2024학년도 오리엔테이션

2024. 1. 13. (토)

2023. 가을학기 학술활동(학과세미나, 학과워크숍) 및
2024. 봄학기 신입생 오리엔테이션 통합실시

한국방송통신대학교 대학원
환경보건시스템학과

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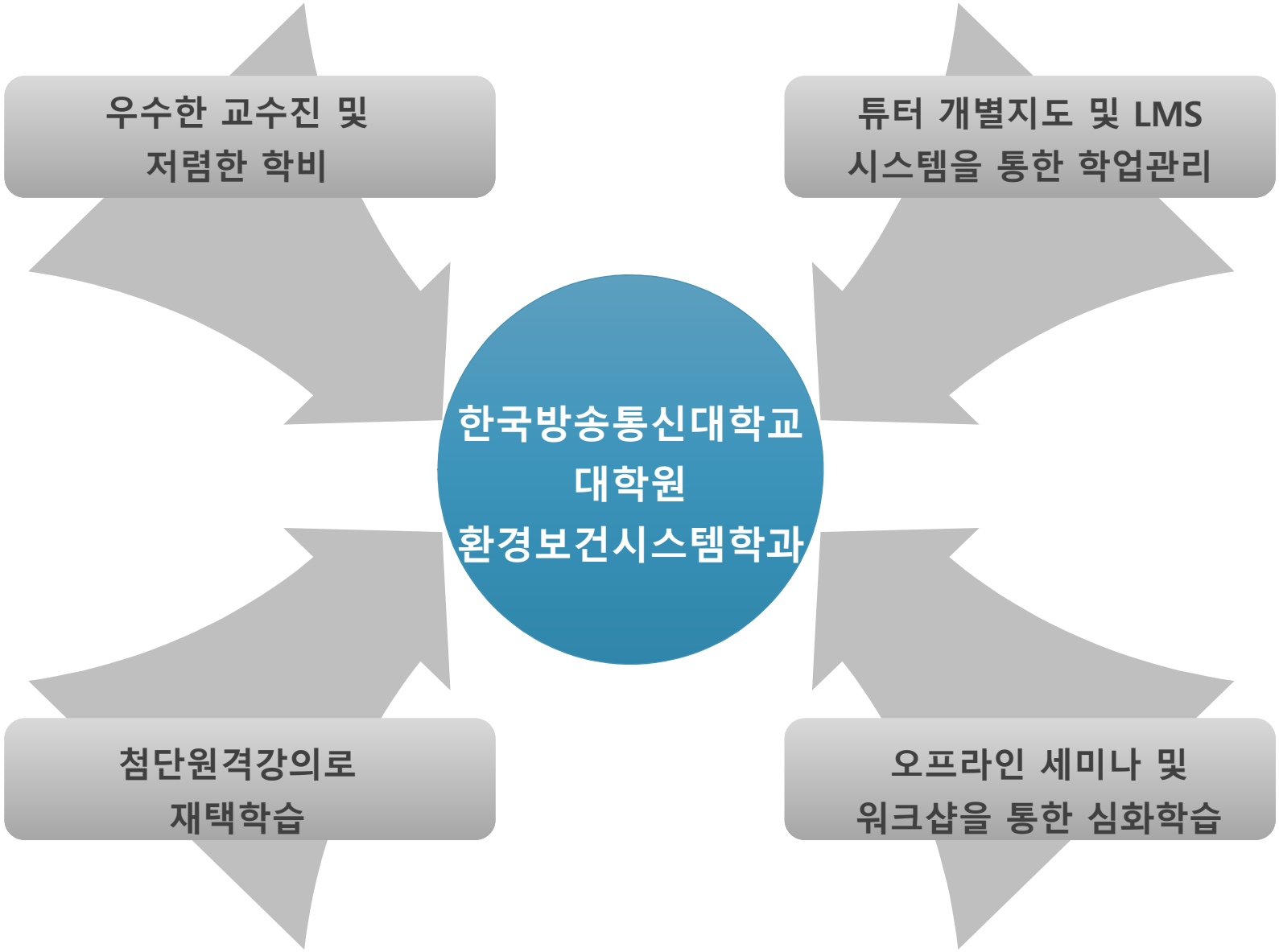
1-1. 학과특징 및 교육목표



1-1. 학과특징 및 교육목표

01

- 인간과 자연환경과의 조화 및 인간의 건강을 중시하는 미래지향적 환경보건학을 연구

02

- 미래사회가 요구하는 이론과 실무를 겸비한 새로운 개념의 환경보건관리 전문가를 양성

03

- 환경관리, 폐기물자원화 및 인체건강에 대한 위험성 평가 등 환경과 건강을 고려한 통합적 환경보건시스템 분야의 교과과정을 운영

1-2. 학과연혁

1992	보건위생학과 보건학전공 첫 신입생 모집
1996	제1회 졸업생 62명 배출(학부)
2001	보건학과 환경보건학 전공으로 명칭 변경
2003	환경보건학과 승격 독립
2010	교육과학기술부로부터 대학원 환경보건시스템학과 개설 승인
2012	환경보건학과 개설 20주년 대학원 환경보건시스템학과 개설 (30명 모집)
2014	제1회 졸업생 21명 배출 (대학원)
2019	환경보건학과 -> 보건환경학과 명칭 변경
2021	졸업생 총 145명 배출 (2021. 2월 기준)
2022	보건환경학과 개설 30주년 및 **대학원 환경보건시스템학과 개설 10주년**

1-3. 교수진 소개

권수열 교수님

전공분야

- 환경공학

담당 교과목

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1-3. 교수진 소개

박동욱 교수님

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- 산업보건학

담당 교과목

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1-3. 교수진 소개

한선기 교수님

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- 환경공학

담당 교과목

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1-3. 교수진 소개

박지호 교수님

전공분야

- 환경화학

담당 교과목

- 환경보건과학
- 대기환경특론
- 환경오염물질 이동메카니즘

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1-3. 교수진 소개

이경무 교수님

전공분야

- 환·경분자역학

담당 교과목

- 보건통계학특론
- 환경영향 및 건강위해성 평가
- 역학의 이해와 응용

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1-3. 교수진 소개

정영일 교수님

전공분야

- 보건관리학

담당 교과목

- 고령화사회와 보건환경이슈
- 건강증진특론
- 환경보건과학

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- https://professor.knou.ac.kr/extra012

1-3. 교수진 소개

이혜재 교수님

전공분야

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담당 교과목

- 보건학특론

- 02-3668-4741
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- https://professor.knou.ac.kr/hjlee1

1-3. 교수진 소개

윤혜정 교수님

전공분야

- 보건관리학

담당 교과목

- 보건학특론
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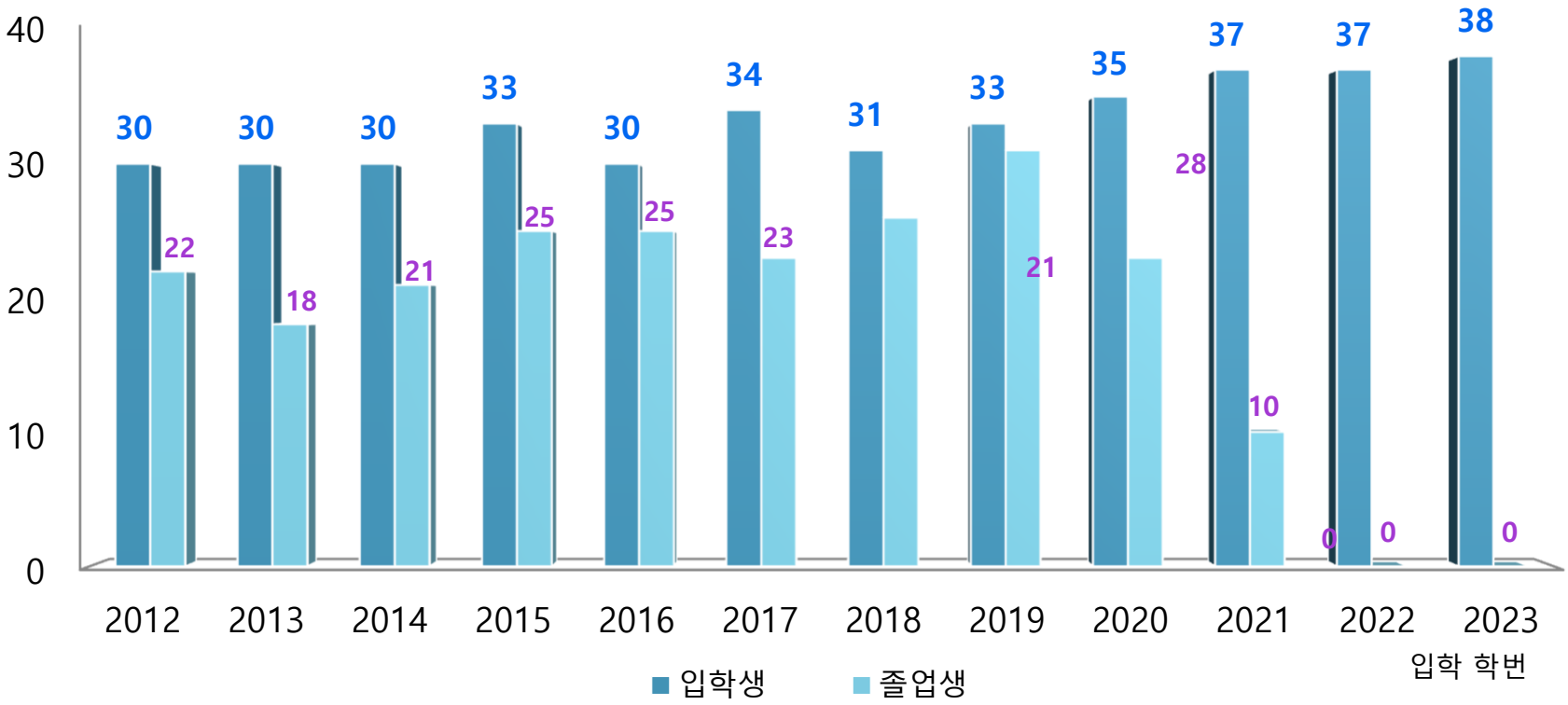
1-4. 졸업 및 재학생 현황(2024.01 기준)

- **입학생: 총 423명 (2024년도 봄학기 신입생 포함)**
- **졸업생: 총 224명 (2023년도 7월 졸업생 포함)**
- **재학생: 115명 (2012~2023학번 기준)**
- **휴학생: 17명 (2012~2023학번 기준)**



1-5. 학과자랑

국제전문(SCI)학술지 논문 게재

3기_ 정혜란 동문

Atmospheric Environment (SCI) 2편

Science of the Total Environment (SCI) 1편

Atmospheric Environment 154 (2017) 179–188

Contents lists available at ScienceDirect

Atmospheric Environment

journal homepage: www.elsevier.com/locate/atmosenv

Characteristics of elementary school children's daily exposure to black carbon (BC) in Korea

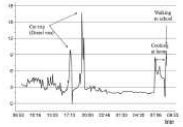
Hyeran Jeong, Donguk Park*

Department of Environmental Health, Korea National Open University, Republic of Korea

HIGHLIGHTS

- The children's black carbon (BC) exposure was influenced by type of microenvironment and activity.
- Commuting in diesel vehicles or in the subway, cooking, and second-hand smoking were all found to elevate BC exposure.

GRAPHICAL ABSTRACT



ARTICLE INFO

ABSTRACT

Atmospheric Environment 164 (2017) 270–279

Contents lists available at ScienceDirect

Atmospheric Environment

journal homepage: www.elsevier.com/locate/atmosenv

Contribution of time-activity pattern and microenvironment to black carbon (BC) inhalation exposure and potential internal dose among elementary school children

Hyeran Jeong, Donguk Park*

Department of Environmental Health, Korea National Open University, Republic of Korea

HIGHLIGHTS

- Transportation and cooking were responsible for disproportionately high contributions to children's exposure to and potential dose of black carbon (BC).
- Children received intense exposure to BC when commuting by diesel vehicles and from charbroiling meat.
- Type of day, season, and gender modified contribution of activities/microenvironments to daily BC exposure and potential dose.

ARTICLE INFO

Article history:
Received 17 January 2017
Received in revised form
30 May 2017
Accepted 4 June 2017
Available online 6 June 2017

Keywords:
Black carbon (BC)
Exposure
Potential inhaled dose
Time-activity pattern
Microenvironment (ME)
Contribution
Intensity

ABSTRACT

The aims of this study were to quantify the contributions of activities or microenvironments (MEs) to daily total exposure to and potential dose of black carbon (BC). Daily BC exposures (24-h) were monitored using a micro-aethalometer microAeth AE51 with forty school-aged children living in an urban area in Korea from August 2015 to January 2016. The children's time-activity patterns and the MEs they visited were investigated by means of a time-activity diary (TAD) and follow-up interviews with the children and their parents. Potential inhaled dose was estimated by multiplying the airborne BC concentrations ($\mu g/m^3$) we monitored for the time the children spent in a particular ME by the inhalation rate (IR, m^3/h) for the time-activity performed. The contribution of activities and MEs to overall daily exposure to and potential dose of BC was quantified. Overall mean daily potential dose was equal to 24.1 ± 10.6 μg/day (range: 6.6–46.3 μg/day). The largest contribution to BC exposure and potential dose (51.9% and 41.7% respectively) occurred in the home thanks to the large amount of time spent there. Transportation was where children received the most intense exposure to (14.8%) and potential dose (20.2%) of BC, while it accounted for 7.6% of daily time. School on weekdays during the semester was responsible for 20.3% of exposure and 22.5% of potential dose. Contribution to BC exposure and potential dose was altered by several time-activity parameters, such as type of day (weekdays vs. weekends; school days vs. holidays), season, and gender. Traveling by motor vehicle and subway showed more elevated exposure or potential dose intensity on weekdays or school days, probably influenced by the increased surrounding traffic volumes on these days compared to on weekends or holidays. This study may be used to prioritize targets for minimizing children's exposure to BC and to indicate outcomes of BC control strategies.

1. Introduction

Given the harmful potential of particulate matter (PM), ambient air PM_{10} and $PM_{2.5}$ standards are currently being promulgated in Korea. In particular, combustion-related pollutants such as black carbon (BC) are known to be highly relevant to health and to induce a variety of negative health effects including respiratory diseases, cardiovascular problems, and biological aging (Delfino et al., 2010; Janssen et al., 2011; McCracken et al., 2010; Suglia et al., 2008; Zanobetti et al., 2011). Accurately measuring exposure to BC is of great importance for children since they undergo respiratory and cognitive development while

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1352-2310/

Science of the Total Environment 637–638 (2018) 418–430

Contents lists available at ScienceDirect

Science of the Total Environment

journal homepage: www.elsevier.com/locate/scitotenv

Characteristics of peak concentrations of black carbon encountered by elementary school children

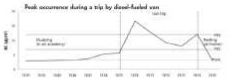
Hyeran Jeong, Donguk Park *

Department of Environmental Health, Korea National Open University, Republic of Korea

HIGHLIGHTS

- Children were exposed to short-term elevated BC levels
- Peak BC exposure levels ≥ time-weighted average differed significantly by activity and microenvironment.
- Commuting by diesel-fueled vehicles and charbroiling meat produced frequently-occurring BC peaks

GRAPHICAL ABSTRACT



ARTICLE INFO

Article history:
Received 19 February 2018
Received in revised form 25 April 2018
Accepted 30 April 2018
Available online xxxx

Editor: Lidia Morawska

Keywords:
Black carbon
Peak concentrations
Time-activity pattern
Microenvironment
Diesel engine exhaust emission

ABSTRACT

The objectives of this study were to examine characteristics of peak concentrations, including frequency, duration, and relative magnitude, and estimate its contributions to overall daily exposure to BC by activity and microenvironment. We assessed daily personal exposures from August 2015 to January 2016 (75.2% of weekdays and 24.8% of weekend days; 64.1% of school days and 35.9% of holidays) among forty 10–12 years old children living in the Seoul metropolitan area. These children were equipped with a microaethalometer (BC monitor) and recorded a time-activity diary. Pre-administrated questionnaires and follow-up interviews also provided information on children's time-activity patterns. Owing to the absence of a generally accepted threshold, peaks were alternatively defined as BC concentrations higher TWA, the 95th percentile, and the 98th percentile. Peak concentrations made substantial contributions to total daily exposure to BC (peaks ≥ TWA: 50%, peaks ≥95th-percentile: 19%, and peaks ≥98th-percentile: 6%). Average peak levels higher than TWA and the 95th percentile differed significantly by activity and ME. Transportation and cooking led to frequent peak occurrences which disproportionately contributed to daily integrated exposure relative to time spent in these activities. Walking was characterized by occasional brief but high-magnitude peaks exceeding the 98th percentile, which produced the most intense potential dose (0.09% of daily time spent on walking accounted for 1.8% of daily potential dose). It might be attributed to encounters with high emissions sources such as passing/idling vehicles and environmental tobacco smoke. Trips by diesel vehicle produced frequently occurring and long-duration peaks above the 95th percentile that contributed 2% to total daily exposure (corresponding time: 0.3%). Charbroiling meat incurred sustained peaks as intense as those in trips by diesel vehicles. Peaks during commuting showed relatively high exposure intensity on weekdays, possibly because of increased surrounding traffic volume on these days, while those during cooking accounted for a more elevated residential contribution to daily integrated exposure.

1. Introduction

Increasing attention has been paid to the importance of intense exposures of short duration (peaks) since the high concentrations involved produce a high dose rate into the body and target tissue that may alter metabolism, overload protective or repair mechanisms, and

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E-mail address: pdw545@gmail.com (D. Park).

https://doi.org/10.1016/j.scitotenv.2018.04.399
0048-9697/

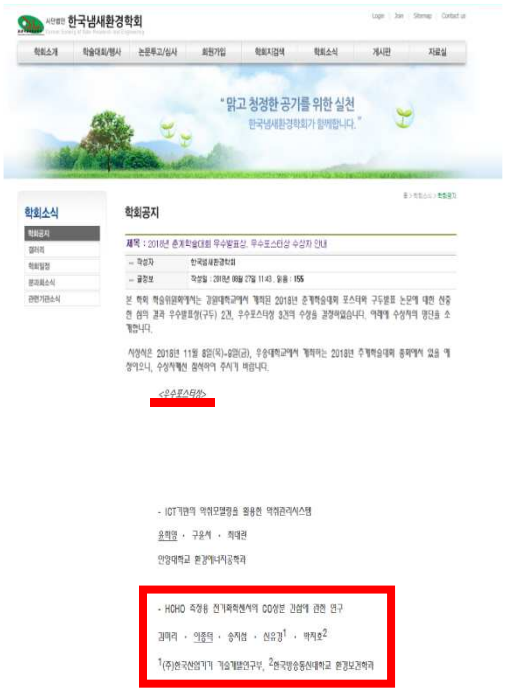
1-5. 학과자랑

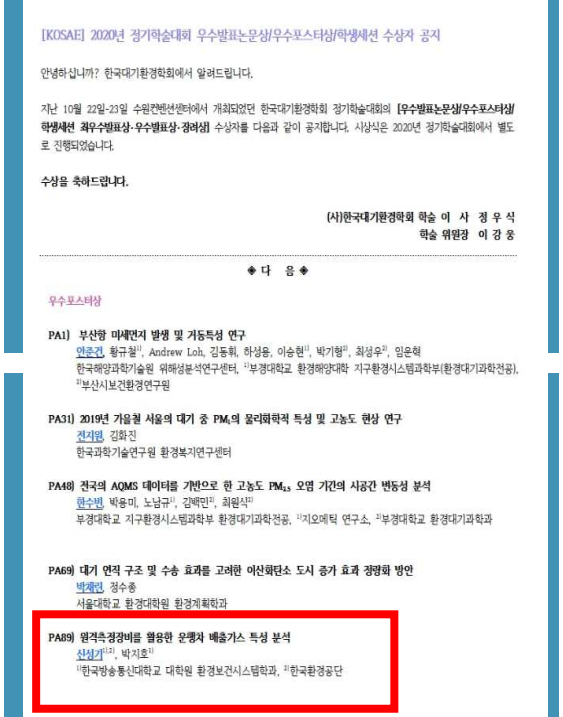
학술대회 수상

4기_ 이혜민 동문: 한국산업보건학회 “2017 한국 3M Young IH Award” 수상

5기_ 김미리 동문: 한국냄새환경학회 “2018년 춘계학술대회 우수포스터상” 수상

7기_ 신성기 동문: 한국대기환경학회 “2020년 정기학술대회 우수포스터상” 수상





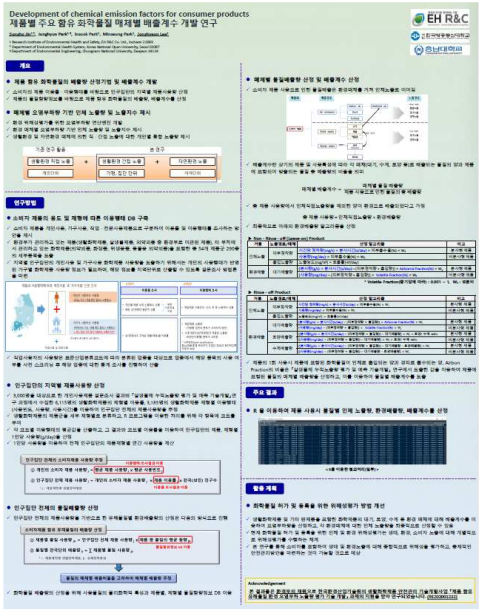
1-5. 학과자랑

학술대회 발표

7기_ 김형희 동문
2021 한국물환경학회 학술발표

학술대회 발표

9기_ 진성호 동문
2020 한국환경보건학회 학술발표



논문우수상 수상 (대학원장 수여)

1기_박종욱 동문, 4기_최상진 동문, 5기_신현숙 동문, 7기_신성기 동문, 김형희 동문

02

학위취득안내

개설교과목

권장교과목

강의안내

학술활동

졸업요건

2-1. 개설 교과목

봄학기

과목명	담당교수
보건학특론	이혜재
환경보건과학	박지호
역학의 이해와응용	이경무
폐기물자원화와 바이오에너지	한선기
고도 수처리 공정	권수열
환경영향 및 건강위해성평가	이경무
유해화학물질 관리	박동욱
고령사회와 보건환경이슈	정영일

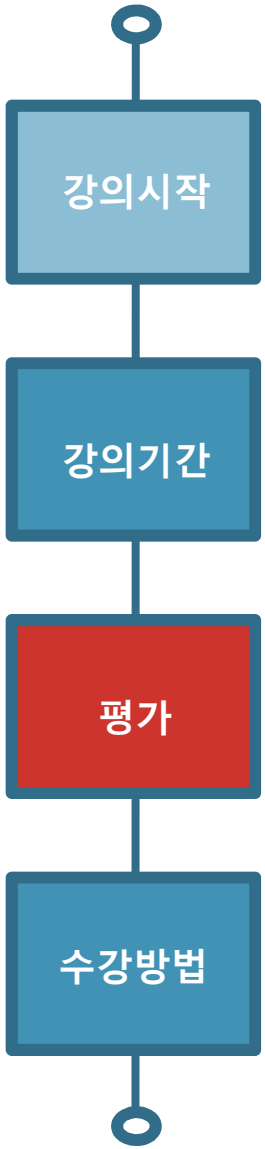
가을학기

과목명	담당교수
환경오염물질 이동 메커니즘	권수열
위험관리특론	박동욱
건강증진특론	정영일
보건통계학특론	이경무
대기환경특론	박지호
직업보건환경이슈	박동욱
산업안전특론	김경순

2-2. 권장교과목

학기	교과목명	학점	담당교수	개설계절
1학기	보건학특론	3	이혜재	봄
	환경보건과학	3	박지호	
2학기	환경오염물질 이동 메카니즘	3	권수열	가을
	위험관리특론	3	박동욱	
	건강증진특론	3	정영일	
3학기	역학의 이해와 응용	3	이경무	봄
	폐기물자원화와 바이오에너지	3	한선기	
	고도 수처리 공정	3	권수열	
4학기	보건통계학특론	3	이경무	가을
	대기환경특론	3	박지호	
	직업보건환경이슈	3	박동욱	
	산업안전특론	3	김경순	
	환경기술정책 및 계획<미개설 교과목>	3	권수열	
5학기	환경영향 및 건강위해성평가	3	이경무	봄
	유해화학물질 관리	3	박동욱	
	고령사회와 보건환경이슈	3	정영일	
논문	논문연구1	3	-	
	논문연구2	3	-	

2-3. 강의 안내



3월(봄학기) 및 9월(가을학기) 시작

총 15주 (중간고사 8주차, 기말고사 15주차)

시험, 과제물, 퀴즈, 토론, 참여도 등 종합평가
(중간/기말 시험: 온라인시험)

인터넷 접속

2-5. 졸업요건

01

총 30학점 이수

논문연구진행: 전공학점 24학점 + 논문연구 6학점
과목추가이수과정: 전공학점 30학점

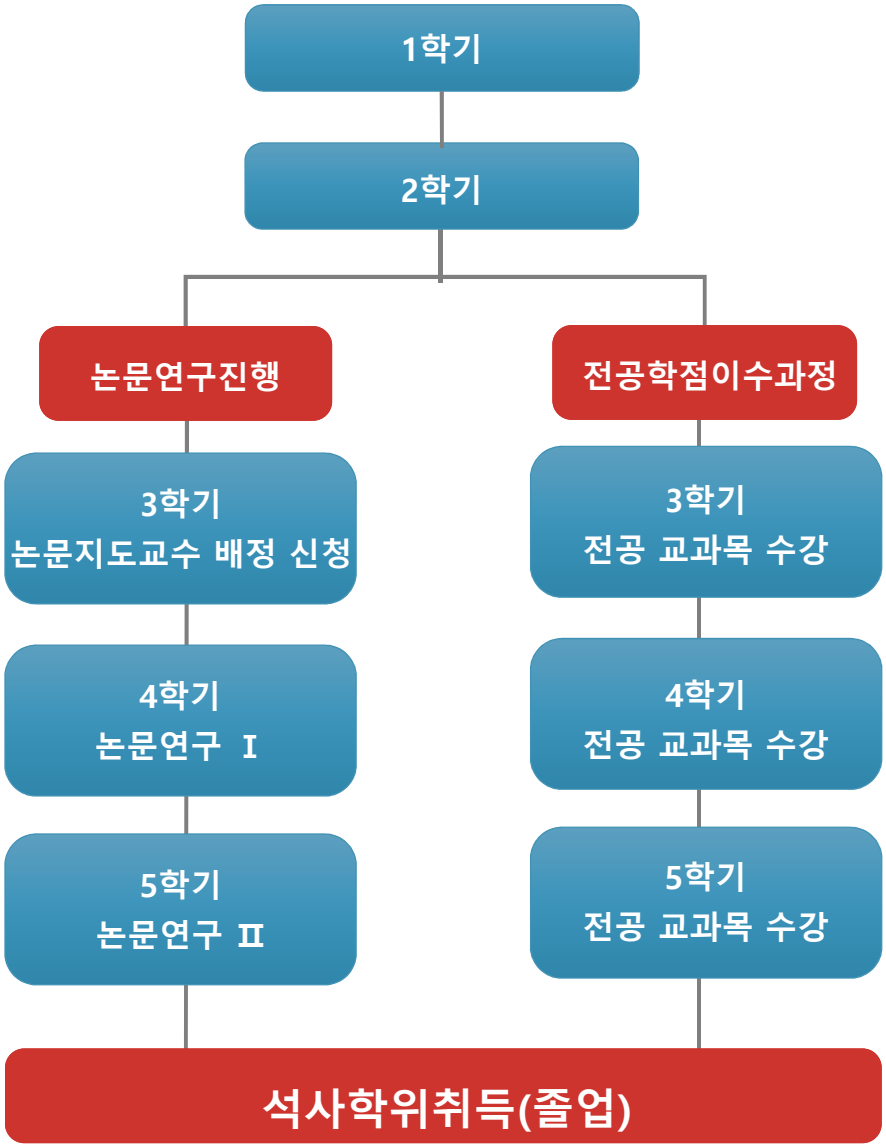
02

학위취득 자격시험 합격

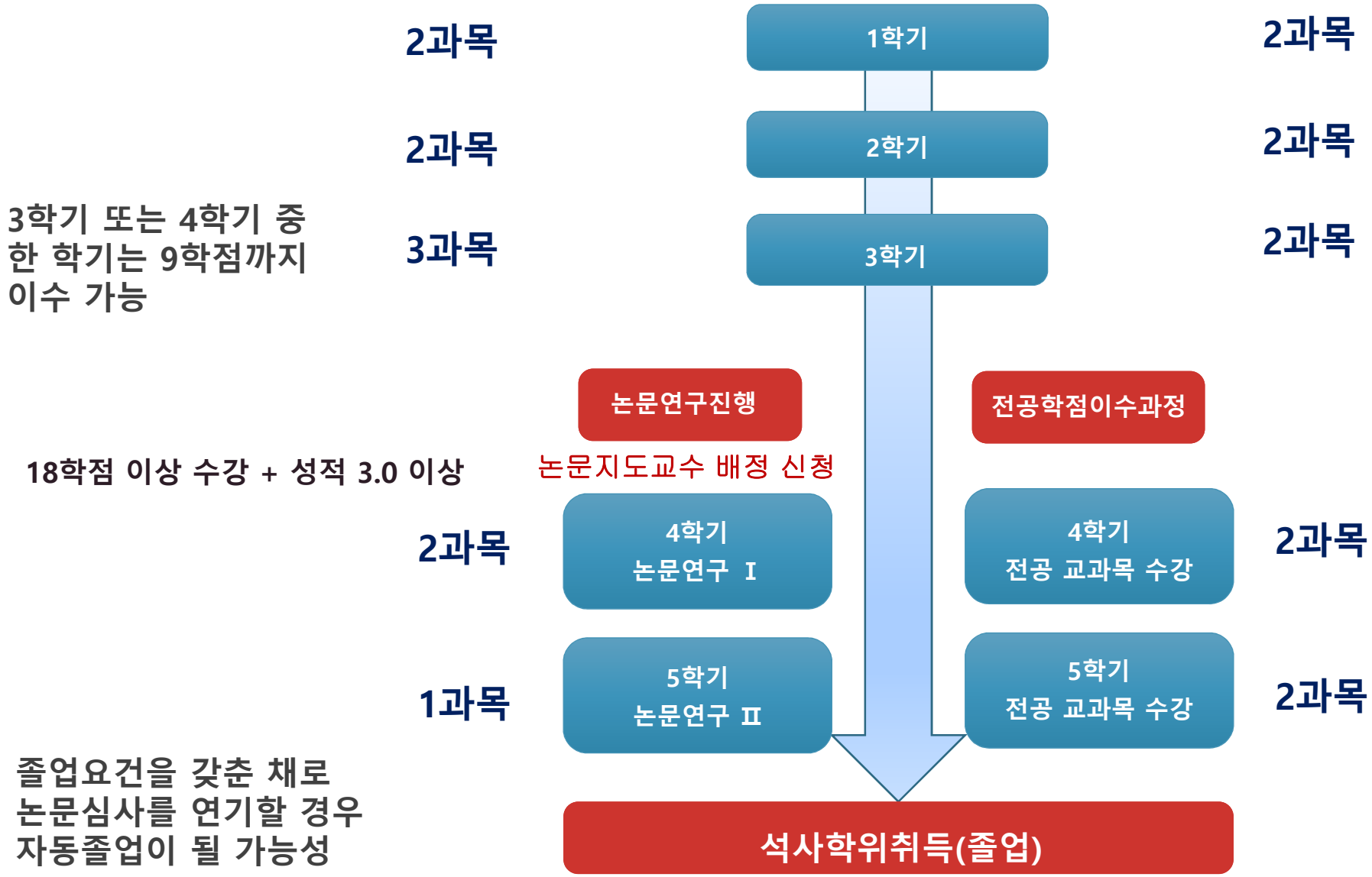
(종합시험:3과목, 외국어시험)
- 종합시험 : 18점 이상 취득한 자 응시가능
- 외국어시험 : 6학점 이상 취득한 자 응시가능

03

평점평균 3.0 이상



2-5. 과목 수강 예


2과목
1학기
2과목
2과목
2학기
2과목
3학기 또는 4학기 중
한 학기는 9학점까지
이수 가능
3과목
3학기
2과목
논문연구진행
전공학점이수과정
18학점 이상 수강 + 성적 3.0 이상
논문지도교수 배정 신청
2과목
4학기
논문연구 Ⅰ
4학기
전공 교과목 수강
2과목
1과목
5학기
논문연구 Ⅱ
5학기
전공 교과목 수강
2과목
졸업요건을 갖춘 채로
논문심사를 연기할 경우
자동졸업이 될 가능성
석사학위취득(졸업)

2-6. 학술활동

01

봄학기 과목세미나

- 5월 18일(토)

02

가을학기 신입생 OT 및 워크샵

- 7월 13일(토)

03

가을학기 과목세미나

- 11월 16일(토)
- 2024년도 가을학기에 개설될 과목 대상

04

봄학기 신입생 OT 및 워크샵

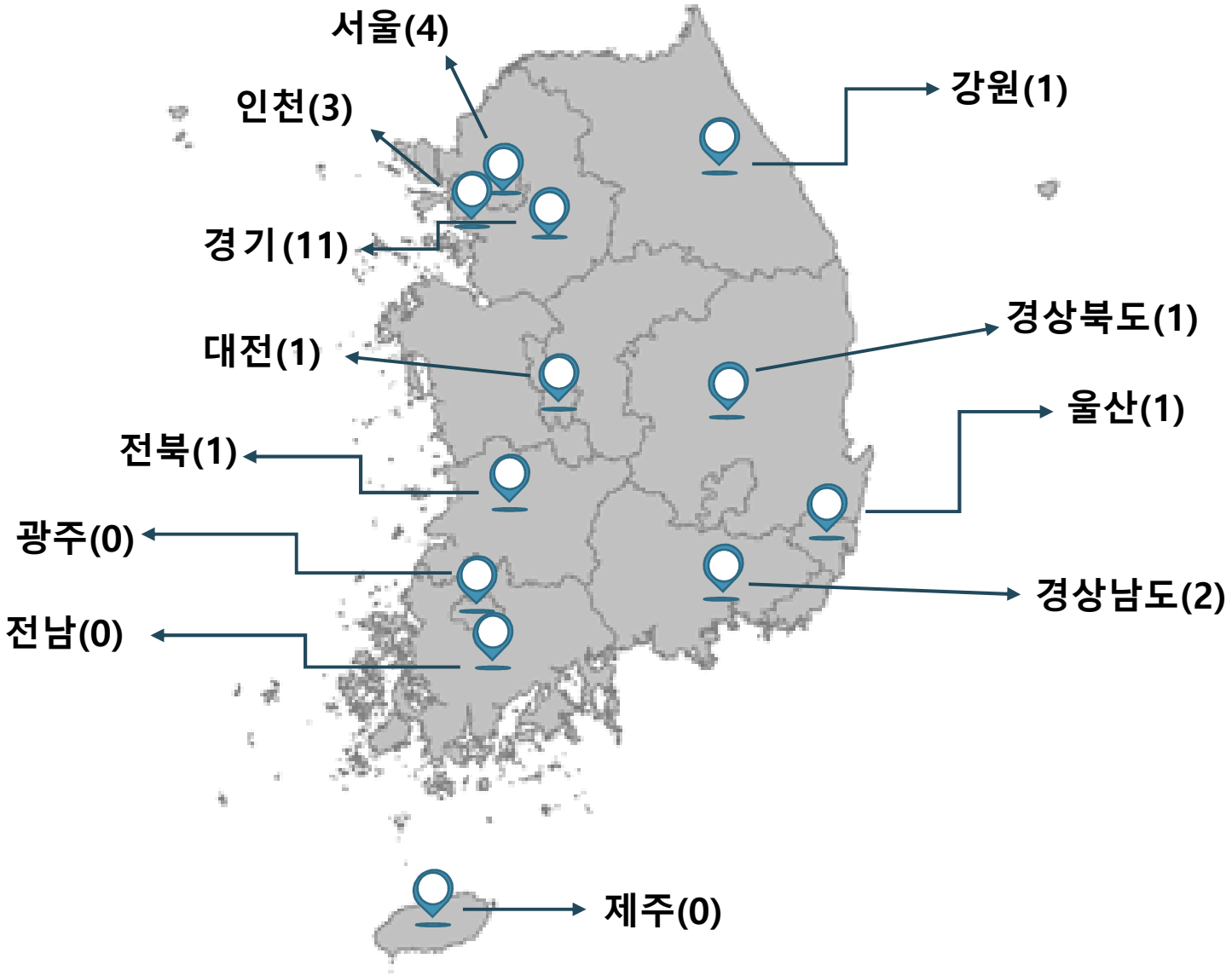
- 2025년 1월 18일(토)

03

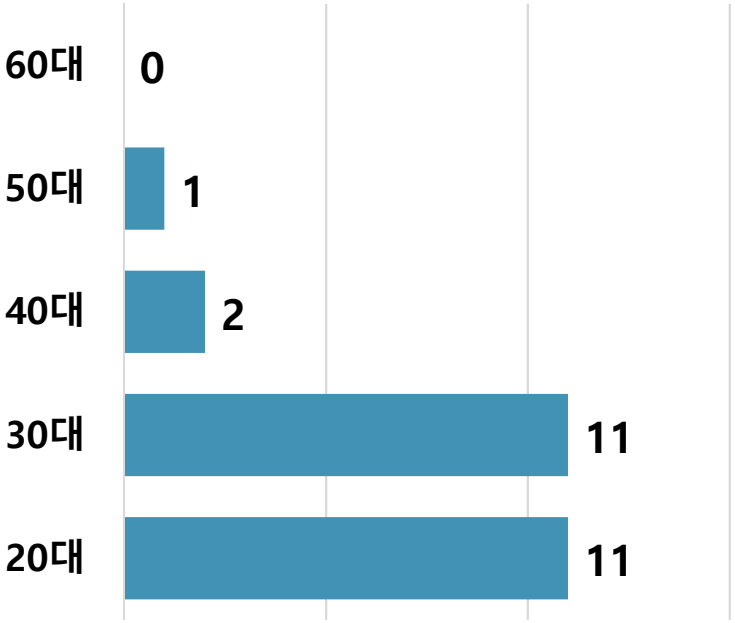
대학원 합격자 현황

(2024학년도 봄학기)

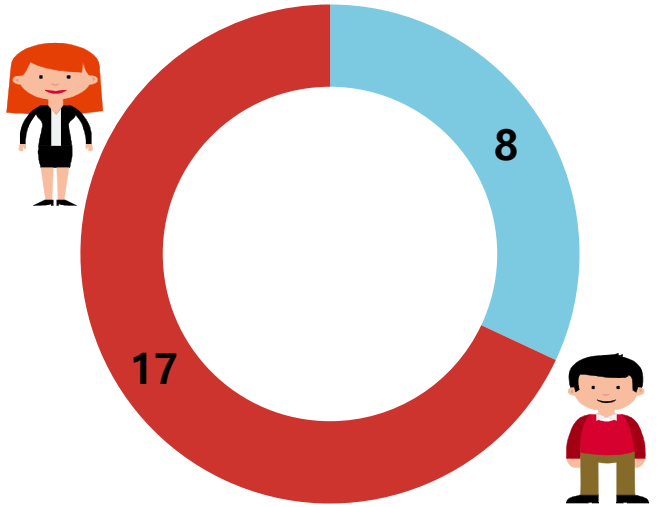
3-1. 합격자 현황(지역별)



3-2. 합격자 현황(연령별, 성별)

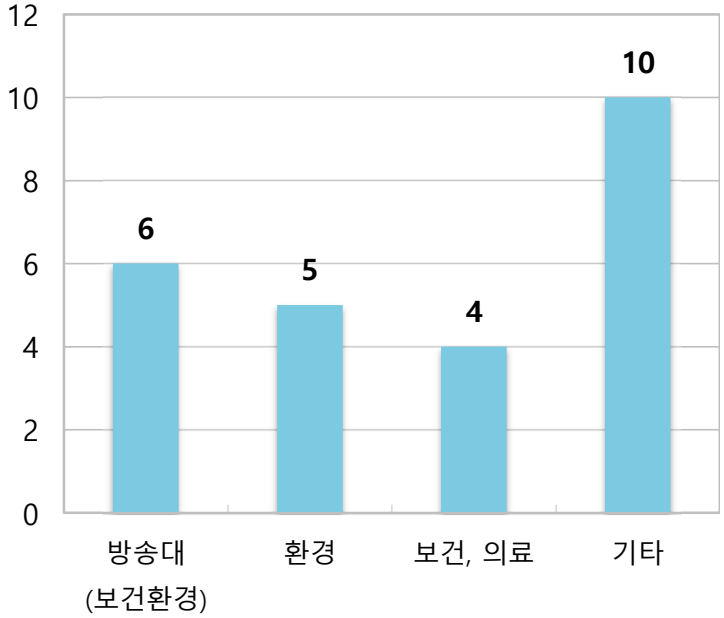


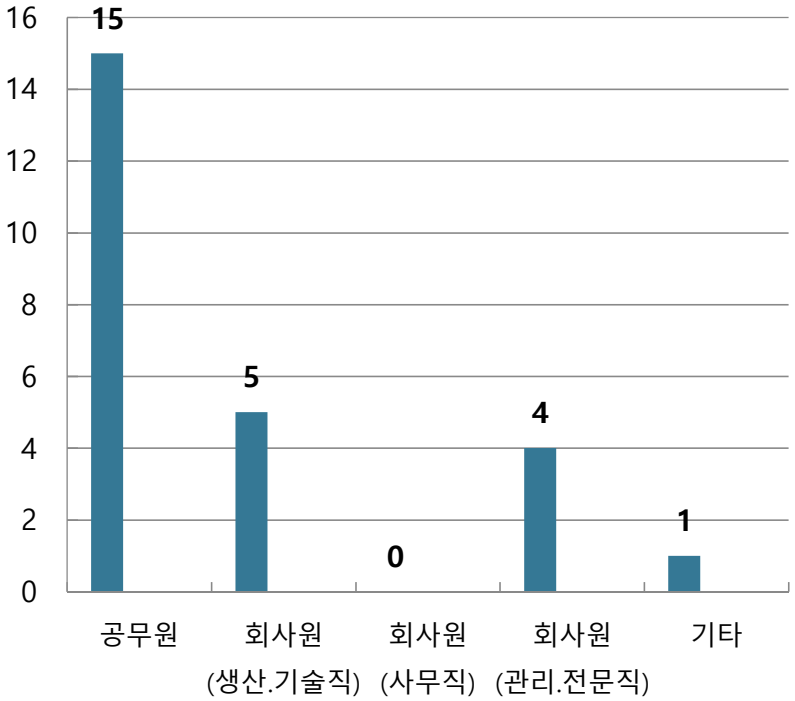
연령별



성별

3-3. 합격자 현황



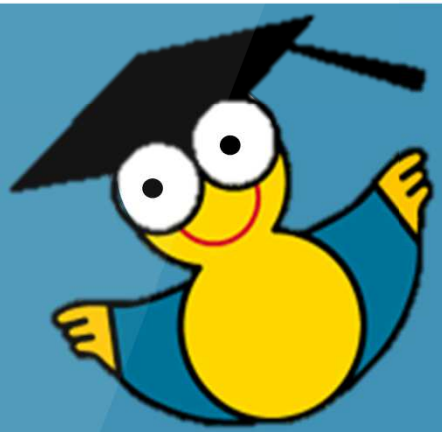


학부 전공

직종

Q&A

THANK YOU!



한국방송통신대학교 대학원
환경보건시스템학과