

Blue Book 2020

Department of Civil Engineering
Keimyung University



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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”.

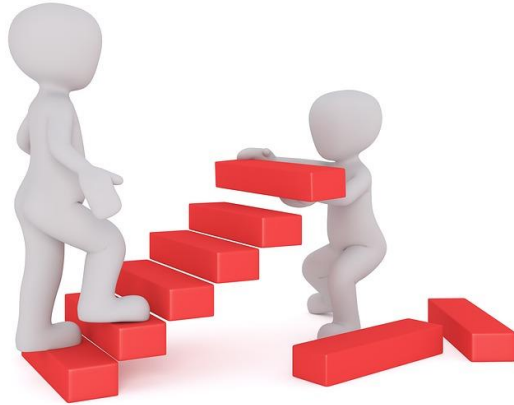
Civil engineering now focuses on the subjects highly related to public goods (i.e., civil infrastructures) while other engineering fields such as electronic and mechanical engineering were stood alone independently

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

01 Introduction

Chapter.

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

01 Introduction

Chapter.

4) History



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

01 Introduction

Chapter.

5) ABEEK Program

Our department is now running the Accreditation Board for Engineering Education of Korea (ABEEK) program.

ABEEK Vision

ABEEK, by promoting innovation and quality assurance of education in engineering, computing and engineering technology, will enhance the professional competencies of respective engineering professionals.

Mission for achieving ABEEK Vision

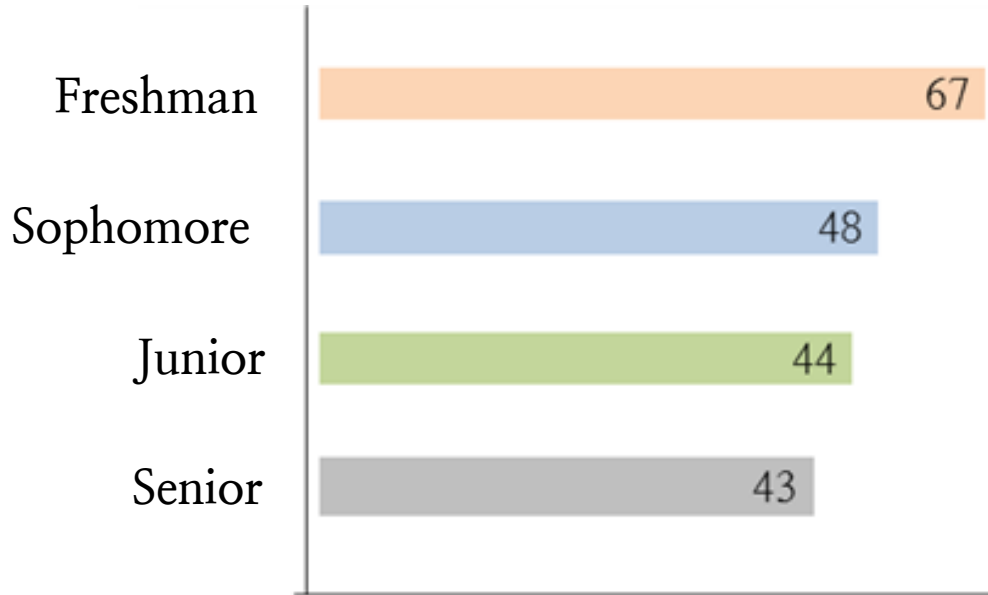
- *Mission 1:* Develop accreditation criteria to meet evolving needs of engineering profession
- *Mission 2:* Provide effective and timely accreditation services
- *Mission 3:* Foster innovation and enhance quality of engineering education
- *Mission 4:* Promote public awareness of the benefits of accreditation
- *Mission 5:* Establish and maintain independence and consistency of accreditation
- *Mission 6:* Contribute to advancement of global engineering education



01 Introduction

Chapter.

6) Number of Students



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



02 Professors

Chapter.

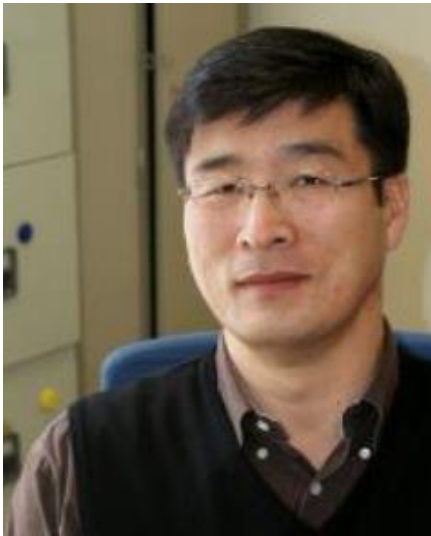


Prof. Kwon, Oh Kyun

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. Investigating 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, Chunho

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

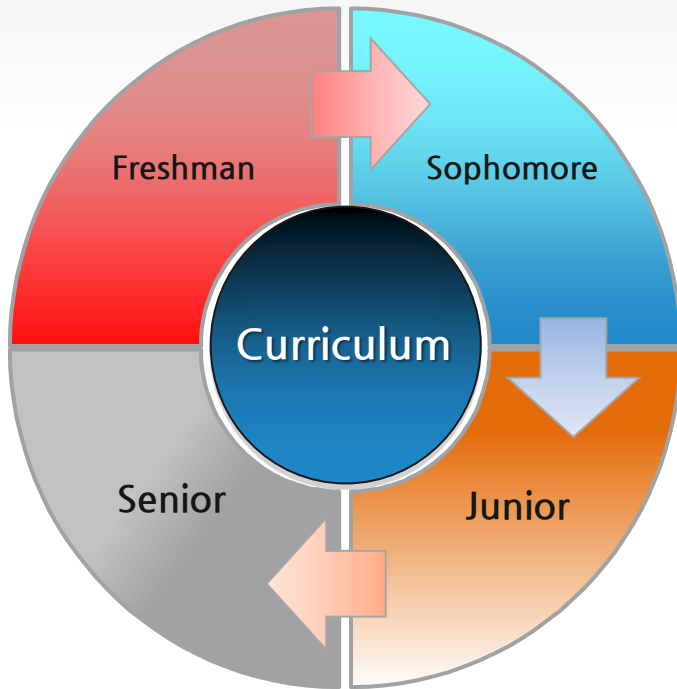
Lab: Reinforced Concrete Engineering Lab

Research and Publication Info.:

1. Development of concrete products utilizing low carbon materials
2. Development of fiber-reinforced cementitious concrete technologies
3. Development of prestressed concrete structure with super high strength PC-strand applied

03 Curriculum

Chapter.



2nd Semester
- Basic Design



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

2nd Semester
- Open Channel Flow & Practices
- Applied Mechanics & Practices
- Construction Materials & Practices



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

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



Capstone Design and Others
http://tomok2.dssso.kr/sub3_3.php

04 Contacts

Chapter.

- **Department Office**

Location: Room 2112, Engineering Building #2

- **Dept. Assistant: Ki Hyun Kim - Contact for classes, events, and dept. administration**
 - ❖ Phone 053-580-5819
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 - ❖ thskan5229@naver.com
- **Practice Assistant: Beom jun Gong - Contact for practices, labs, and equipment repair**
 - ❖ Cell 010-2571-5229
 - ❖ thskan5229@naver.com

- **Professors**

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- Prof. Chang, Chunho, **Room 2111, Eng. Bldg #2**, 82-53-580-5299, chunho@kmu.ac.kr
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