STUDY MODULE DESCRIPTION FORM

Name of the module/subject		Code
Concurrent programming		**1010331541010335200**
Field of study: **Information Engineering**	Profile of study (general academic, practical): **(brak)**	Year /Semester: **2 / 4**
Elective path/specialty: **-**	Subject offered in: **Polish**	Course (compulsory, elective): **elective**
Cycle of study: **First-cycle studies**	Form of study (full-time,part-time): **full-time**	
No. of hours: Lecture: **2** Classes: **-** Laboratory: **1** Project/seminars: **-**		No. of credits: **3**
Status of the course in the study program (Basic, major, other): **(brak)**	(university-wide, from another field): **(brak)**	
Education areas and fields of science and art: **technical sciences**		ECTS distribution (number and %): **3 100%**

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Mathematics in the basics of matrix calculus, linear algebra. Basic knowledge of object-oriented programming, using the Windows API, the basics of UNIX. Knowledge and understanding of the basic concepts of programming
2	**Skills**	Ability to program in an object-oriented language. Design and analysis of combinatorial algorithms, including sorting and processing base of graphs. solve simple tasks in the field of mathematical analysis.
3	**Social competencies**	Conscientiousness in communicating the results of laboratories.

Assumptions and objectives of the course:

Skills in programming

Study outcomes and reference to the educational results for a field of study

Knowledge:

Skills:

Social competencies:

Assessment methods of study outcomes

Assignments, reports from laboratories

Course description

Programming in C, code optimization. Optimize sequence. Optimizing super-scalar. Programming in OpenMP parallelism declarative. Development platforms, support for concurrency: Win32, .NET, Java Programming in TBB, advanced optimization techniques (as hardware) memory models
Basic bibliography:
Additional bibliography:

Result of average student's workload

Activity	Time (working hours)

Student's workload

Source of workload	hours	ECTS
Total workload	100	3
Contact hours	30	2
Practical activities	20	1