

Syllabus [2025Year 2 Term]

Course Information

Course Title	Discrete Mathematics	Credits	3
Course Code	388080-5	Required/Elective (For Undergraduate Courses)	
Department or Major	Department of Software Science	Language	English
Methods of Teaching		Lecture Room	목19,20,21(소프트227)
Time Allotment	Lecture(3) Experiments(0) Trainging & Practice(0) Performance(0) Designing & Planning(0)	Cyber Lectures	
Course Type	offline		
Cyber Lectures Preview			

Lecturer

Lecturer	Name	Chung Kyuhyuk	Rank	Professor	Final Academic Degree	공학박사
	Department & college	Department of Software Science		Office	Media Center 302	
	Office Phone Number	031-8005-3237		e-mail	khchung@dankook.ac.kr	
	Field of Interest					

Course Summary

Course Description	Discrete Mathematics is an area of Mathematics, in which the concept of computing consists. 'Logic and proofs' is one of the major topics in Discrete Mathematics, and covers the fundamental contents on the properties and structure of generic Deduction systems. The procedures for proving a new fact from existing knowledge could be logically laid down on a Deduction system, so a Deduction system can be regarded as a frame for extending a logical process. The concept of Computing, which is expressed by Turing Machine, has been derived from the course of developments of Deduction systems. As well, this course includes the some other mathematical knowledge, which is needed for the understanding the concepts of algorithms and analyzing them. This course has the role of introducing the theory of computation, and also involves the fundamental knowledge that should be held by the SW Engineers, who plan SW developments and analyzes the results.
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Description Related Courses	
Course Goals	1. Grasp the concepts of major topics of Discrete Mathematics. 2. Understand the application methods for the knowledge of Discrete Mathematics, which can be applied to the analysis of Algorithms,.
Projected Results	
Percentage of the original language classes(%)	
Cyber Lectures Preview	

Syllabus

Times	Lecture Topic	Lecture Goals	Lecture Methods	Assignments
1	Logic and Proofs	comprehend the topic comprehend the topic	ppt ppt	exercise problems exercise problems
2	Logic and Proofs	comprehend the topic comprehend the topic	ppt ppt	exercise problems exercise problems
3	Logic and Proofs	comprehend the topic comprehend the topic	ppt ppt	exercise problems exercise problems
4	Logic and Proofs	comprehend the topic comprehend the topic	ppt ppt	exercise problems exercise problems
5	Logic and Proofs	comprehend the topic comprehend the topic	ppt ppt	exercise problems exercise problems
6	Logic and Proofs	comprehend the topic comprehend the topic	ppt ppt	exercise problems exercise problems
7	Logic and Proofs	comprehend the topic comprehend the topic	ppt ppt	exercise problems exercise problems
8	Logic and Proofs	comprehend the topic comprehend the topic	ppt ppt	exercise problems exercise problems
9	Midterm	comprehend the topic comprehend the topic	ppt ppt	exercise problems exercise problems
10	Basic Structures: Sets	comprehend the topic comprehend the topic	ppt ppt	exercise problems exercise problems
11	Basic Structures: Sets	comprehend the topic comprehend the topic	ppt ppt	exercise problems exercise problems

Times	Lecture Topic	Lecture Goals	Lecture Methods	Assignments
12	Basic Structures: Sets	comprehend the topic comprehend the topic	ppt ppt	exercise problems exercise problems
13	Induction and Recursion	comprehend the topic comprehend the topic	ppt ppt	exercise problems exercise problems
14	Induction and Recursion	comprehend the topic comprehend the topic	ppt ppt	exercise problems exercise problems
15	Induction and Recursion	comprehend the topic comprehend the topic	ppt ppt	exercise problems exercise problems

Methods of Grading

sequence	Description	Percentage	Details
1	Mid-tem Exam	40%	
2	Final-exam	40%	
3	Pop Quizzes	0%	
4	Assignments	0%	
5	Reports	0%	
6	Presentations & Discussions	10%	
7	Attendance	10%	
8		0%	
9	Others	0%	
All		100%	

Core of Value

핵심가치	핵심역량	하위역량	역량정의	역량구분	값 (%)
혁신 (Discovery)	문제해결 (Deliberation)	분석력 창의력 종합적 사고력	문제상황을 명확하게 이해하고 체계적으로 분석하여 창의적으로 해결할 수 있는 능력		0%
혁신 (Discovery)	전문지식 (Knowledge)	탐구능력 논리적 사고력 전문지식/기술	전공분야 지식과 기술, 그리고 관련된 다양한 정보를 활용하여 논리적으로 사고하고 탐구하는 역량		0%

핵심가치	핵심역량	하위역량	역량정의	역량구분	값 (%)
헌신 (Dedication)	세계시민 (Universal value)	외국어능력 다문화 수용 능력 공감능력	세계 각지의 다양한 언어, 문화, 역사에 대한 이해를 바탕으로 글로벌 이슈에 대응할 수 있는 능력		0%
헌신 (Dedication)	협력.헌신 (Dedication)	대인관계능력 협업 능력 공동체의식	공통의 목적과 가치를 위해 개방적인 태도와 균형 잡힌 시간으로 서로 돕고 헌신할 수 있는 능력		0%
능동 (self-Determination)	자기주도 (maNagement)	독립성 성찰 능력 자기개발능력	자기 스스로 목표를 세우고 목표를 달성하기 위해 주체적으로 실천할 수 있는 능력		0%
능동 (self-Determination)	의사소통 (Articulation)	표현력 이해력 조정력	언어 또는 다양한 매체를 활용하여 다른 사람들과 효과적으로 상호작용할 수 있는 능력		0%

Textbook(s) & References

Description	Title	Author	Publisher
References	Discrete mathematics and its applications 7th edition	Kenneth H. Rosen	McGraw-Hill

Memo