

Indoor Air Quality

Course Name	Course section (credit/hours)	Elective course(3/3)			course code	E005
	course item				course component	
	Target students Division/major/grade				opening semester	2021 1ST SEMESTER
	Class time and classroom	Wed B(WEB239)Fri B(WEB239)			English Grade	A(100%English)
Reference to this course	Credit compositon	Theory(3) + Design(0) + Practice(0)				
	Prerequisite courses					
	Related basic courses	수학, 물리학, 화학, 생물학				
	Recommanded concurrent courses					
	Related advanced course					
Instructor	Name (title/division)		Jae Young Lee(Assistant Professor, Environmental and safety Engineering)			
	Office Room Number	서관 313호	Extension Number		e-mail	jaeylee@ajou.ac.kr
	Office hour	수요일 1시-3시		Homepage address	jaeylee.com	
Teaching Assistant	Name (title/division)					
	Office Room Number		Office phone Number		e-mail	

1. Course Introduction

Indoor air pollutants is the principal parameter for the assessment of the exposure to and the health effects of these pollutants, because people generally spend more than 85% of their time indoors. Thus, in this class, students can learn about general information of indoor air quality, sources and movements of indoor air pollutants, and basic control methods.

2. Course Objectives & course outcome

The aim of this class is written below:

- 1.Understanding general information of indoor air quality and characteristics
- 2.Learning about indoor air pollutants and their sources
- 3.Understanding movements of indoor air pollutants
- 4.Figuring out how to control indoor air pollutants

3. Class types and activities

This class is English lecture based class.

This class will include midterm, final, one homework and one report.

4. Teaching Method

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|--|---|
| <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

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|--|---|---|
| <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 checked="" 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 Scienced Active Learning) |
| <input type="checkbox"/> others | | |

7. Evaluation method of course outcome

Evaluation Item	The Number of Times	Evaluation Proportion	Remarks
Attendance		10	
midterm exam		30	
final exam		30	
quiz			

7. Evaluation method of course outcome

Evaluation Item	The Number of Times	Evaluation Proportion	Remarks
presentation			
discussion			
homework		30	– Homework (15%, before final) – Report (15%, before midterm)
etc			
study hours			

8. Textbook and Reference material

Main/Sub	Title	Writer	Publisher	Publication year
Sub	실내공기질 Indoor air quality engineering	Yuanhui Zhang	동화기술	2009
Sub	Indoor air quality handbook	John D. Spengler, Ph. D., Jonathan M. Samet, M.D., M.S., John F. McCarthy, Sc.D., C.I.H.	McGraw-Hill Education	2001

9. Class system and Class shedule

<ol style="list-style-type: none"> 1. General information of indoor air quality 2. Types of indoor air pollutants and their sources 3. Health effects of indoor air pollutants 4. Movements of indoor air pollutants 5. Control methods for indoor air pollutants
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< Schedule >

* language : K-korean, E-English

Weeks	Title of lecture	language	time distribution(minutes)			Teaching Method	evaluation method
			theory	design	experiment practice		
1	Introduction	E					
2	General information of indoor air quality	E					
3	Types of indoor air pollutants and their sources	E					

< Schedule >

* language : K-korean, E-English

Weeks	Title of lecture	language	time distribution(minutes)			Teaching Method	evaluation method
			theory	design	experiment practice		
4	Types of indoor air pollutants and their sources	E					
5	Types of indoor air pollutants and their sources	E					
6	Health effects of indoor air pollutants	E					
7	Movements of indoor air pollutants	E					
8	Midterm	E					
9	Movements of indoor air pollutants	E					
10	Movements of indoor air pollutants	E					
11	Control methods for indoor air pollutants	E					
12	Control methods for indoor air pollutants	E					
13	Sampling and Analyses	E					
14	Indoor Odor	E					
15	Indoor air and future building	E					
16	Final	E					

10. Contribution index of the course for attaining ABEEK program outcomes

course outcome	contribution scale
No Data	

11. Analysis of improved matters for the previous semester

13. Reference items

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