

# System Optimization

## Course Introduction

Hyunsoo Lee, Ph. D, Prof.

September 2, 2024

# Outline

1. Announcement
  - 1.1. Announcement
  - 1.2. What you have to do
2. Prof. Info.
  - 2.1 Info I
  - 2.2 Info II
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3. Course Info.
  - 3.1. Course Overview
  - 3.2. Grade Policies
  - 3.3. Course Topics

# Course Principle

## Principle

- Don't be late at the beginning of each class
- Cheating behaviors have the greatest penalties
- Private usages of computers are prohibited strongly.
- Don't ask silly questions
- Don't bother others

## Homework-Homepage

- Make your own homepage
- Address : [https://kitst.kumoh.ac.kr/~ sURL/sys](https://kitst.kumoh.ac.kr/~sURL/sys)
  - ex) [http://kitst.kumoh.ac.kr/~ s20231111/sys](http://kitst.kumoh.ac.kr/~s20231111/sys)
- Your picture & "I keep the promises between Prof. and I"
- Due date : September 12th (Thursday) Midnight

# Instructor : Hyunsoo Lee

## Academic Career

- 1) 2006~2010 : Ph.D , Industrial & Systems Engineering, Texas A&M University
- 2) 2000~2002 : MS, Industrial & Production Engineering, POSTECH
- 3) 1993~1997 : BS. Industrial Engineering, SKKU

## More Info.

- Prof. Homepage : <http://kitlab.kumoh.ac.kr/~hsl>

# Career

## Professional Career

- 1) 10. 2021 ~ : Prof.
- 2) 09.2016~ : Associate Prof.
- 3) 09.2011~08.2016 : Assistant Prof. / School of Industrial Engineering / Kumoh National Institute of Technology
- 4) 2010~2011 : Senior Manager, SCM Division, LG Electronics
- 5) 2009~2010 : Teaching Instructor, Texas AM University, USA
- 6) 2006~2019 : RA / TA, Texas AM University, USA
- 7) 2002~2006 : Advisory Consultant, Samsung SDS

# Project

## Project Info.

- Project Info : Refer Course Homepage

# Course Overview

## Course Info.

- Course No: IX0012-01/02
- Course Title : System Optimization
- Course Homepage :  
<http://kitlab.kumoh.ac.kr/~hsl/courses/sysopt>
- Course title
  - Course I : 10:00AM ~ 00:50 AM, Every Tuesday, G576-1
  - Course II : 01:00PM ~ 03:50 PM, Every Tuesday, G576-1



# Grade Policies

## Score Portion

- Midterm I/II (30%) Final (35%) Quiz & Homework (20%)  
Attendance (10%) Attitude (5%)

## Basic Policies

- 1) Survivor or not (Passion)
- 2) Attendance
- 3) Prior excuse for absences (ill, care, job interview)
- 4) Don't miss Midterm/Final Exams
- 5) Don't interrupt class

# To be Covered

## Topics

- 1) Systems and Processes
- 2) Systematic / Dynamic View
- 3) Intelligence, Deep Learning, and others
- 4) Linear / Nonlinear / Stochastic Programming
- 5) Reinforcement learning / Deep Reinforcement learning
- 6) Intelligent System

# Maint Computer Programming Tools

## Tools

- 1) Matlab / Simulink with Related Toolboxes
- 2) Python and Related libraries