Title	Code
Engineering of production I: Machining	**10102512310102202250**
Field: **Mechanical Engineering**	Year / Semester: **2 / 3**
Specialty: **-**	Course: **core**
Hours: Lectures: **1** Classes: **1** Laboratory: **1** Projects / seminars: **-**	Number of credits: **5**
	Language: **polish**

Lecturer:

Prof. Mieczysław Kawalec, Ph. D. Sc. (Eng.) - lecture
phone: +48(61) 6652 260
e-mail: mieczyslaw.kawalec@put.poznan.pl
Marian Jankowiak, Ph. D. (Eng.) - laboratory
phone: +48 (61) 6652 785
e-mail: marian.jankowiak@put.poznan.pl

Faculty:

Faculty of Mechanical Engineering and Management
ul. Piotrowo 3
60-965 Poznań
tel. (061) 665-2361, fax. (061) 665-2363
e-mail: office_dmef@put.poznan.pl

Status of the course in the study program:

Obligatory course in the field of Mechanical Engineering.

Assumptions and objectives of the course:

Become familiar with basic knowledge of machining.

Contents of the course (course description):

Characteristic and destination of machining in modern production engineering. Types, methods and varieties of metal cutting and abrasive machining. Kinematics of process and its consequences. Modern materials for cutting edges and cutting tools. Cutting edge geometry and process and machining effects. Machined surface and its geometric condition. Energetistic problems (forces, moment, power, heat, temperature) in cutting process. Tribology problems in tool operating process. Machinability of materials. Basic optimization of machining parameters. Technological surface layer and its role in modern technique. Development tendencies in metal removal process technique (complete and hybrid machining etc.).

Introductory courses and the required pre-knowledge:

Basic knowledge from physics, engineering graphics, theory of machines, material science.

Courses form and teaching methods:

Lectures illustrated by transparencies, aided laboratory classes and practices of machining.

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

Examination, auditorium practice and laboratory credit.

Basic Bibliography:

Additional Bibliography: