

Title Forming Technology (Technologie kształtujące)	Code 1010401151010220749
Field EDUCATION IN TECHNOLOGY AND INFORMATICS	Year / Semester 3 / 5
Specialty -	Course core
Hours Lectures: 1 Classes: - Laboratory: 1 Projects / seminars: -	Number of credits 2
	Language polish

Lecturer:

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Faculty:

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Status of the course in the study program:

Obligatory course at the Faculty of Technical Physics

Assumptions and objectives of the course:

Acquaint future engineers with technique of production basing on practical forming technologies with the special allowance of machining.

Contents of the course (course description):

Forming technologies in modern technique of production. Characteristic and destination of machining. Types, methods and varieties of machining, kinematics and parameters of machining, cutting time, productivity. Characteristic and description of basic ma-chining methods: turning, drilling, milling, grinding. Modern materials for cutting edges and cutting tools. Stereometric features identification of different cutting tools. Energetic problems: forces, power and cutting torques. Tribology problems. Basic optimization of machining parameters, economical aspects. Machinability of materials. Characteristic of surface layer. Modern tendencies of production technique develop-ment with the aid of machining. Selected aspects of eroding and machining with the concentrated stream energy.

Introductory courses and the required pre-knowledge:

Basic knowledge from physics, mechanics, strength of materials

Courses form and teaching methods:

Lectures and laboratories

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

Examination from lectures and laboratory credit on the basis of reports and knowledge

Basic Bibliography:

1. Filipowski R., Marciniak M.: Techniki obróbki mechanicznej i erozyjnej. Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2000.
2. Grzesik W.: Podstawy skrawania materiałów metalowych. WNT- Warszawa 1998.
3. Kawalec M., Kodym J., Jankowiak M.: Laboratorium z podstaw skrawania. WPP 1984.
4. Kusiński J.: Lasery i ich zastosowanie w inżynierii materiałowej. Wydawnictwo Naukowe ?Akapit?, Kraków 2000.
5. Shaw M.C.: Metal Cutting Principles. Oxford Univ. Press., Oxford 1996.

6. Oczóś K.: Kształtowanie materiałów skoncentrowanymi strumieniami energii. Redakcja Wydawnictw Uczelnianych Politechniki Rzeszowskiej, Rzeszów 1988.
7. Olszak W.: Obróbka skrawaniem. WNT Warszawa 2008
8. Wsiecki M.: Nowoczesne materiały narzędziowe. WNT Warszawa 1997.

Additional Bibliography:

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