

Subject - name:	Computer Techniques I	Kod:	M110
Level of studies:	I		
Type of studies:	Stacjonarne		
Major:	MiBM/MTR/IPEiH		
Kind of subject:	Compulsary		
Specialisation:	All specialisations		
Form:	15W, 30L		

Professor:	Jerzy Pokojński prof. dr hab. inż.
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Outline:	
Lecture:	<ol style="list-style-type: none"> 1. History of computer techniques. 2. Elements of information processing theory, computer systems, operating systems. 3. Introduction to computer support of engineering activities. 4. CAD systems and their functionalities. 5. Geometric modeling. 6. CAE systems and their functionalities. 7. Engineering problems modeling. 8. Algorithmic programming languages. Part I. Elements. 9. Algorithmic programming languages. Part II. Exemplary programming structures. 10. Algorithmic programming languages. Complex problems. 11. Object oriented programming, basic concepts. Declarative approach, basic concepts. 12. Database approach, basic concepts. Part I. 13. Database approach, basic concepts. Part II.

Laboratory:	<ol style="list-style-type: none"> 1. MathCAD, operations, variables, expressions. 2. MathCAD, functions, units. 3. MathCAD, matrix operations, diagrammes - 2-dimensional, animation. 4. MathCAD, solving of equations and systems of equations, symbolic operations. 5. Visual Basic, application of objects, operating on properties, events. 6. Visual Basic, conditional blocks, logic operators. 7. Visual Basic, arithmetic operations, variables, functions. 8. Visual Basic, subroutines and their applications. 9. Visual Basic, functions and their applications. 10. Visual Basic, vector animation. 11. Visual Basic, loop (FOR NEXT). 12. Visual Basic, loop (DO WHILE). 13. Visual Basic, input/output with files.
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