Title	Code
(Obrabiarki CNC)	**10102513510102202411**

Field	Year / Semester
Mechatronics	**3 / 5**

Specialty	Course
-	**core**

Hours	Number of credits
Lectures: **1** Classes: **-** Laboratory: **1** Projects / seminars: **-**	**2**
	Language **polish**

Lecturer:

Ph.DSc.Eng. Roman Staniek
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Faculty:

Faculty of Mechanical Engineering and Management
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60-965 Poznań
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e-mail: office_dmef@put.poznan.pl

Status of the course in the study program:

Obligatory course of the technical basic study program

Assumptions and objectives of the course:

Getting familiar with: general design, running and operation of CNC machines, their controls and drives.

Contents of the course (course description):

Classification and demands of CNC machine tools (according to ISO 230 standards), determi-nation and orientation NC axes. Drive and servodrive units: main and feed drives (DC, AC and linear type), analogue and digital. Measuring systems. Mechanical parts. Design principles for CNC machine tools. Overview and characteristic of modern CNC machine tools, NC machining centre. Development trends (direct drives, electro-spindles, HSM and HSC machine tools). In-vestigations in functional units of CNC machine tools.

Introductory courses and the required pre-knowledge:

Basic knowledge of machine design, technology, tool selection and machining, rudiments of automatics and automation.

Courses form and teaching methods:

Lectures supported by multimedia presentation, laboratory CNC machine tools.

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

Laboratory credit.

Basic Bibliography:

Additional Bibliography: