COURSE DESCRIPTION CARD

<table>
<tr><td colspan="10">Faculty of Electrical Engineering</td></tr>
<tr><td>Field of study</td><td colspan="6">Electrical and Electronics Engineering</td><td colspan="2">Degree level and programme type</td><td>Bachelor's degree
Full time</td></tr>
<tr><td>Specialization/ diploma path</td><td colspan="6">-</td><td colspan="2">Study profile</td><td>-</td></tr>
<tr><td rowspan="2">Course name</td><td colspan="6" rowspan="2">Introduction to Programming in C</td><td colspan="2">Course code</td><td>IS-FEE-10061S</td></tr>
<tr><td colspan="2">Course type</td><td>elective</td></tr>
<tr><td rowspan="2">Forms and number of hours of tuition</td><td>L</td><td>C</td><td>LC</td><td>P</td><td>SW</td><td>FW</td><td>S</td><td>Semester</td><td>summer</td></tr>
<tr><td></td><td></td><td></td><td></td><td>30</td><td></td><td></td><td>No. of ECTS credits</td><td>3</td></tr>
<tr><td>Entry requirements</td><td colspan="9">-</td></tr>
<tr><td>Course objectives</td><td colspan="9">Developing the skills of computer algorithms designing and implementing them in the form of programs in C language.</td></tr>
<tr><td>Course content</td><td colspan="9">Structured programming in C language: data types, variables and constants, expressions and statements, operators, precedence of operators, formatted input/output, conditional statements, loops, arrays, pointers and dynamic memory allocation, structures, unions and bit fields, text and binary files, functions, passing argument to functions.</td></tr>
<tr><td>Teaching methods</td><td colspan="9">Multimedia presentation, solving programming problems</td></tr>
<tr><td>Assessment method</td><td colspan="9">Two practical tests, evaluation of computer programs</td></tr>
<tr><td>Symbol of learning outcome</td><td colspan="7">Learning outcomes
(After completing this course student ...)</td><td colspan="2">Reference to the learning outcomes for the field of study</td></tr>
<tr><td>LO1</td><td colspan="7">writes and runs simple structured programs in C language using the appropriate data types and conditional statements</td><td colspan="2"></td></tr>
<tr><td>LO2</td><td colspan="7">uses loops and arrays in programs in C language</td><td colspan="2"></td></tr>
<tr><td>LO3</td><td colspan="7">defines and uses its own functions in programs in C language</td><td colspan="2"></td></tr>
<tr><td>LO4</td><td colspan="7">reads and writes data from and to files in programs written in C language</td><td colspan="2"></td></tr>
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Symbol of learning outcome	Methods of assessing the learning outcomes	Type of tuition during which the outcome is assessed	
LO1	practical test, evaluation of computer programs	SW	
LO2	practical test, evaluation of computer programs	SW	
LO3	practical test, evaluation of computer programs	SW	
LO4	practical test, evaluation of computer programs	SW	
Student workload (in hours)		No. of hours	
Calculation	participation in specialization workshop	30	
	preparation for specialization workshop	18	
	working on homework (computer programs)	18	
	participation in student-teacher sessions related to the specialization workshop	5	
	preparation for practical tests (specialization workshop)	10	
	TOTAL:	81	
Quantitative indicators		HOURS	No. of ECTS credits
Student workload – activities that require direct teacher participation		35	1,5
Student workload – practical activities		81	3
Basic references	1. Prata S., C Primer Plus (6th Edition) (Developer's Library). Addison-Wesley Professional, 2013. 2. Kernighan B.W., Ritchie D.M., The C Programming Language. 2nd Edition, Prentice Hall, 1988. 3. Kochan S.G., Programming in C (4th Edition) (Developer's Library). Addison-Wesley Professional, 2014.		
Supplementary references	1. King K.N., C Programming: A Modern Approach, 2nd Edition. W. W. Norton & Company, 2008. 2. Reese R.M., Understanding and Using C Pointers. O'Reilly Media, 2013. 3. Shaw Z.A., Learn C the Hard Way: Practical Exercises on the Computational Subjects You Keep Avoiding (Like C). Addison-Wesley Professional, 2015.		
Organisational unit conducting the course	Department of Electrotechnics, Power Electronics and Power Engineering	Date of issuing the programme	
Author of the programme	Jarosław Forenc, PhD	23.02.2020	

L – lecture, C – classes, LC – laboratory classes, P – project, SW – specialization workshop, FW - field work, S – seminar