Programming 6

Basic Course Information

Course Number	02005100	**Subject Category**	Compulsory (C)
Class Format	Lecture	**Credit Type and Number of Credits**	1
Department	Computer	**Student Category**	Year 3
Period of Study	Semester 2	**Classes per Week**	1
Required Materials			
Instructor	Yuki Yoshikawa	Saunghninpowint Oo	

Course Objective

The course builds on the knowledge and understanding introduced in the previous subject, and provides students with basic knowledge of C language. Students practice programming in C language. Data structure and algorithm are also covered.

Evaluation(Rubric)	Ideal Level of Achievement (Very Good)	Standard Level of Achievement (Good)	Unacceptable Level of Achievement (Fail)
Understanding programming for basic data	Able to explain programming for basic data structure	Able to explain programming for some of basic data structure	Unable to explain programming for basic data structure
Understanding programming for tree data structure	Able to explain programming for tree data structure	Able to explain programming for some of tree data structure	Unable to explain programming for tree data structure
Understanding programming for basic algorithms such as search and sort	Able to explain programming for basic algorithms such as search and sort	Able to explain programming for some of basic algorithms such as search and sort	Unable to explain programming for basic algorithms such as search and sort
Understanding programming for advanced algorithms such as Backtracking method and Dynamic programming	Able to explain programming for advanced algorithms such as Backtracking method and Dynamic programming	Able to explain programming for some of advanced algorithms such as Backtracking method and Dynamic programming	Unable to explain programming for advanced algorithms such as Backtracking method and Dynamic programming

Relationship with Learning Outcomes
C(1) Ability to operate and administer the computer software and hardware
C(2) Ability to understand the operating system and to develop software to solve specific problems.
Please change

Teaching Method	
Outline:	Lecture and practice, group work
Class Format:	
Please Note :	

Course Plan

Semester 2	**Contents and Method of Course**	**Goals**	**Related MCC**
Week 1	Introduction to C programming and algotithm	Be able to understand and explain what is algorithm and its complexity	V-D 3 46 V-D 5 62
Week 2	C programming for Basic data structures Array, list, stack, queue	Be able to understand and implement basic data structures such as Array and List in C	V-D 3 46 V-D 5 63
Week 3	C programming for Linked lists Circular list, Bidirectional list, Multible list structure	Be able to understand and implement linked lists in C	V-D 3 46
Week 4	C programming for Tree structures Binary trees, tree traversal, formula trees	Be able to understand and implement tree structures in C	V-D 3 46
Week 5	C programming for Tree structures Binary trees, tree traversal, formula trees	Be able to understand and implement tree structures in C	V-D 3 47 V-D 3 31 V-D 3 32
Week 6	C programming for Search Linear search and binary search Hash method	Be able to understand and implement search algorithms and hash method in C	V-D 3 47
Week 7	C programming for Search Linear search and binary search Hash method	Be able to understand and implement search algorithms and hash method in C	V-D 3 47
Week 8	Midterm Report		V-D 3 47
Week 9	Midterm Report		
Week 10	C programming for Sort Simple sorting algorithms	Be able to understand and implement simple sorting algorithms inC	V-D 3 47
Week 11	C programming for Sort Quick sort, heap sort	Be able to understand and implement advanced sorting algorithms in C	V-D 3 47
Week 12	C programming for String search	Be able to understand and implemant string search in C	V-D 3 47
Week 13	C programming for Regular expressions and automata	Be able to understand and implement regular expressions and automata in C	V-D 4 47 V-D 3 31 V-D 3 32 V-D 3 33 V-D 3 34
Week 14	C programming for various algorithms	Be able to understand and implement Backtracking method, Dynamic programming, etc.	V-D 3 46 V-D 3 47 V-D 3 48 V-D 3 49 3 50
Week 15	C programming for Memory management algorithms	Be able to understand and implement Static and dynamic allocation Garbage collector	V-D 3 46 V-D 3 47 V-D 3 48 V-D 3 49 V-D 3 50
Week 16	C programming for Memory management algorithms	Be able to understand and implement Static and dynamic allocation Garbage collector	V-D 3 46 V-D 3 47 V-D 3 48 V-D 3 49 V-D 3 50
Week 17	Final Report		V-D 3 46 V-D 3 47 V-D 3 48 V-D 3 49 V-D 3 50
Week 18	Final Report		
Week 19	Review and conclusion		
Week 20			

Do not c

	Examination	**Quiz**	**Mutual Evaluations between students**	**Report**	**Portfolio**	**Other**
Basic Ability		20		20		
Technical Ability		20		20		
Interdisciplinary Ability		10		10		