

Akashi College		Year	2023		Course Title	Computer Programming I	
Course Information							
Course Code		5129		Course Category		Specialized / Compulsory	
Class Format		Lecture		Credits		Academic Credit: 2	
Department		Electrical and Computer Engineering		Student Grade		1st	
Term		Second Semester		Classes per Week		2	
Textbook and/or Teaching Materials							
Instructor		HIRANO Masatsugu					
Course Objectives							
[1] Can perform basic Linux operations. [2] Can write programs that contain conditional branches in C. [3] Can write programs that contain iterations in C. [4] Can write programs that contain arrays in C.							
Rubric							
		Ideal Level		Standard Level		Unacceptable Level	
Achievement 1		Can perform basic Linux operations accurately.		Can perform basic Linux operations.		Cannot perform basic Linux operations.	
Achievement 2		Can write programs that contain complex conditional branches in C.		Can write programs that contain conditional branches in C.		Cannot write programs that contain conditional branches in C.	
Achievement 3		Can write programs that contain iterations in C in multiple ways.		Can write programs that contain iterations in C.		Cannot write programs that contain iterations in C	
		Can write programs that use arrays and two-dimensional arrays in C.		Can write programs that use arrays in C.		Cannot write programs that use arrays in C.	
Assigned Department Objectives							
Teaching Method							
Outline		The course will provide lectures and exercises on programming in C to establish a foundation for problem solving and programming skills.					
Style		The first week will be in the classroom, and the from second week, the class will be in the Information Basics Lab. In the Information Basics Lab,, the class will alternate between explanations about the content you will learn for the week and doing programming exercises. Students are required to complete ten programming assignments.					
Notice		This course's content will amount to 90 hours of study in total. These hours include learning time guaranteed in classes and the standard self-study time required for pre-study / review, and completing assignment reports. In addition to the lecture hours, students should visit the Information Basics Lab frequently and learn with the attitude, "practice makes perfect." Students who have submitted fewer than six programming assignments will not be eligible for a passing grade. Students who miss 1/3 or more of classes will not be eligible for a passing grade.					
Characteristics of Class / Division in Learning							
☒ Active Learning		☒ Aided by ICT		☒ Applicable to Remote Class		☒ Instructor Professionally Experienced	
Course Plan							
			Theme		Goals		
2nd Semester r	3rd Quarter	1st	Basic knowledge of programming and information processing		Can list the components of a computer. Can use binary digits (integer and decimal), complement on 2, and 32-bit floating point numbers		
		2nd	Linux, Emacs, compile, and run		Can perform basic Linux operations. Can write, compile, and run programs in C.		
		3rd	Variables, types, outputs, inputs, basic operations		Can use variables, arithmetic operators, and simple assignment operators. Can use the basic types accordingly. Can write programs that contain data inputs and outputs.		
		4th	Characters, hexadecimal numbers, exponents, loss of trailing digits		Can use characters, hexadecimal numbers, and exponents. Can explain what the loss of trailing digits mean.		
		5th	Operators, logical operations, casts		Can use assignment operators. Can perform logical operations and casts.		
		6th	Structured programming, conditional branches 1 of 2		Can explain what the structure theorem is. Can write if statements.		
		7th	Conditional branches 2 of 2		Can write switch statements.		
		8th	Midterm exam				
	4th Quarter	9th	Midterm exam comments, iteration 1 of 3		Understand where you made mistakes on the midterm exam. Can write do statements.		
		10th	Iteration 2 of 3		Can write while and for statements.		
		11th	Iteration 3 of 3		Can write nested iterative statements.		
		12th	Arrays		Can explain sets and columns. Can scan, initialize, and copy arrays.		
		13th	Algorithms and flowcharts		Can explain algorithms. Can write flowcharts.		

		14th	Matrices and a two-dimensional arrays 1 of 2	Can add and subtract in matrices. Can add and subtract matrices using two-dimensional arrays.
		15th	Matrices and two-dimensional arrays 2 of 2	Can multiply matrices. Can multiply matrices using two-dimensional arrays.
		16th	Final exam	

Evaluation Method and Weight (%)							
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	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	70	30	0	0	0	0	100
Basic Proficiency	0	0	0	0	0	0	0
Specialized Proficiency	70	30	0	0	0	0	100
Cross Area Proficiency	0	0	0	0	0	0	0