		STUDY MODULE DE	ESCRIPTION FORM			
Name of Algo	the module/subject	structures	Code 1010341731010340103			
Field of s	study	_	Profile of study (general academic, practical)	Year /Semester		
Math	ematics in techi	nology	(brak)	2/3		
Elective	path/specialty	-	Subject offered in: Polish	Course (compulsory, elective) obligatory		
Cycle of	study:		Form of study (full-time,part-time)			
First-cycle studies			full-time			
No. of ho	ours	I		No. of credits		
Lecture	e: 30 Classes	s: - Laboratory: 30	Project/seminars:	4		
Status of	f the course in the study	program (Basic, major, other) (brak)	(university-wide, from another field	nak)		
Educatio	on areas and fields of sci	ence and art	(8)	ECTS distribution (number		
technical sciences				4 100%		
	l'echnical scie	ences		4 100%		
dr inż. Karol Gajda email: karol.gajda@put.poznan.pl tel. 2805 Faculty of Electrical Engineering ul. Piotrowo 3A 60-965 Poznań						
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Assessment methods of study outcomes

- evaluation of knowledge acquired in the lecture
- skills assessment related to the implementation of project tasks

- evaluation of student preparation for classes and laboratory evaluation of skills related to the implementation of laboratory exercises

- evaluation of reports

- evaluation of team skills

Course description

The basic principles of analysis algorithms. Basic techniques and structures. Sorting. Selection. Search and simple dictionaries. Effective implementations dictionary. Complex data structures. Graph algorithms. Search pattern in the texts. Textual data structure. NP-completeness.

Basic bibliography:

1. Algorytmy i struktury danych, L. Banachowski, K. Diks, W. Rytter, WNT, 2006.

2. Wprowadzenie do algorytmów, Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest, Clifford Stein, WNT, 2012

Additional bibliography:

1. G. Cornell, C. Horstmann, ,Java Podstawy, Helion

2. B. Eckel, Thinking in Java. Edycja polska

3. D.E.Knuth, Sztuka programowania komputerów, Wydawnictwa Naukowo-Techniczne, Warszawa.

4. http://wazniak.mimuw.edu.pl/index.php?title=Algorytmy_i_struktury_danych

Result of average student's workload

Activity	Time (working hours)				
1. participation in lectures (7,5x2 hrs.)	15				
2. participation in laboratory classes (15x2 hrs.)	30				
3. participation in the consultations related to the implementation of the education p laboratory / project	10 5				
4. completion (within own work) reports on laboratory exercises	15				
5. write a program / programs, commissioning and verification (time outside of the c laboratory)	classroom	15			
6. preparation for laboratory exercises		5			
7. preparation for tests / test	5				
8. read with the specified literature / teaching materials	5				
9. exam preparation and participation in the exam					
Student's workload					
Source of workload	hours	ECTS			
Total workload 105		4			
Contact hours 55		2			
Practical activities 75		3			