

UNIVERSITY OF BIELSKO-BIALA

Internship for Erasmus Students (17th June—17th September 2024)

International week
17th June-21st June

Intensive internship block (210 hours)
24th June-14th August

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

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

Language module (60 hours)

- *Polish language course*
- *English specialist, technical language course*

Management and Interpersonal module (30 hours)

- *Communication skills workshops*
- *Management skills (CSR, Human resources management skills)*
- *Culture shock – stereotypes and overcoming them*
- *Cultural diplomacy and soft power in international relations*
- *The conditions and the history of European Union integration process after the Second World War*
- *European labour market nowadays*
- *Social Responsibility in Management – the aspects of communication with external stakeholders*
- *The examples of CSR – good practices*
- *Building relations in multicultural environment – culture aspects at work*
- *The mass media history – introduction*
- *Frames and networks in communication process*
- *Agenda Setting Theory – Maxwell McComb and Donald Show – how we can shape the reality in customers minds*
- *Shaping of regional brand based on the example of the city Bielsko-Biala*
- *Shaping your own cities/universities brand*
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Specialist module (120 hours)

- *Dynamics and programming of robots*
- *Metallographic specimens preparation*

- *3D modeling and designing using Inventor or Unigraphics or CATIA system,*
- *Experimental and theoretical studies of mechanical properties of polymer composites*
- *Statistics for engineers*
- *Investigations of dynamics of vehicle*
- *Electric and hybrid drive*
- *Operation programming of CNC machine tools (SINUMERIK)*
- *Mechatrical systems*
- *Emerson PLC and PAC systems integration*
- *Emerson controllers programming*
- *Applications and operation of industrial robots*
- *Management of Health and Safety at Work*
- *Modelling and simulation of production processes*
- *Decision support systems*
- *Computer Integration Manufacturing*
- *Static tensile test of metal specimens*
- *Strength tests of plastics*
- *Static and dynamic tests of structures using the MTS system*
- *Fluid dynamics*
- *3D printing*
- *Devices working in FDM, SLA and SLS technologies*

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

- **Computer Science – Applied Artificial Intelligence**

Language module (60 hours)

- *Polish language course*
- *English specialist, technical language course*

Management and Interpersonal module (30 hours)

- *Communication skills workshops*
- *Management skills (CSR, Human resources management skills)*
- *Culture shock – stereotypes and overcoming them*
- *Cultural diplomacy and soft power in international relations*
- *The conditions and the history of European Union integration process after the Second World War*
- *European labour market nowadays*
- *Social Responsibility in Management – the aspects of communication with external stakeholders*
- *The examples of CSR – good practices*
- *Building relations in multicultural environment – culture aspects at work*
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Specialist module (120 hours)

- *External modules for AAI*
- *Reinforcement learning: AAI for healthcare*
- *AI for image processing*
- *Encryption and steganography governed by AI*
- *Coping with NLP*
- *AI population control*
- *Cybersecurity towards AI*
- *Intelligent biometrics*

MODULE #3: Dedicated for the following fields of studies:

- Environmental Engineering
- Chemical Technology
- Materials Engineering

Language module (60 hours)

- *Polish language course*
- *English specialist, technical language course*

Management and Interpersonal module (30 hours)

- *Communication skills workshops*
- *Management skills (CSR, Human resources management skills)*

Specialist module (120 hours)

- *Characterization and testing of material properties – introduction (10 h, lecture)*
 - *Characterization and testing of material properties (20 h, laboratory classes)*
 - *Analysis of chemical compounds using infrared spectroscopic methods (15 h, laboratory classes)*
 - *Data analysis and visualization in R (10 hours, computational exercises)*
 - *Bioenergy Technologies (20 h, laboratory classes, computational exercises)*
 - *Assessment of the energy properties of sewage sludge (10 h, computational exercises)*
 - *Biodiesel production in laboratory conditions and in industry (10 h, laboratory classes)*
 - *Environmental Microbiology (15 h, laboratory classes)*
 - *Laboratory testing of environmental samples (10 hours, laboratory classes)*
- Results obtained during laboratory and computational classes will constitute the basis for preparation an individual report (19th -16th of September).*

Work on individual raport

19th August-16th September

Final project presentations

17th September

Official closing ceremony

18th September