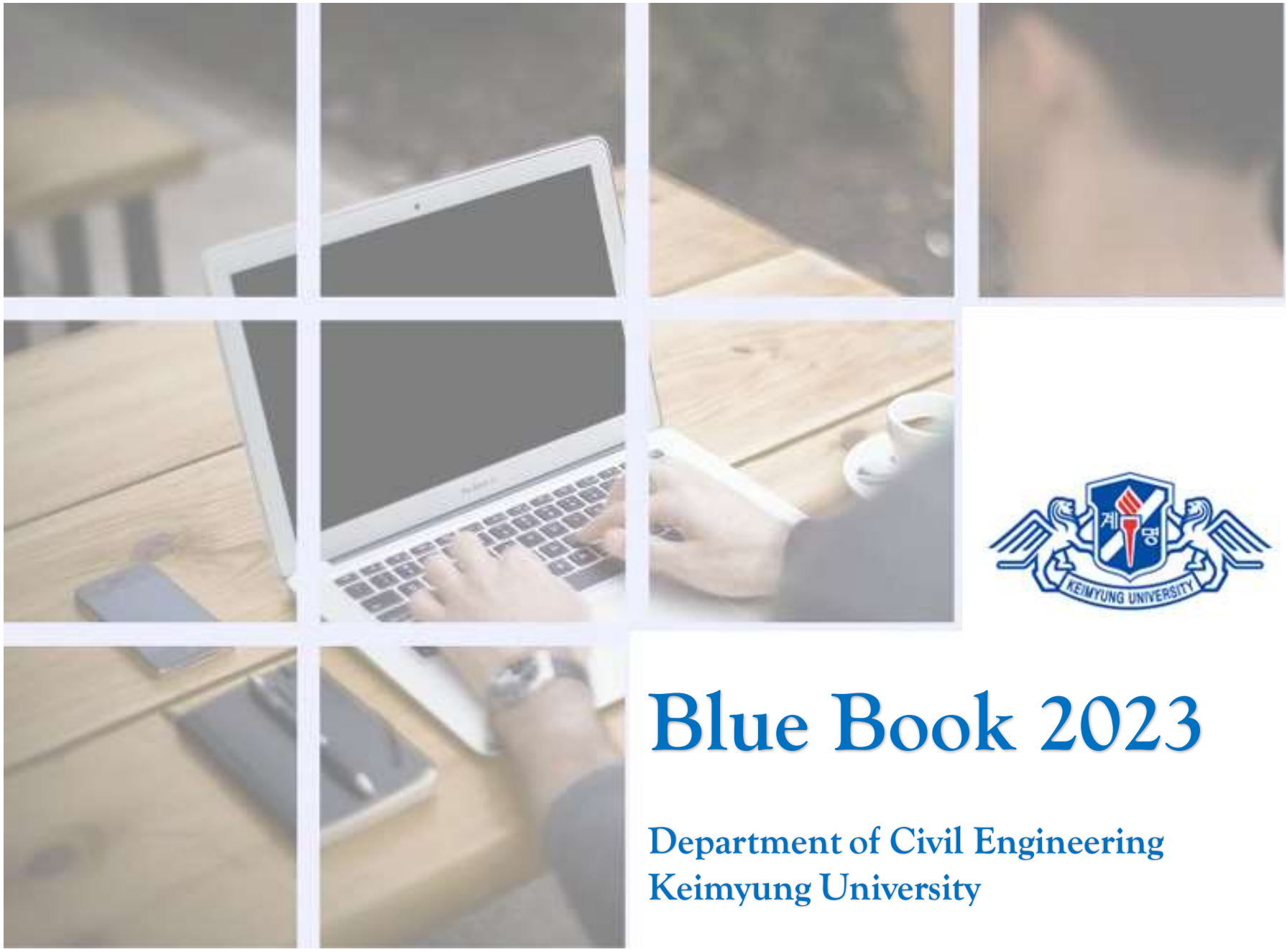


Blue Book 2023

Department of Civil Engineering
Keimyung University

Contents

01 Introduction
Chapter.

1) About Civil Engineering

Civil Engineering deals with theories and practices related to civil infrastructures such as roads, bridge, hydro-system, architectural/civil structure, and high-rise building, to design, build, and maintain them efficiently and effectively.

The history of “Civil” engineering begun with that of human because its main purpose is to serve human well-being. All engineering domains were used to be governed by military in ancient times. The name of “Civil” engineering was originated from the need of its separation from “military engineering”.

Civil engineering now focuses on the subjects highly related to public goods (i.e., civil infrastructures) while other engineering fields such as electronic and mechanical engineering were stood alone independently

Majors in civil engineering are hydrology/hydraulic engineering, Reinforced concrete engineering, geo-mechanical engineering, construction management, environmental engineering, and structural engineering.

2) Educational Goals

Fostering civil engineer with expertise and practical abilities in all fields of civil engineering through systematic and professional educational program

① Systematization of fundamental theories and practices
② Strengthening professional and humanistic education
③ Fostering engineering expert who can resolve issues in our society and public policy

3) After Graduation

- Governmental organizations
- Research institutes
- National enterprises
- Domestic and international construction companies
- Consulting companies

4) History

1985	Our department was established
1993	Graduate-master program opened
1996	Graduate-Ph.D. program opened
2001	Renamed to Dept. of Civil Engineering
2002	Ranked 10 out of 77 civil departments all over the nation
2004	Attracted about 10 Million USD from MCT for COMTEC
2009	Construction of Advanced Construction Materials Testing Center (COMTEC) was completed
2010	Civil Eng. Intensive program was certified
2015	Renamed to Civil Eng. Major in School of Architectural and Civil Eng.

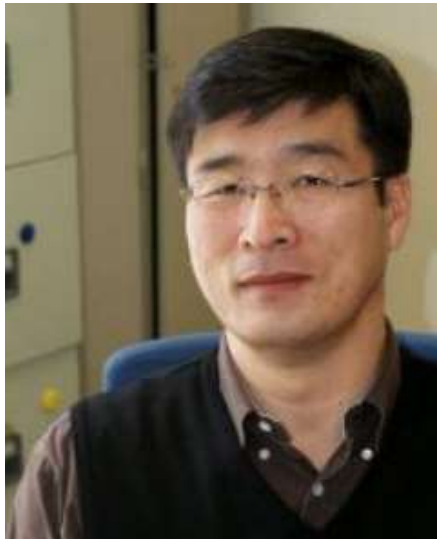
01 Introduction
Chapter.

Descriptions on Each Major

- **Water Resources Eng.** involves protecting and managing water resources in a sustainable and environmentally appropriate manner for the good of society
- **Structural Eng.** includes the design and optimization of the built environment – be it bridges, buildings, transportation facilities or habitats
- **Geotechnical Eng.** involves working with and understanding the engineering properties of soil, rock, and groundwater
- **Civil Construction Management** involves the application of construction methods and knowledge of construction equipment, as well as the implementation of the principles of management, scheduling and planning
- **Water Treatment Eng.** involves designing systems and solving pressing global problems in all areas related to the environment and public health; Bioprocessing research is particularly based on biological application to deal with diverse environmental issues.

02 Professors
Chapter.

Prof. Kwon, Oh Kyun
Lab: Geotechnical Engineering Lab.
Research and Publication Info.:
1. Displacement characteristics of battered pile under horizontal loads
2. Bearing behavior characteristics of pressure penetrating steel pipe pile under compression load
3. Case study on slope failure with carbonaceous peculiar soil
4. Uplift capacity of suction pile by an experiment



Prof. Chung, Youn In
Lab: Civil Construction Management Lab.
Research and Publication Info.:
1. Study on excavation reinforcing techniques for large cross sectional tunnel and
2. Study on effective consolidation design in soft soils
3. Physical and consolidation characteristics of soft clay in Nakdong River Lower Basin

02 Professors
Chapter.

Prof. Chung, Ho Jin
Lab: Environmental Sanitation Lab.
Research and Publication Info.:
1. Investing the impact of slow mixing on flocculation
2. Effective operation and diagnosis of water treatment facility
3. Study on floc characteristics of different solutions
4. Study on the development of electro coagulation oxidation system

Prof. Chang, Chun Ho
Lab: Composite Structure System Lab.
Research and Publication Info.:
1. Seismic performance evaluation of RC column using TRC
2. Seismic performance evaluation of steel frame structures with base isolation
3. Seismic repair and strengthening using Hybrid FRP

02 Professors
Chapter.

Prof. Chey, Min Ho
Lab: Smart Structure Lab.
Research and Publication Info.:
1. Response spectrum analysis for TMD type story isolation system design
2. Urban structures with various horizontal irregularities using equivalent static analysis
3. Passive and semi-active mid-story isolation system

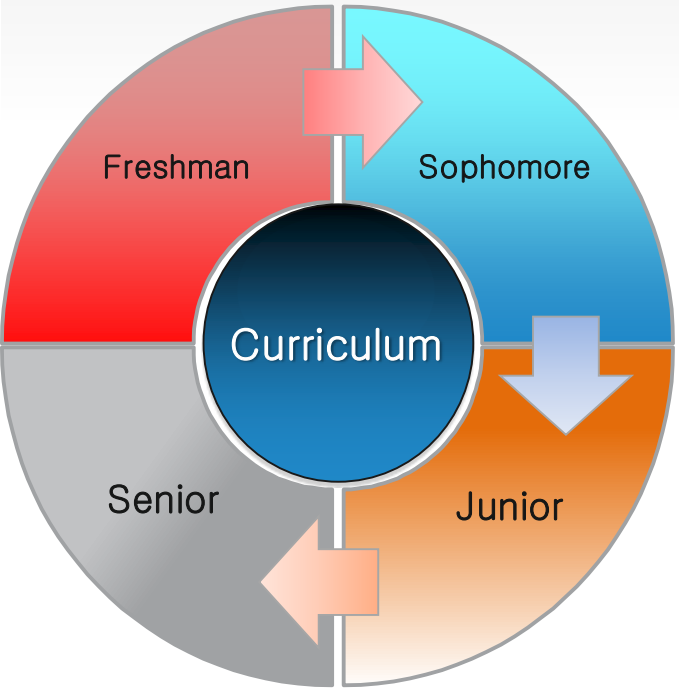
Prof. Yang, Jun Mo
Lab: Reinforced Concrete Engineering Lab
Research and Publication Info.:
1. Development of 3D Printed Concrete Technology
2. Development of fiber-reinforced cementitious concrete technologies
3. Development of prestressed concrete structure with super high strength PC-strand applied
4. Development of Standard Experimental Procedures for Concrete Materials and Structures

02 Professors
Chapter.

Prof. Woo, Dong Kook
Lab: Hydrosystem Lab.
Research and Publication Info.:
1. Analysis of the impact of climate change on vegetation and water resources
2. Land Surface model Surface flux calculation and water balance evaluation using
3. Development of soil moisture measurement device using non-destructive sensor and machine learning

Prof. Eom, Heon Seop
Lab: Environmental Bioprocess Lab.
Research and Publication Info.:
1. Nitrogen in wastewater treatment processing and its impact on eutrophication
2. Energy and nutrients-recovery wastewater treatment systems
3. Microorganism-based ecotoxicity assessment

03 Curriculum
Chapter.



1

2nd Semester
- Basic Design

2

1st Semester
- Civil Fluid Mechanics
- Surveying & Practices
- Civil Statics

2nd Semester
- Open Channel Flow & Practices
- Applied Mechanics & Practices
- Construction Materials & Practices
- Soil Mechanics & Lab.1

3

1st Semester
- Structural Analysis
- Water and Wastewater Eng. & Lab.
- Soil Mechanics & Lab.2
- Reinforced Concrete Mechanics

2nd Semester
- Hydrology
- Construction Management
- Wastewater Eng. & Lab.
- Reinforced Concrete Structure & Design
- ISP

4

Capstone Design and Others

http://tomok2.dsso.kr/sub3_3.php

04 Contacts
Chapter.

- **Department Office**

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    - Cell 010-8797-1935
    - aledma1026@naver.com
  - Practice Assistant: Inbeom Park– Contact for practices, labs, and equipment repair
    - Cell 010-3443-6411
    - dlsqja0820@naver.com

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  - Prof. Chung, Youn In, Room 2115, Eng. Bldg #2, 82-53-580-5705**, cyi@kmu.ac.kr**
  - Prof. Chung, Ho Jin, Room 2103, Eng. Bldg #2, 82-53-580-5355**, hjc@kmu.ac.kr**
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  - Prof. Yang, Jun Mo, Room 2109 Eng. Bldg #2, 82-53-580-5297**, jm.yang@kmu.ac.kr**
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  - Prof. Eom, Heon Seop, Room 2110 Eng. Bldg #2, 82-53-580-5706**, heom@kmu.ac.kr**