

Course code:

Course item:

1. INFORMATION ABOUT THE COURSE

a. Basic information

Course title	<i>Machine Building Technology</i>
Field of study	<i>Mechanical Engineering</i>
Cycle	<i>first degree</i>
Study profile	<i>general academic</i>
Study mode	<i>full-time</i>
Specialism	<i>Machine technology</i>
Unit responsible for the field of study	<i>Faculty of Mechanical Engineering</i>
Lecturer	<i>Andrzej Skibicki, PhD</i>
Introductory courses	<i>The basics of entrepreneurship. Machine Orientation</i>
Prerequisites	<i>The scope of knowledge / skills / social competences resulting from the introductory subjects, basic knowledge of theory and practice of machining, forming</i>

b. Semester timetable

Semester	Lectures (W)	Classes (C)	Laboratories (L)	Project classes (P)	Seminars (S)	Fieldwork (T)	ECTS credits ECTS*
VI	30		15				3

C. Assumed outcomes and aims - aims bind the course programme with the study programme and are referred to in learning outcomes point 2

2. LEARNING OUTCOMES (acc. to National Qualifications Framework)

No.	Description of learning outcomes	Reference to learning outcomes for the field of study	Reference to learning outcomes for the area of study
KNOWLEDGE			
K1	has knowledge of manufacturing engineering: techniques, processes and machines.	K_W10	P6S_WG
SKILLS			
S1	is able to plan the production process of simple machines and devices and to initially estimate its costs	K_U06	P6S_UW
S2	has the ability to self-study, inter alia, to improve professional competences	K_U12	P6S_UU
SOCIAL COMPETENCES			
SC1	is aware of the importance and understands the non-technical aspects and effects of a mechanical engineer's activity, including its impact on the	K_K04	P6S_KO

	environment, and the related responsibility for decisions		
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3. TEACHING METHODS

multimedia lecture, laboratory and other methods, e.g. videos, books, catalogues, diagrams, blackboard, on-line techniques, exercise workbook classes, lectures, brainstorming, discussion, etc.

4. METHODS OF EXAMINATION

final lecture written or oral exam, partial or final report after the laboratory, class attendance

5. COURSE CONTENT

Specify the content separately for each type of classes in accordance with point I.B. Lecture	Manufacturing techniques – types, characteristics. Production system, technological process. Technological process design for typical machine parts. Tools and tool materials and application. Machinability of work part material, machine tools and fixture. Mechanization and automation of manufacturing processes. Final summary.
Laboratory	Application and machining processes used on lathe, drilling, milling, grinding, gear producing machines. Machining accuracy. Machining of cylindrical flat and formed surfaces. Gear machining, Automatic and NC machine. Summary of the course cycle.

6. VALIDATION OF LEARNING OUTCOMES

Learning outcome	Form of assessment (for example:)					
	Oral examination	Written examination	Test	Project	Report	Class attendance
K1		x			x	x
S1 – S2		x			x	x
SC1		x			x	x

7. LITERATURE

Basic literature	<ol style="list-style-type: none"> 1. Youssef H.A., Hofy H.E.: Machining Technology Machine Tools and Operations, CRC Press, 2008 2. Boothroyd G., Knight W.A.: Fundamentals of Machining and Machine Tools Second Edition, Scripta Book Company, 1989
Supplementary literature	<ol style="list-style-type: none"> 1. Feld M., 2010. Podstawy projektowania procesów technologicznych typowych części maszyn. WNT Warszawa Kosmol J., 2000. Automatyzacja obrabiarek i obróbki skrawaniem. WNT Warszawa 2. Olszak W., 2008. Obróbka skrawaniem. WNT Warszawa

8. TOTAL STUDENT WORKLOAD REQUIRED TO ACHIEVE EXPECTED LEARNING OUTCOMES EXPRESSED IN TIME AND ECTS CREDITS

Student's activity		Student workload– number of hours
Classes conducted under a direct supervision of an academic teacher or other persons responsible for classes	Participation in classes indicated in point 1.b	45
	Supervision hours	4
Student's own work	Preparation for classes	10
	Reading assignments	15
	Other (preparation for exams, tests, carrying out a project etc)	16
Total student workload		90
Final number of ECTS credits		3