

## Applied Mechanics

Course Name	Course type (credit/hours)	Required course(3/3)			Course code	E017
	Target students Division/major/grade	Civil System Engineering/Sophomore			Opening semester	2020 1ST SEMESTER
	Class time and classroom	Mon F(Pal310)Thu F(Pal310)			English Grade	A(100%English)
Reference to this course	Prerequisite courses					
	Related basic courses	수학1				
	Recommended concurrent courses					
	Related advanced courses	재료역학, 구조역학				
Instructor	Name (title/division)		Yung Seok shin(Professor, Civil System Engineering)			
	Office Room Number	팔달관 511호	Office phone Number	2505	e-mail	
	Office hours			Homepage address		
Teaching Assistant	Name (title/division)					
	Office Room Number		Office phone Number		e-mail	

### 1. Introduction

### 2. Course Objectives

The purpose of the course is to introduce students the basic conceptual and quantitative tools for basic structural analysis which is used in designing massive civil structures and structural members.  
Students completing the course are expected to use the equilibrium concept to analyze simple structures.

### 3. Class types and activities

### 4. Teaching Method

<input checked="" type="checkbox"/> lecture	<input type="checkbox"/> discussion and debate
<input type="checkbox"/> team project(presentation and case studies)	<input type="checkbox"/> experiments(role-playing,etc)
<input type="checkbox"/> designing and production	<input type="checkbox"/> on-site learning(on-site training)
<input type="checkbox"/> others	

### 5. Support Systems in Use

<input checked="" type="checkbox"/> AjouBb	<input type="checkbox"/> automatic recording system	<input type="checkbox"/> web-based assignment
<input type="checkbox"/> cyber lecture	<input type="checkbox"/> online content	
<input type="checkbox"/> class behavior analyzing system	<input type="checkbox"/> others	

### 6. Teaching Tools

<input type="checkbox"/> PBL(Problem Based Learning)	<input type="checkbox"/> CBL(Case Based Learning)	<input type="checkbox"/> TBL(Team Based Learning)
<input type="checkbox"/> UR(Undergraduate Research)	<input type="checkbox"/> FL(Flipped Learning)	<input type="checkbox"/> DSAL(Data Science Active Learning)
<input type="checkbox"/> others		

### 7. Knowledge and ability required for taking this course

Since this course is the most basic mechanics course, you are not required to have any prior skill or special knowledge for taking the course.

## 8. Method of Evaluation

Evaluation Item	The Number of Times	Evaluation Proportion	Remarks
Attendance		10%	
midterm exam	1	40%	
final exam	1	40%	
quiz			
presentation			
discussion			
homework	10	10%	
etc			
study hours			

## 9. Textbook and supplementary material

Main/Sub	Title (Web-site)	Writer	Publisher	Publication year
Main	Engineering Mechanics (Statics) 8th edition	J.L. Meriam & L. G. Kraige & J.N. Bolton	John Wiley & Sons	2016

## 10. Class system and Class schedule

Mathematical vector representation of force and force system will be studied.
The concept of the equilibrium is studied and it will be used to analyze the simple structure systems.
Truss and beam structures are studied.

### < Class Schedule >

\* language : K-korean, E-English

Weeks	Topics	language	Instructor	Teaching Method	Evaluation Method	Matter to be prepared
1	Chap1: Introduction to statics	E	Yung Seok shin	lecture		
2	Chap2: Force systems	E	Yung Seok shin	lecture		
3	Chap2: Force systems	E	Yung Seok shin	lecture		
4	Chap2: Force systems	E	Yung Seok shin	lecture		

## < Class Schedule >

\* language : K-korean, E-English

Weeks	Topics	language	Instructor	Teaching Method	Evaluation Method	Matter to be prepared
5	Chap3:Equilibrium	E	Yung Seok shin	lecture		
6	Chap3:Equilibrium	E	Yung Seok shin	lecture		
7	Chap3:Equilibrium	E	Yung Seok shin	lecture		
8	reviews and midterm exam	E	Yung Seok shin	lecture		
9	Chap4:Structures	E	Yung Seok shin	lecture		
10	Chap4:Structures	E	Yung Seok shin	lecture		
11	AppendixA:Area moment of inertia	E	Yung Seok shin	lecture		
12	Chap5:Distributed forces	E	Yung Seok shin	lecture		
13	Chap5:Distributed forces	E	Yung Seok shin	lecture		
14	Chap5:Distributed forces	E	Yung Seok shin	lecture		
15	Chap6:Friction	E	Yung Seok shin	lecture		
16	Finalexam	E	Yung Seok shin	lecture		

## 11. Other items of notification

Students are expected to attend each class on time and stay for the entire class. Three times of tardy(beinglate)are counted to one absence and one absence will result in 1% of deduction in the total grade. More than 4 times of unexcused absence results in "F" in the course grade.

This course is an English spoken class. You should communicate with me only in English. But in assessing your performance, quality of your contents are more important than your fluency in English.

Students are strongly encouraged to read the textbook in advance to better understand the class lectures.

Students are expected to participate actively in class discussion either by voluntarily raising questions and comments or by responding when called on.