Erasmus Students (15<sup>th</sup> June -15<sup>th</sup> September 2026)**

**INTERNATIONAL WEEK**

15th June – 19th June

**INTENSIVE INTERNSHIP BLOCK (210 HOURS)**

22nd June – 14th August

## **MODULE #1: Dedicated for the following fields of studies:**

- Mechanical Engineering
- Industrial Engineering
- Management and Production Engineering
- Automatics and Robotics
- Mechatronics

<b>Language module (60 hours)</b>
<ul style="list-style-type: none"><li>➤ <i>Polish language course</i></li><li>➤ <i>English specialist, technical language course</i></li></ul>
<b>Management and Interpersonal module (30 hours)</b>
<ul style="list-style-type: none"><li>➤ <i>Communication skills in theory and practice: culture shock, stereotypes and overcoming them, building relations in multicultural environment, frames and networks in communication process, agenda setting theory, shaping of regional brand.</i></li><li>➤ <i>Management skills workshops: human resources management skills, social responsibility in management, communication with internal and external stakeholders, good practices.</i></li><li>➤ <i>Cultural and historical context content: cultural diplomacy and soft power in international relations, history and culture of Bielsko-Biala and Poland, history of European integration after World War II</i></li></ul>
<b>Specialist module (120 hours)</b>
<ul style="list-style-type: none"><li>➤ <i>Dynamics and programming of robots</i></li><li>➤ <i>Metallographic specimens preparation</i></li><li>➤ <i>3D modeling and designing using Inventor or Unigraphics or CATIA system,</i></li><li>➤ <i>Experimental and theoretical studies of mechanical properties of polymer composites</i></li><li>➤ <i>Fourier series and Laplace differential equation</i></li><li>➤ <i>Elements of variational calculus</i></li><li>➤ <i>Statistics for engineers</i></li><li>➤ <i>Investigations of dynamics of vehicle</i></li><li>➤ <i>Electric and hybrid drive</i></li><li>➤ <i>Operation programming of CNC machine tools (SINUMERIK)</i></li><li>➤ <i>Mechatronic systems</i></li><li>➤ <i>Emerson PLC and PAC systems integration</i></li><li>➤ <i>Emerson controllers programming</i></li><li>➤ <i>Applications and operation of industrial robots</i></li><li>➤ <i>Management of Health and Safety at Work</i></li><li>➤ <i>Modelling and simulation of production processes</i></li><li>➤ <i>Decision support systems</i></li><li>➤ <i>Lean in practice – process analysis and improvement using Value Stream Mapping</i></li><li>➤ <i>Computer Integration Manufacturing</i></li><li>➤ <i>Static tensile test of metal specimens</i></li><li>➤ <i>Strength tests of plastics</i></li><li>➤ <i>Static and dynamic tests of structures using the MTS system</i></li><li>➤ <i>Fluid mechanics</i></li><li>➤ <i>The hydraulic and pneumatic systems elements, basic design issues</i></li><li>➤ <i>3D printing</i></li><li>➤ <i>Devices working in FDM, SLA and SLS technologies</i></li></ul>

## **MODULE #2: Dedicated for the following field of study:**

### ➤ Computer Science

<b>Language module (60 hours)</b>
<ul style="list-style-type: none"><li>➤ <i>Polish language course</i></li><li>➤ <i>English specialist, technical language course</i></li></ul>
<b>Management and Interpersonal module (30 hours)</b>
<ul style="list-style-type: none"><li>➤ <i>Communication skills in theory and practice: culture shock, stereotypes and overcoming them, building relations in multicultural environment, frames and networks in communication process, agenda setting theory, shaping of regional brand.</i></li><li>➤ <i>Management skills workshops: human resources management skills, social responsibility in management, communication with internal and external stakeholders, good practices.</i></li><li>➤ <i>Cultural and historical context content: cultural diplomacy and soft power in international relations, history and culture of Bielsko-Biala and Poland, history of European integration after World War II</i></li></ul>
<b>Specialist module (120 hours)</b>
<ul style="list-style-type: none"><li>➤ <i>External modules for AI</i></li><li>➤ <i>Reinforcement learning: AI for healthcare</i></li><li>➤ <i>AI for image processing</i></li><li>➤ <i>Encryption and steganography governed by AI</i></li><li>➤ <i>Coping with NLP</i></li><li>➤ <i>AI population control</i></li><li>➤ <i>Cybersecurity towards AI</i></li><li>➤ <i>Intelligent biometrics</i></li></ul>

### **Work on individual report**

17th August – 14th September

### **Final project presentations**

15th September

### **Official closing ceremony**

16th September