

Title <b>Informatics and Programming</b>	Code <b>1010101211010510327</b>
Field <b>Environmental Engineering first-cycle studies</b>	Year / Semester <b>1 / 1</b>
Specialty -	Course <b>core</b>
Hours Lectures: <b>2</b> Classes: -    Laboratory: <b>2</b> Projects / seminars: -	Number of credits <b>4</b>
	Language <b>polish</b>

**Lecturer:**

Mariusz Nowak, Ph.D., Assistant Professor  
Institute of Computing Science  
Poznań University of Technology  
Piotrowo 2, 60-965 Poznań, Poland  
tel. (061) 665-2921, fax. (061) 877-1525  
e-mail: Mariusz.Nowak@put.poznan.pl

**Faculty:**

Faculty of Civil and Environmental Engineering  
ul. Piotrowo 5  
60-965 Poznań  
tel. (061) 665-2413, fax. (061) 665-2444  
e-mail: office\_dceef@put.poznan.pl

**Status of the course in the study program:**

Basic course.

**Assumptions and objectives of the course:**

Students should obtain knowledge of theoretical and practical problems of IT systems in the context of applications in environmental engineering.

**Contents of the course (course description):**

The course lecture contains the following topics: Range of basic notions - the information and the signal, structure of computer systems, projecting the computer systems, algorithms and the data structure. Range of the architecture and the computer software - the binary arithmetic, basic elements of computer architecture, microprocessors, programming in low level languages, structure of software, programming in high level languages. Range of operating systems - the structure and the basic functions of operating systems. Range of tools of computer science - the text editors, graphic programmes, the spreadsheet, multimedia programs, Flash development environment.

**Introductory courses and the required pre-knowledge:**

Basic knowledge of informatics.

**Courses form and teaching methods:**

Lectures and laboratories.

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

Written test, tests in computer laboratory.

**Basic Bibliography:**

1. Pajdowski L. Chemia ogólna. Wyd. PWN Warszawa 1999
2. Pazdro K.M. Podstawy chemii. Oficyna edukacyjna K. Pazdro Warszawa 1993
3. Sienko M.J., Plane R.A. Chemia - Podstawy i zastosowanie Wyd. Naukowo-Techniczne PWN Warszawa 1993
4. O'Neill P Chemia środowiska Wyd. Naukowe PWN Warszawa 1997
5. Barycka I., Skudlarski K. Podstawy chemii Oficyna Wyd. Pol. Wrocławskiej Wrocław 2001
6. Pigoń K., Ruziewicz K. Chemia fizyczna Wyd. Naukowe PWN Warszawa 2009

**Additional Bibliography:**