

B.S. degree curriculum

Department of Occupational Safety and Health

Educational goals:

1. Implement the concept of holistic education and 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, and develop skills in the problem solving and lifelong learning.

Department requirements:

1. The following curriculum applies to students who were admitted to the DOSH B.S. degree program in Sept. 2021;
2. A minimum of 128 credits is required for completion of degree program, including 70 obligatory credits (24 credits in the Interdisciplinary Freshman Program of Public Health and 46 credits in the DOSH), 30 elective credits (in which 20 credits must be taken within the DOSH or the Interdisciplinary Freshman Program of Public Health), and 28 elective credits offered by the Center of General Education.

Obligatory course (70 credits):

Course name	Credit	Semester
Career planning in public health (I)	2	1st
Introduction to Public health	2	1st
Biology (C)	2	1st
Introduction to health services administration	2	1st
General chemistry (C)	2	1st
Calculus (I)	2	1st
Occupational Safety	2	1st
Career planning in public health (II)	2	2nd
Biostatistics	2	2nd
Environmental health	2	2nd
Occupational hygiene	2	2nd
Introduction to the functions of health care organization	2	2nd
Engineering mathematics	2	3rd
Biostatistics practice (I)	1	3rd
Work physiology	2	3rd
Instrumental analysis	2	3rd
Thermodynamics	2	3rd
Enforcement acts of industrial safety & health	2	4th
Industrial toxicology	2	4th
Occupational health in semiconductor manufacturing industry	2	4th
Biostatistics practice (II)	1	4th
Service learning	0	4th
Aerosol science	2	4th
Process Safety	2	4th
Ergonomics	2	5th
Environmental monitoring at workplace	2	5th
Practice of environmental monitoring at workplace (chemical agents)	1	5th
Practice of environmental monitoring at workplace (physical agents)	1	5th
Fire & explosion prevention	2	5th
Epidemiology	2	5th
Construction safety	2	5th

Obligatory course (70 credits):

Course name	Credit	Semester
Industrial ventilation	2	6th
Biological monitoring	2	6th
Hazardous risk assessment	2	6th
Occupational safety & health management system	2	6th
Practical training	2	7th
Electro-mechanical safety	2	7th
Environmental management system	2	8th
Practice of occupational safety & health	0	8th
Total credits	70	

Elective courses (98 credits):

Course name	Credit	Semester
Biology laboratory (B)	1	1st
Chemistry laboratory (B)	1	1st
Management	2	1st
Office software application for public health informatics	2	1st
Organic chemistry(A)	2	2nd
Organic chemistry laboratory(A)	1	2nd
Integral calculus with theory and application	2	2nd
Industrial safety-hazard recognition	2	3rd
Hazard recognition & prevention	2	3rd
Occupational hygiene-hazard recognition	2	3rd
Industrial psychology	2	4th
Industrial safety-hazard evaluation	2	4th
Industrial management	2	4th
Fluid mechanics	2	4th
Advanced biostatistics	2	4th
Experiment of instrumental analysis	2	4th
Environmental chemistry	2	4th
Experiment of environmental chemistry	2	4th
Environmental law & regulation	2	4th
Environmental microbiology	2	4th
Occupational hygiene-hazard evaluation	2	4th

Elective courses (98 credits):

Course name	Credit	Semester
Industrial safety-hazard control	2	5th
Introduction to operation management	2	5th
Inspection & management of dangerous machines	2	5th
Hazardous waste management	2	5th
Relationships between labor & employer	2	5th
Introduction of environmental engineering	2	5th
Methods and design in occupational safety and health research	1	5th
Occupational hygiene-hazard control	2	5th
Process safety in semiconductor manufactory	2	6th
Research project (I)	2	6th
Wastewater treatment	2	6th
Applied epidemiology	2	6th
Environmental planning & management	2	6th
Planning & evaluation of occupational health	2	6th
Occupational epidemiology	2	6th
Biohazards	2	7th
Engineering control of workplace hazards	2	7th
Quality control	2	7th
Reading of professional literatures	2	7th
Research project (II)	2	7th
Quantitative risk assessment	2	7th
Applied statistics	2	7th
Prevention of occupational disease	2	7th
Air pollution control	2	8th
Personal protective equipments	2	8th
Fire safety equipment & management	2	8th
Health risk assessment	2	8th
Workplace inspection practice	2	8th
Environmental impact assessment	2	8th
Occupational hazard investigation	2	8th
Total credits	98	