

SYLLABUS OF A MODULE

Polish name of a module	Zaawansowane programowanie obiektowe
English name of a module	Advanced object programming
ISCED classification - Code	0613
ISCED classification - Field of study	<i>Software and applications development and analysis</i>
Languages of instruction	<i>English</i>
Level of qualification	<i>1 - BSc (EQF 6)</i>
Number of ECTS credit points	4
Examination	<i>EW – exam written</i>
Available in semester	S – Spring only

Number of hours per semester:

Lecture	Tutorial	Laboratory	Seminar	Project	Others
30	0	30	0	0	0

MODULE DESCRIPTION

Module objectives

- C1. a student acquires the advanced object programming knowledge of modern C++
- C2. a student acquires the advanced object programming skills of modern C++
- C3. a student acquires social competence

PRELIMINARY REQUIREMENTS FOR KNOWLEDGE, SKILLS AND OTHER COMPETENCES

- 1. intermediate English language skills
- 2. C++ intermediate object programming skills
- 3. programming skills using Linux

LEARNING OUTCOMES

EU1. a student acquired the advanced object programming knowledge of modern C++

EU2. a student acquired the advanced object programming skills of modern C++

EU3. a student acquired social competence

MODULE CONTENT

Type of classes – lectures	Number of hours
W1: memory model, expression value categories, references	10
W2: move semantics, lambda expressions, containers	10
W3: smart pointers	10
Type of classes– laboratory	Number of hours
L1: memory model, expression value categories, references	10
L2: move semantics, lambda expressions, containers	10
L3: smart pointers	10

TEACHING TOOLS

1. lecture
2. lab class
3. test

WAYS OF ASSESSMENT (F – FORMATIVE, S – SUMMATIVE

F1.involvement in lab classes
P1. test

STUDENT'S WORKLOAD

	Forms of activity	Average number of hours required for realization of activity
1. Contact hours with teacher		
1.1	Lectures	30

1.2	Tutorials	0
1.3	Laboratory	30
1.4	Seminar	0
1.5	Project	0
1.6	Consulting teacher during their duty hours	0
1.7	Examination	0
Total number of contact hours with teacher:		60
2. Student's individual work		
2.1	Preparation for tutorials and tests	0
2.2	Preparation for laboratory exercises, writing reports on laboratories	24
2.3	Preparation of project	0
2.4	Preparation for final lecture assessment	9
2.5	Preparation for examination	0
2.6	Individual study of literature	7
Total number of hours of student's individual work:		40
Overall student's workload:		100
Overall number of ECTS credits for the module		4
Number of ECTS points that student receives in classes requiring teacher's supervision:		2,4
Number of ECTS credits acquired during practical classes including laboratory exercises and projects :		2,2

BASIC AND SUPPLEMENTARY RESOURCE MATERIALS

1. Bjarne Stroustrup, The C++ Programming Language, Addison-Wesley, 2013
2. Scott Meyers, Effective Modern C++, O'Reilly, 2014

MODULE COORDINATOR (NAME, SURNAME, INSTITUTE, E-MAIL ADDRESS)

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