

DESCRIPTION OF THE STUDY SUBJECT

Title

PROGRAMMING OF COMMUNICATION SYSTEMS

Scope of the subject

Semester	Mode of studies	Structure*				Total number of hours	Number of credits	Group and type of subjects
		L	Lw	C	S			
V	Full-time	18	48	12	89	167	6	Subjects for deepening in the branch
VI	Part-time	8	28	42	89	167	6	

*L – lectures, PS – practical activities, seminars, LW – laboratory work, PR – practice, CP – course paper, C – consultations, S – self-study

Aim of the subject

To know the possibilities of communication systems; be able to apply methods of evaluation of data processing, to install implemented solutions; to be able to program in *Java* programming language, *Desktop* and *Web* type applications, implement raised tasks of software solutions having chosen the most appropriate *Java* platform.

Necessary background knowledge for studying the subject

Students shall have heard subjects basics of algorithmization and basics of programming.

Content of the subject

Title of the topic and description of the content	Number of contact hours			S	Total number of hours
	L	Lw	C		
1. The overview of communication systems, their advantages and disadvantages.	1	-	-	-	1
2. The overview and selection of <i>Java</i> programming environments.	1	2	-	-	3
3. Keywords of <i>Java</i> programming language, the code structure.	1	6	-	-	7
Test No. 1	-	2	-	8	10
4. Classes. Objects.	2	4	-	-	6
5. Inheritance and encapsulation.	2	4	1	-	7
6. Creation of <i>Desktop</i> type applications.	2	7	1	-	10
7. Data placement in the database. Solving of arising problems.	1	2	1	-	4
Test No. 2	-	2	-	20	22
8. Implementation of <i>Web</i> applications.	2	6	1	8	17
9. <i>Java Servlet</i> components.	2	5	-	8	15
10. <i>JSF</i> framework.	2	4	1	6	13
11. <i>JPS</i> framework.	2	4	1	6	13
Individual work. To install the system in <i>Java</i> programming language, using the <i>SQL</i> database management system to store data.	-	-	4	19	23
Preparation and taking the exam			2	14	16
Total number of hours	18	48	12	89	167

Assessment of learning outcomes

Ten-point criteria-based assessment system as well as cumulative assessment using individual cumulative index (ICI) are applied. The overall grade is the sum of grades for intermediate accountings and examination (E) multiplied by weighted coefficients. The formula of assessment: $ICI = 0,2 T1 + 0,2 T2 + 0,2 IND + 0,4 E$, where T1, T2 – test, IND – individual work.

Recommended literature

Key literature						
No.	Year of publishing	Author(s) and title of the publication	Publishing house	Number of copies and/or internet link		
				ŠSC library	Other premises	Other libraries *
1.	2012 2011	Riškus A. Programavimas JAVA. Pirmoji pažintis.	Technologija	6	-	33
2.		Java Books, Free Books on Java Script		http://www.techbooksforfree.com/java.shtml		

Additional literature			
No.	Year of publishing	Author(s) and title of the publication	Publishing house and/or internet link
1.	2014	John Lewis, Joseph Chase. Java Software Structures. Designing and Using Data Structures	Harlow
2.	2013	Mačernis M. Objektinis programavimas : teorija, Java, Android: ką žino profesionalūs programuotojai ir kas mėgėjams nėra aišku!	lulu.com
3.	2013	Nudelman, Greg. Android Design Patterns : interaction design solutions for developers	John Wiley&Sons
4.	2012	Deitel P. J., Deitel H.M. Java for programmers: [contains 200+ examples, covers Java SE 7]	Upper Saddle River (N.J.): Prentice Hall
5.	2005	Belevičius R. JAVA technologijas	Technika

* ŠAVB – Šiauliai Region Povilas Višinskis Public Library, ŠU – library of Šiauliai University

Required material resources and their short description

- **Equipment (devices):** computers (16 units), computers connected to the local network and connected to the Internet, multimedia projector.
- **Software:** JAVA software (JDK7, NETBEATS 7.0.1EE or later)

The description prepared by:

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