



◆ 학습계획 ◆

▶ 과목개요

Through this course, learn the optimization theory for analysing the chemical processes. The lecture covers linear programming, nonlinear programming, unconstrained optimization, constrained optimization. Based on the theory learned during the course, students will write their own programs to solve the given problems and cultivate the ability to analyse and solve the new problems in the field of process systems.

▶ 학습목표

- Understand the optimization concept
- Formulation of the optimization problem
- Understand and applying optimization solution techniques

▶ 추천 선수과목 및 수강요건

▶ 수업자료(교재)

Lecture notes provided in lecture website

▶ 지정도서 및 참고문헌

지정도서	참고도서명	저자명	출판사	출판년도	ISBN

▶ 과제물

- Writing programs to find optima using Matlab or preferred language

▶ 주별학습내용

주	기간	회차	학습내용	교재	활동 및 설계내용
1	09.01 - 09.07	1	Introduction to Optimization		
2	09.08 - 09.14	1	Functions of Single variable		
3	09.15 - 09.21	1	Optimization for the Functions of Several variable I		
4	09.22 - 09.28	1	Optimization for the Functions of Several variable II		
5	09.29 - 10.05	1	Linear Programming I		
6	10.06 - 10.12	1	Linear Programming II		
7	10.13 - 10.19	1	Constrained Optimality Criteria		
8	10.20 - 10.26	1	Transformation Methods		중간고사
9	10.27 - 11.02	1	Constrained Direct Search I		
10	11.03 - 11.09	1	Constrained Direct Search II		
11	11.10 - 11.16	1	Linearization Method of Constrained Problems I		
12	11.17 - 11.23	1	Linearization Method of Constrained Problems II		

주	기간	회차	학습내용	교재	활동 및 설계내용
13	11.24 - 11.30	1	Direction Generation Methods Based on the Linearization I		
14	12.01 - 12.07	1	Direction Generation Methods Based on the Linearization II		
15	12.08 - 12.14	1	Quadratic Approximation Method of Constrained Problems I		
16	12.15 - 12.21	1	Quadratic Approximation Method of Constrained Problems II		기말고사

▶ 기타 (설계관련사항 포함)

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