

2015 B.S. degree curriculum

Department of Occupational Safety and Health

Educational goals:

1. Nurture professional competence and moral responsibility for students;
2. Strengthen students' communication skills and basic knowledge;
3. Emphasize the applications of theory into the real-world settings.

Department requirements:

1. The following curriculum applies to students who were admitted to the DOSH B.S. degree program in Sept. 2015;
2. A minimum of 131 credits is required for completion of degree program, including 102 obligatory credits and 29 elective credits (in which 20 credits must be taken within the DOSH).

Obligatory course (74 credits):

Course name	Credit	Semester
Environmental health	2	1st
Public health	2	1st
Calculus (I)	2	1st
General chemistry (C)	2	1st
Chemistry laboratory (B)	1	1st
Introduction of industrial safety	2	2nd
Introduction of industrial hygiene	2	2nd
Calculus (II)	2	2nd
General physics (B)	2	2nd
General physics laboratory	1	2nd
Organic chemistry(A)	2	2nd
Organic chemistry laboratory(A)	1	2nd
Biostatistics practice (I)	1	3rd
Occupational hygiene-hazard recognition	2	3rd
Instrumental analysis	2	3rd
Biostatistics	2	3rd
Thermodynamics	2	3rd
Engineering mathematics	2	3rd
Biostatistics practice (II)	1	4th
Occupational hygiene-hazard evaluation	2	4th
Environmental chemistry	2	4th
Service learning	0	4th
Enforcement acts of industrial safety & health	2	4th
Fluid mechanics	2	4th
Chemical process safety	2	4th
Industrial toxicology	2	4th
Ergonomics	2	5th
Aerosol science	2	5th
Practice of environmental monitoring at workplace (chemical agents)	1	5th
Fire & explosion prevention	2	5th
Epidemiology	2	5th
Occupational hygiene-hazard control	2	5th
Environmental monitoring at workplace	3	5th

Obligatory course (74 credits):

Course name	Credit	Semester
Practice of environmental monitoring at workplace (physical agents)	1	5th
Biological monitoring	2	6th
Hazardous risk assessment	2	6th
Industrial safety & health management	2	6th
Environmental planning & management	2	6th
Practical training	2	7th
Electro-mechanical safety	2	8th
Workplace inspection practice	2	8th
Total credits	74	

Elective courses (92 credits):

Course name	Credit	Semester
General biology (C)	2	2nd
Hazard recognition & prevention	2	3rd
Work physiology	2	3rd
Industrial safety-hazard recognition	2	3rd
Industrial psychology	2	4th
Experiment of instrumental analysis	2	4th
Environmental microbiology	2	4th
Industrial management	2	4th
Experiment of environmental chemistry	2	4th
Industrial safety-hazard evaluation	2	4th
Applied mathematics method	2	4th
Environmental law & regulation	2	4th
Advanced biostatistics	2	4th
Relationships between labor & employer	2	5th
Industrial safety-hazard control	2	5th
Introduction of environmental engineering	2	5th
Seminar in occupational safety & health	2	5th
Introduction to public health (English course)	2	5th
Management of waste & hazardous material	2	5th
Inspection & management of dangerous machines	2	5th
Construction safety	2	5th

Elective courses (92 credits):

Course name	Credit	Semester
Introduction to operation management	2	5th
Occupational epidemiology	2	6th
Planning & evaluation of occupational health	2	6th
Wastewater treatment	2	6th
Process safety in semiconductor manufactory	2	6th
Engineering control of workplace hazards	2	6th
Industrial ventilation & design	2	6th
Applied epidemiology	2	6th
Research project (I)	2	6th
Air pollution control	2	6th
Practice of occupational safety & health	2	6th
Environmental management system	2	7th
Prevention of occupational disease	2	7th
Quality control	2	7th
Quantitative risk assessment	2	7th
Reading of professional literatures	2	7th
Research project (II)	2	7th
Biohazards	2	7th
Applied statistics	2	7th
Personal protective equipments	2	8th
Data processing	2	8th
Fire safety equipment & management	2	8th
Occupational hazard investigation	2	8th
Health risk assessment	2	8th
Environmental impact assessment	2	8th
Total credits	92	