

Title Mechatronics (Mechatronika)	Code 1010401151010220747
Field EDUCATION IN TECHNOLOGY AND INFORMATICS	Year / Semester 3 / 5
Specialty -	Course core
Hours Lectures: 2 Classes: - Laboratory: 1 Projects / seminars: -	Number of credits 4
	Language polish

Lecturer:

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Status of the course in the study program:

Core course of the study for Education in Technology and Informatics, Faculty of Technical Physics.

Assumptions and objectives of the course:

Basics knowledge of mechatronics

Contents of the course (course description):

There are presented: concept of mechatronics, mechatronics components,
mechatronics systems and their synergy.

Subject of the lectures:

1. The concept of mechatronics
2. Mechatronics components
3. Sensors: types, theoretical foundation, basic construction, operating principles and applications
4. Actuators
5. Controls, feedback
6. Regulation systems
7. Safety and protections

Introductory courses and the required pre-knowledge:

Basic knowledge of mathematics, physics and technology.

Courses form and teaching methods:

Lecture course and student laboratory.

Form and terms of complete the course - requirements and assessment methods:

Written and oral examination.

Basic Bibliography:

1. B.Heiman, W.Gerth, K.Popp, Mechatronika.Komponenty-metody-przykłady, PWN, Warszawa 2001
2. M.Olszewski red., Podstawy mechatroniki, Wyd. Rea s.j., Warszawa 2006

3. A. Milecki ,Ćwiczenia laboratoryjne z elementów i układów automatyzacji, Wyd. PP, Poznań 2000
4. Instrukcje laboratoryjne dostępne podczas ćwiczeń i na stronie Zakładu Urządzeń Mechatronicznych: www.zum.put.poznan.pl
5. M.Olszewski red., Urządzenia i systemy mechatroniczne, Wyd. Rea s.j., Warszawa 2009
6. Imaging and Machine Vision Europe, Europa Science Ltd.

Additional Bibliography:

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