Course Title : Formal Languages and Compilers **2022-1st Semester**

[Sylabus]

Course	Category	전공선택(전공선택)	Instructor	Department or Division	School of Electrical and Computer Engineering
	Number(section)	40105(01)		Name	
	Title	Formal Languages and Compilers		Phone	
	Credit(Hours)	3 Credit(3 Hours)		E-mail	
	Type	강의		Homepage	
	Time(Room)	Mon 07,08,09/19-108/109		Office Hour	
	School Year	4 year	Assistant	name & Phone	

Grading	Evaluation Method	절대평가		
	☐ Attendance (10%)	☐ Portfolio (0%)	☐ Participation (0%)	
	☐ Assignment (10%)	☐ Quiz (0%)	☐ Midterm Report (0%)	☐ Midterm Exam (40%)
	☐ Final Report (0%)	☐ Final Exam (40%)	☐ 기타(0%)	
Type	Lecture and Practice , PBL , Foreign Language , Convergence			
Teaching Method	Lecture , Practice , Design , Project			
Plagiarism Policy	It is considered plagiarism to draw any idea or any language from someone else wihout adequately crediting that source in your work. It doesn't matter whether the source is a published author, another student, a Web site without clear authorship, a Web site that sells academic papers, or any other person: Taking credit for antone else's work is stealing, and it is unacceptable in all academic situations, whether you do it intentionally or by accident.			

Any student with a disability is welcome to contact the instructor to get academic accommodations, and may be in touch with the Student Accessibility Services by calling 02-6490-6273 to discuss the process for requesting accommodations.

Course Objectives

This course provides fundamental concepts of formal languages and skills to design a compiler. Topics included are finite automata, regular expressions, regular languages, regular grammar, finite automata with output, pushdown automata, context-free languages and context-free grammars, parsing techniques, turing machine and unrestricted grammars.

Course Description	Textbooks and Reference Materials
유한오토마타, 푸시다운오토마타, 정규언어, 비문맥언어, 튜링머신 등의 컴파일러 기초이론을 학습하며, 컴파일러의 구조와 컴파일러의 주요 구성요소인 어휘 분석, 구문분석, 의미 분석, 코드생성, 최적화 등의 각 단계의 역할과 원리를 다룬다. 또한 컴파일러 자동 생성도구를 활용하여 소규모 컴파일러를 구현하는 기술을 습득한다.	David Galles, Modern Compiler Design

Specialty competency	Representative competency
Knowledge Application	Primary
Analysis Experiment	
Problem Definition	
Resource Utilization	Secondary
Planning Ability	
Cooperative Ability	
Communicative Skills	
Continuous Learning	

Specialty competency	Representative competency
Effect Understanding	
Vocational Ethics	

교과목명 : 형식언어및컴파일러 2022year 1st Semester

[주별수업계획서]

Week	Contents	Teaching Method	Teaching Materials	Requirements, Assignments, etc.
1	Introduction	Lecture		Textbook
2	Lexical Analysis I	Lecture		Textbook
3	Lexical Analysis II	Lecture		Textbook
4	Context-free Grammars	Lecture		Textbook
5	Top-down Parsing I	Lecture		Textbook
6	Top-down Parsing II	Lecture		Textbook
7	Bottom-up Parsing	Lecture		Textbook
8	Review and Evaluation	Questions and Answers, Test		Textbook
9	Abstract Syntax Trees	Lecture		Textbook
10	Semantic Analysis I	Lecture		Textbook
11	Semantic Analysis II	Lecture		Textbook
12	Supplementary Week			
13	Assembly Trees	Lecture		Textbook
14	Code Generation	Lecture		Textbook
15	Memory Management	Lecture		Textbook
16	Review and Final exam	Questions and Answers, Test		Textbook