

SYLLABUS¹

1. Information about the program

1.1 Higher education institution	Politehnica University Timisoara
1.2 Faculty ² / Department ³	Electronics and Telecommunications Engineering
1.3 Chair	—
1.4 Field of study (name/code ⁴)	Electronics and Telecommunications (in English)
1.5 Study cycle	Bachelor
1.6 Study program (name/code)/Qualification	Electronics and Telecommunications (in English /Engineer

2. Information about the discipline

2.1 Name of discipline	Object Oriented Programming						
2.2 Coordinator (holder) of course activities	Loredana STANCIU						
2.3 Coordinator (holder) of applied activities ⁵	Loredana STANCIU						
2.4 Year of study ⁶	2	2.5 Semester	4	2.6 Type of evaluation	D	2.7 Type of discipline	mandatory

3. Total estimated time (hours / semester of didactic activities)

3.1 No. of hrs. / week	4 , of which:	3.2 course	2	3.3 seminar/laboratory/ project/training	2
3.4 Total no. of hrs. in the education curricula	56 , of which:	3.5 course	28	3.6 applied activities	28
3.7 Distribution of time for individual activities related to the discipline					hrs.
Study using a manual, course materials, bibliography and lecture notes					7
Additional documentation in the library, on specialized electronic platforms and on the field					7
Preparation for seminars / laboratories, homeworks, assignments, portfolios, and essays					7
Tutoring					7
Examinations					7
Other activities					
Total hrs. of individual activities					35
3.8 Total hrs. / semester ⁷	91				
3.9 No. of credits	4				

4. Prerequisites (where applicable)

¹ The form corresponds to the Syllabus promoted by OMECTS 5703/18.12.2011 (Annex3).

² The name of the faculty which manages the educational curriculum to which the discipline belongs.

³ The name of the department entrusted with the discipline, and to which the course coordinator / holder belongs.

⁴ Fill in the code provided in GD no. 493/17.07.2013.

⁵ The applied activities refer to: seminar (S) / laboratory (L) / project (P) / practice/training (Pr).

⁶ The year of study to which the discipline is provided in the curriculum.

⁷ It is obtained by summing up the number of hrs. from 3.4 and 3.7.

4.1 Curriculum	<ul style="list-style-type: none"> • None
4.2 Competencies	<ul style="list-style-type: none"> • Basic knowledge of C programming language

5. Conditions (where applicable)

5.1 of the course	<ul style="list-style-type: none"> • Aula, laptop, projector, blackboard
5.2 to conduct practical activities	<ul style="list-style-type: none"> • Laboratory having 15 computers, Java Development Kit from Oracle, NetBeens IDE from Oracle

6. Specific competencies acquired

Professional competencies ⁸	<ul style="list-style-type: none"> • Applying knowledge, concepts and basic methods concerning the architecture of computer systems, microprocessors, microcontrollers, programming languages and techniques
Transversal competencies	<ul style="list-style-type: none"> • Methodical analysis of problems encountered in practice, identifying those for which there are dedicated solutions, thus ensuring professional tasks' resolution

7. Objectives of the discipline (based on the grid of specific competencies acquired)

7.1 General objective of the discipline	<ul style="list-style-type: none"> • Acquiring basic concepts of object oriented programming and Java programming
7.2 Specific objectives	<ul style="list-style-type: none"> • Design and implementation of Java applications, medium level of difficulty

8. Content

8.1 Course	No. of hours	Teaching methods
Introduction to object oriented programming. Java programming	3	Presentation of the theoretical aspects based on PowerPoint slides, discussions, examples
Basics of java. Classes and objects	3	
Primitive types and wrapper classes. The class String. The input/output system in Java	3	
Inheritance and polymorphism	3	

⁸ The professional competencies and the transversal competencies will be treated according to the Methodology of OMCETS 5703/18.12.2011. The competencies listed in the National Register of Qualifications in Higher Education [Registrul Național al Calificărilor din Învățământul Superior RNCIS] (http://www.rncis.ro/portal/page?_pageid=117,70218&_dad=portal&_schema=PORTAL) will be used for the field of study from 1.4 and the program of study from 1.6 of this form, involving the discipline.

Interfaces	2	
Generic types	1	
Collections	2	
Exceptions	2	
Threads	2	
Graphical user interfaces in Java	3	
Applets	2	
Bibliography ⁹		
1) Loredana STANCIU, <i>Object Oriented Programming</i> , Electronic Online Notes for the Course, http://www.aut.upt.ro/~loredanau/teaching.html		
2) Thomas WU, <i>An Introduction to Object-Oriented Programming with Java, 5th Edition</i> , McGraw-Hill, 2009		
3) Herbert SCHILD, <i>Java. A Beginner's Guide. Sixth Edition</i> , Oracle Press, 2014		
8.2 Applied activities¹⁰	No. of hours	Teaching methods
Introduction to Java. How to create a simple program.	2	Theoretical presentation, discussions, explanations, case study
How to create classes and instantiate objects.	2	
Data types in Java. Reading data from the keyboard. How to work with strings.	4	
How to reuse cod. Inheritance.	2	
Creating an interface.	2	
Generic types and lists.	2	
How to throw and catch an exception in Java.	2	
Creating threads. Multithreading programming.	4	
GUI's in Java. Applets.	8	
Bibliography ¹¹		
1) Loredana STANCIU, <i>Object Oriented Programming</i> , Electronic Online Notes for the Laboratory, http://www.aut.upt.ro/~loredanau/teaching.html		
2) Thomas WU, <i>An Introduction to Object-Oriented Programming with Java, 5th Edition</i> , McGraw-Hill, 2009		
3) Herbert SCHILD, <i>Java. A Beginner's Guide. Sixth Edition</i> , Oracle Press, 2014		

⁹ At least one title must belong to the department staff teaching the discipline, and at least 3 titles must refer to national and international works relevant for the discipline, and which can be found in the Politehnica University Library.

¹⁰ The types of applied activities are those specified in footnote 5. If the discipline contains several types of applied activities, then these will be written consecutively in the lines of the table below. The type of activity will be written in a distinct line, as „Seminar:”, „Laboratory:”, „Project:” and/or „Practice/Training:”.

¹¹ At least one title must belong to the staff teaching the discipline.

9. Corroboration of the content of the discipline with the expectations of the main representatives of the epistemic community, professional associations and employers in the field afferent to the program

- Knowledge and programming skills offered by the course's content provide a plus to future engineers, enriching their baggage of information and skills they have already acquired in other courses from the curricula.
- The main employers in the field afferent to the program require basic programming knowledge

10. Evaluation

Type of activity	10.1 Evaluation criteria	10.2 Evaluation methods	10.3 Share of the final grade
10.4 Course	Multiple choice tests with 30 questions, each one having five possible answers, only one correct.	Written test	66,67%
10.5 Applied activities	S:		
	L: Two tests, containing problems similar with the ones solved during the laboratories. The final mark will be the average of the test's marks.	Running code on the computer	33,33%
	P:		
	Pr:		
10.6 Minimum performance standard (minimum amount of knowledge necessary to pass the discipline and the way in which this knowledge is verified)			
<ul style="list-style-type: none"> • At the exam: 50% correct answers • At the laboratory: create a class, instances, reuse code, exceptions, a minimal GUI 			

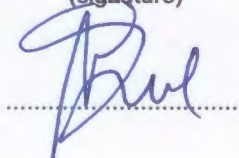
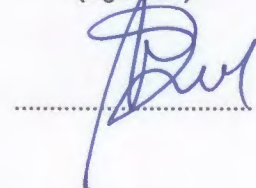
Date of completion

Course coordinator

Coordinator of applied activities

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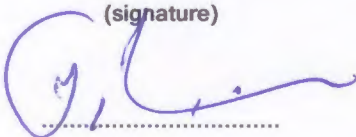
Head of Department

Date of approval in the Faculty Council¹²

Dean

(signature)

(signature)



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¹² Avizarea este precedată de discutarea punctului de vedere al board-ului de care aparține programul de studiu cu privire la fișa disciplinei.