Syllabus of 1st Semester, 2023

Course Title	INTRODUCTION TO UNIX PROGRAMMING	Course Code	CB3500575	Section	060
Department	Computer Science and Engineering	Level	2nd year	Credit-Theory - Practice	3.0 - 3.0 - 0.0
Class Hours & Classroom	Tue 15:00(75) 201-6409-1, Thu 15:00(75) 201-6409-1				
Lecturer	Gahm, Jin Kyu	Office (Counsel room)		Counsel Hours	
		Telephone	0515102292	E-mail	gahmj@pusan.ac.kr
Lesson Style	· 대면 · Teacher-centered learning				
Evaluation Method	Midterm exam (30%), Final exam (30%), Homework (30%), Attendance and etc (10%) * Students with disabilities can request an extension of the exam hour, and they can take exams by getting writing assistance or by using a computer.				
Competitors and Knowledge	C Programming				
Objective	By understanding the inside of fundamental Linux system architecture, students learn how to program in the Linux environment and then, how to program in open-source software development environments. Also, by developing an application program that is easily accessible in our daily life, students foster their programming capability for resolving a problem.				
Lecture Overview	- Learning programming skills in the Linux environment - Various tools for open source SW development environment - After learning and utilizing the design principles of user-defined data types, variable reference range, pointer, dynamic memory allocation and file input/output, each of which follows the standard C grammar, to carry out a large-scale software project (around 10,000 lines) * Students with disabilities can negotiate with the Disabled Student's Academic Support Center regarding course materials and assignments.				

Course and Core competencies

BNU 8Point Core Competency	Global Culture	Communication	Convergence	Application	Service	Personality	Basic Knowledge	Higher thinking
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Core competencies according to subject matter

Department Core Competencies		Training Method

Textbooks and References

Required Textbooks	Lecture notes
References	- Foundation of UNIX System (Kwangsu Ahn, Jeongik press, 2012) - Playing with C(처음 만나는 C프로그래밍)(개정판), 우균, 교보문고, 2013 - C 프로그래밍: 새내기를 위한 첫 C언어 책, 강동진, 하숙정, 임수연, 송무희, 박보석, 한빛미디어(주), 2012

Week Lecture Plan		
Week	Lesson and Lab Contents	Challenges and Other Notes
1 Week	[Orientation and Education on Academic Misbehavior(e.g. Cheating, Plagiarism) and Safety Education on Experiment and Practice] - Course Introduction - Vmware and Linux Installation - Working with the vi editor [Open Source] Linux installation and practice with vi	[Open Source related Assignment] Linux installation on virtual machine, Editing using vi
2 Week	Linux practice: Working with files and directories [Open Source] Practice with Linux shell commands	[Open Source related Assignment] Creating files and directories on Linux
3 Week	Linux practice: Learning shell commands [Open Source] Practice with Linux shell commands	[Open Source related Assignment] Changing access permission of files and directories on Linux
4 Week	Linux practice: Working with gcc, make, gdb utilities [Open Source] Practice with gcc, make, gdb utilities	[Open Source related Assignment] Programming using gcc and make
5 Week	Version management with git [Open Source] Practice with git	[Open Source related Assignment] Programming using gdb and git
6 Week	Coding styles	
7 Week	Reverse engineering from source code [Open Source] Practice with doxygen	[Open Source related Assignment] Reverse engineering using doxygen
8 Week	Midterm exam	
9 Week	Commenting source code with doxygen [Open Source] Practice with doxygen	[Open Source related Assignment] Commenting source code using doxygen
10 Week	Variable reference range: Reference range and duration, local variable and global variable, auto variable and static variable, static local variable and static global variable [Open Source] Programming with vi, gcc, and make	[Open Source related Assignment] Programming with vi, gcc, and make
11 Week	Pointer: pointer overview, pointer argument, array and pointer, void pointer [Open Source] Programming with vi, gcc, and make	[Open Source related Assignment] Programming with vi, gcc, and make
12 Week	User-defined data type: structure overview, nested structure, self-reference structure [Open Source] Programming with vi, gcc, and make	[Open Source related Assignment] Programming with vi, gcc, and make
13 Week	Dynamic memory allocation: dynamic allocation overview, dynamic allocation application, dynamic allocation and stack, self-reference structure [Open Source] Programming with vi, gcc, and make	[Open Source related Assignment] Programming with vi, gcc, and make
14 Week	File I/O: file and file pointer, file I/O functions [Open Source] Programming with vi, gcc, and make	[Open Source related Assignment] Programming with vi, gcc, and make
15 Week (Appointed		
16 Week	Final exam	