Faculty of Mechanical Engineering and Computer Science

Internship schedule for Erasmus students (15th June—15th September 2023)

15th June—15th August: MODULE A1,A2, B1, B2

16th August—15th September: Individual Projects

- **Department of Mechanical Engineering Fundamentals**
- **Laboratory of Metrology**
- **Department of Computer Science and Automatics**
- **Department of Mathematics**
- **Department of Combustion Engines and Vehicles**
- **Department of Production Engineering**
- **Department of Manufacturing Technology and Automation**

1st month of Internship (14th June—15th July)	
14th June	**ORIENTATION DAYS: „Getting to know the University"** **start: 14.06.2022** **Time: 10:00** Welcome at the University of Bielsko-Biala – Aleksandra Hasior, Institutional Erasmus+ Programme Coordinator Welcome at the University of Bielsko-Biala – Dagmara Mika PhD, Institutional Coordinator for Internships and Education Advisory University of Bielsko-Biala Why Poland?: top reasons – presentation What to know living in Poland and Bielsko-Biała? – presentation
15th June	**ORIENTATION DAYS: „Getting to know each other"** **start: 15.06.2022** **Time: 10:00** Ice-breaking games and activities Poland and other countries – similarities and differences Ą, Ę, Ć, Ź, Ż… - basics of Polish language – presentation and exercises
16th June	**ORIENTATION DAYS: „Getting to know Polish language"** **start: 16.06.2020** **Time: 10:00** The town hall of Bielsko-Biała sightseeing; meetings with promotion manager of the city of Bielsko-Biała Sighting The Sulkowski Dukes' Castle/ Old Factory – guided tour Lunch

MODULE A1			MODULE A2		
Date	**Subject**	**Teacher**	**Date**	**Subject**	**Teacher**
19th—23rd June Dept. of Mechanical Engineering Fundamentals	* 3D modeling and designing using Inventor or Unigraphics or CATIA system, * Experimental and theoretical studies of mechanical properties of polymer composites	prof. J. Stadnicki prof. I. Wróbel dr inż. P. Danielczyk dr inż. J. Marszałek **Start: 19.06.2023** **Building LAB A /9 (behind L building)** **Time: 9:00**	**19st—20th June Dept. of Mechanical Engineering Fundamentals**	*Metallographic specimen preparation, * Analysis of a materials microstructure,	prof. D. Jędrzejczyk dr inż. W. Skotnicki **Start: 19.06.2023** **Building: A 101** **Time: 9:00**

			21st–23rd June Dept. of Mechanical Engineering Fundamentals	* Static tensile test of metal specimens, * Static compression test of metal specimens, * Strength tests of plastics, * Static and dynamic tests of structures using the MTS system, * Reynolds experiment, * Determination of losses for flows in pipes, * Relative liquid equilibrium, * Turbulent free jet,	dr inż. J.Kopeć **Start: 21.06.2023** **Building A23** **Time: 9:00**
26th–30thJune Lab. of Metrology	* Measurements with use of coordinate measuring machine (CMM), * Programming of measurement on CMM, * Measurements with use of laser interferometer,				prof. W. Płowucha **Start: 26.06.2023** **Building: B217** **Time: 9:30**

3rd—7th July Dept. of Mechanical Engineering Fundamentals	* Robot elements, controlling devices, * Start up and moving of the robot, * Robot programming,	mgr inż. A. Jabłoński dr inż. M. Sidzina dr inż. J. Janusz **Start: 3.07.2023** **Building: A 211** **Time: 9:30**	**3rd—7th July Dept. of Production Engineering**	* Management of Health and Safety at Work. * Modelling and simulation of production processes, * Decision support systems,	dr inż. M. Baron-Puda prof. D. Plinta prof. Janusz Mleczko prof. I. Kutschenraiter-Praszkiewicz **Start: 3.07.2023** **Building: A15** **Time: 9:00**
10th—14th July Dept. of Mechanical Engineering Fundamentals	* Programming of PLC controller SIMENS S7-1200 *Making SCADA application	dr inż. D. Jancarczyk **Start: 10.07.2023** **Building: A308/039** **Time: 10:00**	**10th—14th July Dept. of Combustion Engines and Vehicle**	* Calculation of the equilibrium composition of combustion products	prof. A. Sucheta dr inż. K. Sikora **Start: 10.07.2023** **Building: B 225** **Time: 9:00**

2nd month of Internship (15th July—15th August)					
MODULE B1			**MODULE B2**		
17th—18th July Dept. of Combustion Engines and Vehicle	* Dynamics of robots,	prof. A. Harlecki, **Start: 17.07.2023** **Building: A109** **Time: 9:00**	**17th—18th July Dept. of Manufacturing Technology and Automation**	* Basics of 3D printing, presentation of devices working in FDM, SLA and SLS technologies and discussion of their operation * Designing and 3D printing of sample models	prof. J. Pezda dr inż. A. Jarco **Start:17.07.2023** **Building: B211** **Time: 9:00**
19th—21st July Dept. of Combustion Engines and Vehicle	* Investigations of dynamics of vehicle, *Investigations of transmission systems of vehicle, * Electric and hybrid drive	prof. K. Parczewski dr inż. H. Wnęk **Start: 19.07.2023** **Building: B 222** **Time: 10:00**	**19th—21st July Dept. of Mathematics**	* Elements of Statistics * Fourier Analysis * Variational Calculus	dr T. Zgraja **Start: 19.07.2023** **Building: B314** **Time: 11:15**
24th July	**Excursion to company**				

25th July–1st August Dept. of Combustion Engines and Vehicle	* Numerical simulation of work cycle of combustion engines, * Modeling and investigations of fuel injection systems for CI and SI engines, * Optimization of the algorithm for CI and SI engines control,	prof. J. Nowakowski prof. D. Pietras **Start: 25.07.2023** **Building: B 208** **Time: 9:00**	**25th July–28th July Dept. of Computer Science and Automatics**	* Introduction to the Internet of Everything * Setting Up Development Platform - The Arduino Platform and C Programming - The Raspberry Pi Platform and Programming - The ESP32 Platform and Programming * Sensing and Actuation From Devices - Interfacing with the Arduino - Interfacing with the Raspberry Pi * Communication Technologies - Hardware Interfaces - Networking and the Internet * Software Architecture for the Internet of Things	dr Ł. Więcław **Start: 25.07.2023** **Building: B 326** **Time: 10:00**
			31st July–4th August Dept. of Manufacturing Technology and Automation	* Operation of CNC machine tools (SINUMERIK) * Programming of the CNC machine tools (SINUMERIK) * Flexible programming of the CNC machine tools (SINUMERIK) * Programming of robots (Kuka, Motoman)	mgr inż. K Wyrobek **Start: 31.07.2023** **Building: H** **Time: 9:00**

7th–11th August Dept. of Computer Science and Automatics	* Modeling of mechanical systems using MATLAB software * Dynamics analysis of multibody systems using MSC. ADAMS	dr inż. A. Urbaś dr inż. K. Augustynek **Start: 02.08.2023** **Building: A 307/A 213** **Time: 9:30**	7thAugust–11th August Dept. of Computer Science and Automatics	* Image Processing	dr Joanna Nikodem **Start: 7.08.2023** **Building: L412** **Time: 9:00**

3rd month of Internship (16th August—15th September)

16th August	**Excursion to company**
17th August—10th September	**Work on individual projects** **(the subject and the name of tutor will be provided at the beginning of Internship)**

11th—14th September	**Projects acceptation, documents preparation (meeting with Tutors and Coordinator)**
15th September	**Internship certificate**