

T.C.
ÜSKÜDAR ÜNİVERSİTESİ
HEALTH SCIENCES INSTITUTE
OCCUPATIONAL HEALTH AND
SAFETY DEPARTMENT
MASTER'S GRADUATE
PROGRAM WITH THESIS
COURSE CONTENTS

I. SEMESTER

ISG541 Probability and Statistics

(3+0) 3 AKTS:6

Compiling, summarizing, analyzing the data obtained by sampling method, interpreting and generalizing the results, Solving probability problems, Finding random variables, distributions, expected values, variances and moments, Making statistical conclusions from the data, Modeling any data with basic statistical methods, Testing the necessary hypothesis. creation and analysis, statistical interpretation and providing the necessary statistical equipment.

ISG537 Security Engineering

(3+0) 3 AKTS:6

Basic concepts and definitions of Security Engineering; Safety and maintenance activities; Basic security calculations; Fundamentals of security; Security testing and planning; Giving information about failure mode and effects analysis

ISG531 OHS Electrical Applications (Elective Course)

(3+0) 3 AKTS:6

Electrical Energy and Definitions; Properties of Electricity, Current, Voltage, Conductivity, Resistance, Ohm's Law; Electric circuits; Electrical Energy and Power; Direct Current, Alternating Current,; Transformers; Small Voltage, Low Voltage, High Voltage ; Kofra and Main Distribution Table; Three-phase Systems, Delta and Star Connection, Phase, Neutral; Power, Inductive, Capacitive and Ohmic Power in Electrical Systems; Electrical Protection Methods, Protective Isolation, Ground Isolation, Use of Small Voltage, Equipotentialization, Zeroing, Grounding, Protective Transformer; Fuses and Disconnectors; Leakage relay; Static Electricity and Its Precautions, Short Circuit and Grounding, Humidification, Ionization; Lightning and Lightning Protection Systems and Methods; Low Voltage Networks, TN Type, TT Type, IT Type Networks; First Aid in Electrical Accidents; Security in Electrical Facilities, Constructions, Mines, Welding Machines; Safety Precautions in Electrical Installations and Electrical Devices; Causes of Electrical Accidents.

ISG539 Scientific Research Methods and Science Ethics

(3+0) 3 AKTS:6

Information on scientific research methods such as science, knowledge, scientific research, paradigms, Quantitative research approach, Qualitative research approach, the effects of approaches on educational research, research process, ethics and scientific ethics, research writing, hypothesis generation and the contents of thesis, article and thesis sections. completion of the preliminary preparation for the thesis stage.

ISG521 Emergency Management (Elective)**(3+0) 3 AKTS:6**

Disaster and emergency concepts; Disaster and emergency events; Disaster management system phases; Emergency (Crisis) and risk management concepts; The work to be done before, during and after the emergency; Establishment of an emergency management system; Establishment of emergency policy and planning team; Examination of existing legislation; Determination of budget and resources; Preparation of emergency plans; emergency response procedures; Training, exercises and other activities; Example contingency plans.

ISG527 Management Systems and Organization (Elective)**(3+0) 3 AKTS:6**

Basic concepts, terms and definitions; OHSAS 18001/ISO 9001:2000 Quality Management / Total Quality Management relationship; Legal terms and other requirements; Goals and management programs; Application; Structure and responsibilities; Education; awareness and competence; Operation control; Emergency Preparedness; control and corrective actions; Performance measurement and monitoring; accidents; incidents and nonconformities; Evaluation of results in computer environment and creation of statistical results; OHS evaluation of workplaces depending on business lines.

II. SEMESTER**ISG538 Occupational Health and Safety Legislation; Business law****(3+0) 3 AKTS:6**

History of laws, statutes, regulations and other legal procedures in force in our country in the field of Occupational Health and Safety; Occupational Health and Safety in the Constitution / Occupational Health and Safety in Laws; Labor Law, Code of Obligations, Public Health Law; Occupational Health and Safety Law; Bylaws and regulations on OHS legislation; Occupational Health and Safety Committees; Responsibilities of employers and employers' representatives in the field of OHS; Regulations regarding the occupational safety measures to be taken for the building and its annexes, raw materials and materials to be used and machinery and equipment in the workplace; Regulations on the organization of occupational safety; Regulations on working order; Duties, powers and responsibilities of the occupational safety specialist; Principal employer sub-employer relationship; Examination of sample Supreme Court decisions.

ISG542 Security Practices in Workplaces**(3+0) 3 AKTS:6**

The dangers of fire and Atex explosions in workplaces; What to do in case of fire; Precautions to be taken against fire; Explosive atmosphere hazards, disposal and minimization methods; Determination of dangerous areas and determination of safe equipment to be used in these areas; Basic concepts of combustion and fire chemistry; Classes and behavior of fires; Provisions of regulations on the protection of buildings from fire and measures against fire; Fire detection and alarm systems and their features; What to do in case of fire; Extinguishing principles and methods; Fire extinguishers and using techniques; fire extinguishing systems; Safety and personal protective equipment during fire; Fire response teams and techniques; Evacuation plan and organization in case of fire emergency.

ISG522 Occupational Accidents and Occupational Diseases**(3+0) 3 AKTS:6**

Causes and consequences of work accidents; Occupational accident statistics in Turkey and in the World; Epidemiology specific to work accidents and occupational diseases; Determination and compensation of occupational diseases and work accidents; General characteristics of occupational diseases; Occupational diseases caused by chemicals; Health risks of heavy metals (Lead, cadmium, nickel, chromium, mercury, cobalt), solvents (Benzene, toluene, styrene, trichloroethylene) used extensively in industry and protection; Environmental surveillance of chemicals; Sampling methods; laboratory methods; biological surveillance of chemicals; Biomarker selection; Bioaccumulation and biomagnification; Occupational cancers; Occupational respiratory diseases (Silicosis, asbestosis, occupational asthma etc.) and prevention; Occupational musculoskeletal diseases; Basic ergonomics, protection; Occupational skin diseases; Occupational diseases due to physical factors (noise, ionizing and non-ionizing radiation, vibration, thermal comfort, pressure differences, laser); Psychosocial hazards and the health risks they pose.

ISG540 Risk Management; Evaluation and Applications

(3+0) 3 AKTS:6

Risk analysis; Risk assessment; Learning risk management and enterprise risk management techniques; To be able to carry out risk assessment and risk management studies in line with national and international standards; To be able to choose the most appropriate methods and techniques in risk assessment studies; To be able to use the methods that should be used to reduce the hazards to the level that does not affect human health and safety in working environments; By establishing risk assessment teams; Don't lead; Taking an active role in teamwork; To be able to make reports in line with the knowledge they have learned through sample applications.

ISG530 Advanced Ergonomics (Elective)

(3+0) 3 AKTS:6

Definition and importance of ergonomics; The relationship between ergonomics and work efficiency; Human body; Physical conditions in the working environment; Control and command mechanisms; Loading and strain; Working and rest periods; Work tension, fatigue and boredom; Working energy and energy requirements of jobs; The relationship between ergonomics and occupational safety; The relationship between ergonomics and occupational diseases; The relationship between ergonomics and work study; Ergonomics and quality control relationship; Ergonomic design of workplaces; Ergonomic review in workplaces.

ISG532 OHS in Industry and Chemical Industry (Elective)

(3+0) 3 AKTS:6

Introduction and general definitions; Naming, classification, labeling of chemicals; UNRTDG, GHS, NFPA and HMIS classification; Hazard and Precautionary Coding; Types of chemicals affected by workplaces; Ways of entry of chemicals into the body and their interactions; Occupational hygiene; Principles of safe working with chemicals (Handling and Storage); Examination of the effects of chemicals on humans and the environment; Personal protective equipment; Fire; What is explosion and explosive atmosphere (ATEX)?; Classification of dangerous zones; explosion protection document; Chemical risks; Responsibilities in chemical risk; Safety data sheets.

ISG536 Seminar

(1+0) 1 AKTS:1

The subject, field research, scanning of the sources related to the subject of the candidate, who has started the thesis process, the construction of the method, the determination of the qualitative and quantitative approaches, the presentation of the original preliminary preparation by the student, the completion of the preliminary preparation to the thesis process by placing the academic approach.