Title **Computer Simulations of Physical Processes (SKPF)**	Code **1010401251010410713**
Field **TECHNICAL PHYSICS**	Year / Semester **3 / 5**
Specialty **-**	Course **core**
Hours Lectures: **1** Classes: **-** Laboratory: **2** Projects / seminars: **-**	Number of credits **4**
	Language **polish**

Lecturer:

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Status of the course in the study program:

Core course of the study for Technical Physics, Faculty of Technical Physics.

Assumptions and objectives of the course:

Development of the skill of writing simulation programs in the language of the symbolic computations. Development of the critical analysis of the results provided by the simulation programs.

Contents of the course (course description):

Presentation of the structure and basic instructions of Mathematica: the package of symbolic computations. Presentation of the structure and functioning of the simulation programs written in the language of symbolic computations.

Introductory courses and the required pre-knowledge:

General knowledge of computers. Ability to perform some basic operations connected with the switching on of a computer, preparing it to work within the environment of a chosen compiler. The skill of writing basic programs of numerical computations.

Courses form and teaching methods:

Lectures performed with the use of the multimedial techniques, in particular live presentation of the structure and functioning of the computer programs developed by the lecturer aimed at solving some simple problems. Exercises in the computer laboratory. Work with individual students.

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

Written colloquium as a basic test of knowledge at the end of lectures. Presentation of the computer programs developed by students.

Basic Bibliography:

1.   W. Kinzel , G. Reents, ?Physics by computers?, Springer Verlag 1998.

Additional Bibliography:

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http://www.put.poznan.pl/