Tsuyama College	Year	2022	Course Title	Basic Programming

Course Information

Course Code	0036	Course Category	Specialized / Compulsory
Class Format	Lecture	Credits	School Credit: 2
Department	Department of Integrated Science and Technology Communication and Informations System Program	Student Grade	2nd
Term	Year-round	Classes per Week	2
Textbook and/or Teaching Materials	Textbook:”Kurushinde oboeru C language” (Syuwa System)		
Instructor	KAWANAMI Hiromichi		

Course Objectives

Learning purpose:
To learn basic programming in C language, and to acquire the skill to read and write simple programs.

Course Objective:
1. To understand concept of variable and data type
2. To understand concept of assignment and operator, and to be able to program the expression
3. To understand concept of control structure, and to be able to program the conditional branching and the iterative processing
4. To understand concept of function, and to be able to program the source code involving the function

Rubric

	Excellent	Good	Acceptable	Not acceptable
Achievement 1	The student can explain about concept of variable and data type adequately, and can apply them.	The student can explain about concept of variable and data type adequately.	The student can explain aspects of variable and data type.	The student can explain few aspects of variable and data type.
Achievement 2	The student can explain about concept of assignment and operator adequately, and can apply them.	The student can explain about concept of assignment and operator adequately.	The student can explain about concept of assignment and operator.	The student can’t explain about concept of assignment and operator.
Achievement 3	The student can understand about concept of control structure, can explain about it adequately, and can apply it.	The student can understand about concept of control structure, can utilize it accordingly.	The student can understand about concept of control structure, can explain about it.	The student can’t explain about concept of control structure.
Achievement 4	The student can understand about concept of function, and can program the source code involving the various functions.	The student can understand about concept of function, and can program the source code involving the normal functions.	The student can understand about concept of function, and can program the source code involving the easy functions.	The student can’t understand about concept of function.

Assigned Department Objectives

Teaching Method

Outline	General or Specialized: Specialized Field of learning: Information system・Programming・Network Foundational academic disciplines: Informatics/Information science, Computer engineering, and related fields/Software-related Relationship with Educational Objectives: This class is equivalent to “(3) Acquire deep foundation knowledge of the major subject area”. Course outline: Learn the rules of grammar required for C language, and learn how to read and write simple program. Also, learn how to programing readable source code. Classes with understanding the process of the program, while incorporating as many exercises as possible.
Style	Course method: Classes presentation lectures and programming exercises. There are reports for deepening understanding For each quarter, evaluation is given by a exam (75%) + exercises (25%). A cumlative score of each quarter is caluculated using an average of the evaluation up to the quarter. Although a retaking exam is not planned, it may be performed depending on the situation. When It conducted, the total score of the quarter limits to 60 points.

Notice	Precautions on the enrollment: Students must take this class (no more than one-third of the required number of class hours missed) in order to complete the 2nd year course. Course advice: PDF files of this lecture slides are available. You are encouraged to input sample programs in the textbook yourself and understand the source code step by step against compilation errors. Foundational subjects: Fundamentals of Integrated Science and Technology (1st year), Information Literacy (1st) Related subjects: Algorithms and Data Structures (3rd year), Advanced Programming (4th), System Programming (5th), Graduation Thesis (5th) Attendance advice: Programming skill can be acquired by self-directed learning. Hope that the student has the programming environment in their homes. Do homework yourself. Arriving late to class is by half the class time, arriving late of two times will be treated as one time absence.

Characteristics of Class / Division in Learning

☐ Active Learning	☐ Aided by ICT	☐ Applicable to Remote Class	☐ Instructor Professionally Experienced

Must complete subjects

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	Guidance	
		2nd	Improvement of the programming environment, and review programming of 1th year	Understand about basic format of C language
		3rd	How to write program, and display to the monitor	Display character string using “printf” function
		4th	Display of the value, and calculation	Display character string and value using “printf” function
		5th	Memory of the value, and calculation	Understand how to use basic variable
		6th	Input from the keyboard	Understand how to input from the keyboard using “scanf” function
		7th	Conditional branching ("if" sentence and "switch" sentence)	Understand about "if" sentence and "switch" sentence
		8th	1st semester mid-term exam	
	2nd Quarter	9th	Return and commentary of exam answers	Review about incompetent learning content
		10th	Repetition processing (1)	Understand about "while" sentence
		11th	Repetition processing (2)	Understand about "for" sentence
		12th	Repetition processing (3)	Understand about "do-while" sentence
		13th	Function (1)	Understand about the concept of function
		14th	Function (2)	Understand about the function definition and function declaration
		15th	(1st semester final exam)	
		16th	Return and commentary of exam answers	Review about incompetent learning content
2nd Semester	3rd Quarter	1st	Guidance of 2nd semester	
		2nd	Function (3)	Understand about the self-build function
		3rd	Treatment of variable (1)	Understand about treatment of the character variable and the character string
		4th	Treatment of variable (2)	Understand about the various variable type
		5th	Array and string	Understand about array
		6th	Pointer variable (1)	Understand about the concept of the pointer
		7th	Pointer variable (2)	Understand about the pointer variable
		8th	2nd semester mid-term exam	
	4th Quarter	9th	Return and commentary of exam answers	Review about incompetent learning content
		10th	Structure (1)	Understand about the concept of the structure
		11th	Structure (2)	Understand about the program using the structure
		12th	Treatment of file	Understand about the loading file and the writing file
		13th	Macro function	Understand about the program using the macro function
		14th	Programming exercises	Solve exercise problem
		15th	(2nd semester final exam)	
		16th	Return and commentary of exam answers	Review about incompetent learning content

Evaluation Method and Weight (%)

	Examination	Exercise	Total
Subtotal	75	25	100
Basic Proficiency	0	0	0
Specialized Proficiency	75	25	100

Cross Area Proficiency	0	0	0