

INSTITUTE OF MECHATRONICS

Department	Job position	Part of FTE	Study field	Science field	Required competences and experience
Robotics and Piezomechanics Laboratory (5560)	Researcher	1,00	E 06 Mechanical Engineering	T 009 Mechanical Engineering	<p>Doctor of Science in: the science field of Mechanical Engineering T 009.</p> <p>Pedagogical experience: in the area of technologies related to mechatronics.</p> <p>Experience of giving lectures in the following languages: required experience of giving lectures in the English language.</p> <p>Experience of supervision of the students' theses: first and second study cycle.</p> <p>Experience of research activities:</p> <ul style="list-style-type: none"> - Preparation of the proposals of national research projects with allocated external financing for tenders; - Participation in national research projects in the area of mechatronics; - Implementation of R&D orders. <p>Knowledge of specific technologies: experience of designing of embedded systems, programming of widgets and logical frameworks, programming of robots using ROS technologies, 3D prototyping.</p> <p>Work experience with specific equipment: programming/control of industrial and humanoid robots.</p> <p>Additional required experience and competences:</p> <ul style="list-style-type: none"> - Work experience with Nao, Yumi and Shadow Dexterous Hand robots; - Experience of preparation of patent applications; - Practical experience at a research institution (for example, traineeship at a university or institute) working with robots in the area of biomedical engineering.
Dynamics Laboratory (5561)	Researcher	1,00	E 04 Measurement Engineering	T 010 Measurement Engineering	<p>Doctor of Science in: the science field of Measurement Engineering T010.</p> <p>Pedagogical experience: in the area of technologies related to mechatronics.</p> <p>Experience of giving lectures in the following languages: required experience of giving lectures in the English language.</p> <p>Experience of supervision of the students' theses: first and second study cycle.</p> <p>Experience of research activities:</p> <ul style="list-style-type: none"> - Preparation of the proposals of national research projects with allocated external financing for tenders; - Participation in national research projects in the area of mechatronics; - Implementation of R&D orders. <p>Knowledge of specific technologies: experience of development of embedded systems and electronic boards, in the area of measurement of small displacements and vibrations, development of effectors and sensors.</p> <p>Work experience with specific equipment: work with scanning laser Doppler vibrometers, microindenter and measurement equipment for surface topography of microstructures.</p> <p>Additional required experience and competences:</p> <ul style="list-style-type: none"> - Traineeship or work experience at national and/or foreign research institutions conducting research in the area of technologies related to mechatronics; - Experience of preparation of patent applications; - Experience of expert activities in the area of technologies related to mechatronics.

Dynamics Laboratory (5561)	Chief Researcher	1,00	E 06 Mechanical Engineering	T 009 Mechanical Engineering	<p>Doctor of Science in: the science field of Mechanical Engineering T 009.</p> <p>Pedagogical experience: in the area of technologies related to mechatronics.</p> <p>Experience of giving lectures in the following languages: required experience of giving lectures in the English language.</p> <p>Experience of supervision of the students' theses: second and third study cycle.</p> <p>Experience of research activities:</p> <ul style="list-style-type: none"> - Preparation of the proposals of national and/or international research projects with allocated external financing for tenders; - Management of national and/or international research projects in the area of mechatronics. <p>Knowledge of specific technologies: experience of development and research of the piezomechanical systems of electrical energy generation, experience in the area of multi-physical mathematical modelling of macro and micro electromechanical energy converters and dynamic measurements.</p> <p>Work experience with specific equipment: work with engineering modelling software Comsol Multiphysics, work with laser Doppler vibrometers.</p> <p>Additional required experience and competences: traineeship experience at foreign research institutions conducting research in the area of technologies related to mechatronics, experience of participation in the doctoral committee.</p>
Biomechanics Laboratory (5561)	Senior Researcher	1,00	E 06 Mechanical Engineering	T 009 Mechanical Engineering	<p>Doctor of Science in: the science field of Mechanical Engineering T 009.</p> <p>Pedagogical experience: in the area of technologies related to mechatronics.</p> <p>Experience of giving lectures in the following languages: required experience of giving lectures in the English language.</p> <p>Experience of supervision of the students' theses: First and second study cycle.</p> <p>Experience of research activities:</p> <ul style="list-style-type: none"> - Preparation of the proposals of national research projects with allocated external financing for tenders; - Participation in national research projects in the area of mechatronics; - Implementation of R&D orders. <p>Knowledge of specific technologies: experience in the area of biomechanics, development and testing of health care facilities, certification of medical equipment.</p> <p>Work experience with specific equipment: with Qualisys, Comsol, SolidWorks software.</p> <p>Additional required experience and competences:</p> <ul style="list-style-type: none"> - Experience, knowledge and skills in preparation of a description of the biomedical testing protocol of the medical device and the table of the medical device's compliance with the essential requirements stipulated by the Ministry of Health and the State Health Care Accreditation Agency; - Experience of preparation of patent applications; - Experience of commercialisation of the scientific production created based on the R&D activities.