Title **Computer Simulation**	Code **1010801161010810088**
Field **Electronics and Telecommunications**	Year / Semester **3 / 6**
Specialty **-**	Course **core**
Hours Lectures: **1** Classes: **-** Laboratory: **-** Projects / seminars: **1**	Number of credits **0**
	Language **polish**

Lecturer:

> prof. dr hab. inż. Jerzy Tyszer
> Katedra Radiokomunikacji
> tel. +48 61 665 3814, fax. +48 61 665 3823
> e-mail: tyszer@et.put.poznan.pl

Faculty:

> Faculty of Electronics and Telecommunications
> ul. Piotrowo 3A
> 60-965 Poznań
> tel. (061) 665-2293, fax. (061) 665-2572
> e-mail: office_det@put.poznan.pl

Status of the course in the study program:

> Obligatory course, III year, Faculty of Electronics and Telecommunications

Assumptions and objectives of the course:

> The main purpose of the course is to offer a comprehensive and fairly balanced yet not overlength presentation of a wide repertoire of computer simulation techniques available to the modelers of discrete event systems. It will teach potential simulation users how to design, program and exploit their own computer simulation models by covering all basic and generic concepts used in computer simulation of discrete event systems in a uniform and self-contained manner.

Contents of the course (course description):

> Discrete-event systems, clock advance mechanisms, the concept of event, activity scanning, event scheduling, ABC approach, events vs. activities, implementation of event lists, run-time efficiency of event scheduling, process interaction, coroutines, distributed simulation, random number generators, statistical tests of the random number generators, non-uniform variate generation, design of simulation experiments, validation of simulation models, analysis of variance, collection and analysis of simulation results, estimation of transient and steady-state phase characteristics, independent replications method, method of batch means, regenerative method, variance reduction, examples of simulation models, simulation languages, methodology of computer simulation.

Introductory courses and the required pre-knowledge:

> Basic knowledge of programming in object-oriented languages and some background in the theory of probability and statistics.

Courses form and teaching methods:

> Lectures supported by slides, and individual simulation projects.

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

> Based on projects aimed at developing computer simulation models of a given discrete-event system and written exam.

Basic Bibliography:

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Additional Bibliography:

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