

Title Technological fixtures	Code 10102212610102202291
Field Mechanical Engineering	Year / Semester 3 / 6
Specialty Mechanical Engineering	Course core
Hours Lectures: 1 Classes: - Laboratory: - Projects / seminars: 1	Number of credits 3
	Language polish

Lecturer:

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Status of the course in the study program:

Obligatory course of the field: Mechanical Engineering

Assumptions and objectives of the course:

Detailed acquaintance with with definitions and division of technological instruments, usefulness necessity of usage, the examples of construction solution for basic ways of machining and assembly

Contents of the course (course description):

Classification of fixtures, place and role in production process, influence on quality and accuracy of machined articles, profitability of usage. Specificity of fixtures for various technics of production. Analysis of labour intensity of construction and manufacturing of fixtures. Variants of fixtures. Standard fixtures, special and all-purpose build-up fixtures. Principles of settlement of machined articles (over fixing). Bases and principles of their choice. Parts of fixtures: clamping, clench, locating of fixture on machine tool, divisional, guiding of tool, supporting. Standard parts, catalogue parts, pneumatics, hydraulics, mechanical parts of fixtures. Calculation of force of fastening. Methodics of design. Influence of fixing on accuracy of machined article, machining errors and dividing errors in fixtures, calculation. Fixing of fixture on machine tool and tool in relation to fixture. Automation and mechanisation of fixtures. Examples of fixtures for various technics of cutting, assembly and disassembly. Eksploitation of technological equipment. Projects: Elaboration of fixture construction for chosen machining operation or assembly operation with analysis of variants, accuracy, costs. Idea of mechnisation or automation of this operation

Introductory courses and the required pre-knowledge:

Basic knowledge of machining, process planning and mechanical technology

Courses form and teaching methods:

Lectures illustrated with visual presentations. Projects of fixtures for chosen machined article

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

Written tests and the assessment of practical knowledge - assessment of individual project

Basic Bibliography:

Additional Bibliography: