VIDZEMES
AUGSTSKOLA

FACULTY OF ENGINEERING
STUDY COURSE DESCRIPTION

Course Title:	**Fundamentals of Computing for Security Professionals**				
Course code (LAIS):					
Study programme:	**Cybersecurity Engineering**				
Level of Study programme:	☐	1st level professional higher education			
	☐	Professional Bachelor			
	x	Professional Master			
	☐	Academic Master			
	☐	PhD level			
Type of Study programme:	☐	Compulsory course (Part A)			
	x	Professional specialization courses (Part B, compulsory)			
	☐	Professional specialization optional courses (Part B, optional)			
	☐	Elective courses (Part C)			
Course Workload:	**Credits**	**ECTS**	**Academic hours**	**Contact hours**	**Independent work hours**
	2	3	80	32	48
Course Author/ Tutor:	**Karlis Podins**				
	Academical position, scien./acad.degree				
	e-mail:				
	Consultation: according to the schedule for each semester				
Study Form:	Full time studies				
Study year, semester:	2021/2022; 1st semester				
Language:	Latvian, English				
Prerequisites for the Course:	*Beginner Linux command line skills. Computer programming experience-recommended*				
Course Summary:	This course provides students with overview of technical details of computer architecture at the CPU/machine code level. Course introduces students to C language and relationship between C and Assembly language, based on hands-on tasks				
Assessment:	Exam				
Abiding by the Academic Ethics	Students must abide by the academic and research ethics, Vidzeme University of Applied Sciences Ethics Regulations, incl.: − study papers must be independently developed; − the study work should reference all statements, ideas and data used that have been authored by someone else; − appropriate data acquisition methods should be used in the acquisition of data, the research ethics must be respected, empirical data must be collected independently and cannot be distorted or falsified; − the examination must be carried out by the student independently, without the use of supporting materials and/or consultations with other students, unless the lecturer states otherwise. In the event of non-compliance with the academic and research ethics, punishment is imposed in accordance with the ViA Ethics Regulations and the study course must be re-taken, unless the punishment is extramarital.				

	Learning Outcomes	The evaluation methods and criteria
Learning Outcomes; the evaluation methods and criteria	**Knowledge**	
	Students are able to solve and present a practical task during exam, to demonstrate fluency in operating with core concepts of computer architectures.	Lectures, seminars, group works, discussions
	Skills	
	Ability to recognize a classic security problem, gained understanding of security issues	Lectures, seminars, group works, discussions
	Competency	
	Gained knowledges and skills to analyse unknown low-level (machine code) security issue	Lectures, seminars, group works, discussions

Course Compulsory literature:	Duntemann, Jeff. *Assembly language step-by-step: Programming with Linux*. John Wiley & Sons, 2011.	
Course additional literature:	Erickson, Jon. *Hacking: the art of exploitation*. No starch press, 2008.	
Course confirmation date:		
Date of course description update:		