



الجامعة الإسلامية العالمية ماليزيا  
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA  
يُؤْتِي الْعِلْمَ حُجْرَةً  
Garden of Knowledge and Virtue

**TAWHIDIC EPISTEMOLOGY**  
**LEADING THE WAY**

**UMMATIC EXCELLENCE**  
**LEADING THE WORLD**

KHALĪFAH • AMĀNAH • IQRA' • RAHMATAN LIL-ĀLAMĪN

# MASTER OF SCIENCE IN OCCUPATIONAL SAFETY AND HEALTH

KULLIYAH OF ALLIED HEALTH SCIENCES  
INTERNATIONAL ISLAMIC UNIVERSITY  
MALAYSIA

## PROGRAMME HANDBOOK



*All information is accurate at the time of publication and subject to change without prior notice.*

## 1.0 PROGRAMME INFORMATION

### 1.1 Academic Programme

English: Master of Science in Occupational Safety and Health

Malay: Sarjana Sains Keselamatan dan Kesihatan Pekerjaan

### 1.2 Brief Historical

The Kulliyah of Allied Health Sciences (KAHS) was established in 2003 with approval to offer four Bachelor's degree programmes under the Ministry of Higher Education. In 2011, KAHS took over the Bachelor of Biomedical Science (Honours) programme from the Kulliyah of Science, marking its continuous growth in health sciences education. Currently, KAHS offers nine academic programmes.

In line with the increasing demand for qualified professionals in occupational safety and health, and considering the return of several PhD holders in this field serving under the Department of Biomedical Science (DBMS), KAHS proposed the establishment of the Master of Science in Occupational Safety and Health.

The Board of Studies (BOS) for the programme was appointed and approved in August 2019, with endorsement by the Senate in September 2019. A market survey (Phase I) conducted between December 2019 and January 2020 among industry experts and academics showed strong support for the programme, confirming its relevance to national and industry needs. The programme proposal was subsequently reviewed and refined based on feedback from both internal and external BOS members, ensuring alignment with the Medical and Health Sciences Programme Standards 2016.

Further improvements were approved in the AQAC Meeting (April 2022) and endorsed in the Senate Meeting (January 2023), which requested minor amendments and a Phase II market survey. The second survey, completed in 2023, gathered feedback from 115 respondents, confirming the programme's relevance and employability value, with over 80% agreeing that it meets current industry needs and can produce competent graduates.

The proposal was approved by the IIUM Senate at its 499th meeting on 26 May 2023 and subsequently by the IIUM Governing Board at its 71st meeting on 27 February 2024. The programme received provisional accreditation at the 506th Senate Meeting on 26 January 2024 for three years pending MQA assessment.

Following feedback from MQA in October 2024, the curriculum was revised to align with the new Occupational Safety and Health Programme Standard (PS-OSH 2023). After reevaluation by external assessors and the IIUM Self-Accreditation Committee, the programme was granted provisional accreditation for five years (24 January 2025 – 23 January 2030) as confirmed in the 517th Senate Meeting on 24 January 2025.

This accreditation marks the successful establishment of the Master of Science in Occupational Safety and Health under KAHS, International Islamic University Malaysia (IIUM), reinforcing the university's commitment to academic excellence and industry-relevant postgraduate education.

### 1.3 Year of commencement

The Master of Science in Occupational Safety and Health under the Kulliyyah of Allied Health Sciences, International Islamic University Malaysia (IIUM), commenced in Semester 2 of the 2025/2026 Academic Session (March 2026).

### 1.4 Duration of programme and mode of study

The programme is conducted by coursework and is designed to be completed within a minimum duration of one and a half (1.5) years and a maximum of three (3) years for full-time students, and within a minimum duration of three (3) years and a maximum of five (5) years for part-time students.

Mode of Study: Coursework

### 1.5 Entry Requirements

#### General Requirement

Possess a Bachelor's Degree in a related field (Honours) from the International Islamic University Malaysia (IIUM) or any other recognised institution of higher learning, or possess other qualifications equivalent to a Bachelor's Degree (Honours) with professional qualifications or relevant experience recognised by the Senate of IIUM.

#### Specific Requirements

i. Applicants must possess a Bachelor's Degree (Level 6, MQF) in a related field with a minimum CGPA of 2.50 or equivalent, as recognised by the IIUM Senate;

OR

ii. Applicants with a Bachelor's Degree (Level 6, MQF) in a related field with a minimum CGPA of 2.00 but not meeting 2.50 may be accepted subject to rigorous internal assessment;

OR

iii. Applicants without qualifications in a related field but possessing a Bachelor's Degree (Level 6, MQF) with a minimum CGPA of 2.00, as recognised by the IIUM Senate, and at least three (3) years of relevant working experience, may be accepted subject to rigorous internal assessment;

OR

iv. Applicants without qualifications in a related field but possessing a Bachelor's Degree (Level 6, MQF) with a minimum CGPA of 2.00, as recognised by the IIUM Senate, and without relevant working experience, may be accepted subject to the completion of prerequisite courses;

OR

v. Other qualifications equivalent to a Bachelor's Degree (Level 6, MQF) as recognised by the Government of Malaysia.

### Admission via APEL (A)

- Applicants must be Malaysian citizens with at least five (5) years of working experience at the time of application and possess a Diploma / A-Levels / STPM or other qualifications recognised as equivalent.
- Applicants must also have relevant working experience and/or prior experiential learning and pass the APEL (A) assessment for Master's level conducted by IIUM.

### English Language Requirements

Applicants are required to demonstrate sufficient proficiency in English by achieving one of the following minimum scores in any of the recognised English language tests:

- TOEFL: A minimum score of 500 for the Paper-Based Test (PBT), 173 for the Computer-Based Test (CBT), or 60 for the Internet-Based Test (IBT).
- IELTS: A minimum overall Band 5.0.
- EPT (IIUM English Placement Test): A minimum Band 5.0.
- MUET (Malaysian University English Test): A minimum of Band 3.5 for examinations conducted from Semester 1, 2021 onwards, or Band 3.0 for examinations taken up to 2020 (subject to the validity period at the time of application).

### 1.6 Differences between IPTAs

The differences and strengths of the Master of Science in Occupational Safety and Health compared with other IPTAs are:

- This program aims to produce critical thinkers and experts who have a deep understanding of the real and major issues in occupational safety and health. They will contribute to the integration of knowledge based on Islamic and conventional concepts in the field of Occupational Safety and Health. In addition, the injection of Islamization in the implementation of this program meets the future pattern of education (Education 5.0) towards producing graduates based on Qalb.
- This program offers ample opportunities for students and industry workers to develop skills and expand their knowledge in this field through a holistic approach (which includes physical, social and spiritual well-being). In addition, the structure of this course adopts a global approach in its teaching materials which are equipped with local and international cases, industry attachments, and research. This approach ensures that students understand and are able to apply knowledge in the field of occupational safety and health from an Islamic perspective.

### 1.7 The classification of courses for Master of Science in Occupational Safety and Health

| No.                       | Classification     | Number of credits for OSH Programme |
|---------------------------|--------------------|-------------------------------------|
| 1.                        | Core courses       | 31                                  |
| 2                         | Research project   | 6                                   |
| 3.                        | University courses | 2                                   |
| 4.                        | Electives course   | 2                                   |
| <b>Total Credit Hours</b> |                    | <b>41</b>                           |

| <b>Year 1 Semester 1</b>            |                                                                |                    |
|-------------------------------------|----------------------------------------------------------------|--------------------|
| <b>Code</b>                         | <b>Course</b>                                                  | <b>Credit Hour</b> |
| <b>Classification: Core Courses</b> |                                                                |                    |
| ISLM 7212                           | Islamisation of Human Knowledge for Health Sciences            | 2                  |
| AHSH 7211                           | Occupational Safety and Health Legislations                    | 2                  |
| AHSH 7313                           | Industrial Hygiene                                             | 3                  |
| AHSH 7215                           | Industrial and Environmental Toxicology                        | 2                  |
| AHSH 7217                           | Occupational Safety and Security                               | 2                  |
| AHSH 7219                           | Occupational Safety and Health Management                      | 2                  |
| AHSH 7221                           | Occupational Safety and Health Leadership and Entrepreneurship | 2                  |
| <b>Total Credit Hours</b>           |                                                                | <b>15</b>          |

| Year 1 Semester 2                       |                                              |             |
|-----------------------------------------|----------------------------------------------|-------------|
| Code                                    | Course                                       | Credit Hour |
| <b>Classification: Core Courses</b>     |                                              |             |
| RESM 7130                               | Research Methodology                         | 2           |
| AHSH 7212                               | Integrated Management System                 | 2           |
| AHSH 7314                               | Occupational Health and Workers' Wellbeing   | 3           |
| AHSH 7215                               | Occupational Safety and Health Data Analyses | 2           |
| AHSH 7318                               | Human Factors and Ergonomics                 | 3           |
| <b>Classification: Research Project</b> |                                              |             |
| AHSH 7242                               | Research Project 1                           | 2           |
| <b>Total Credit Hours</b>               |                                              | <b>14</b>   |

| Year 2 Semester 1                       |                                                              |             |
|-----------------------------------------|--------------------------------------------------------------|-------------|
| Code                                    | Course                                                       | Credit Hour |
| <b>Classification: Core Courses</b>     |                                                              |             |
| AHSH 7223                               | Emergency Preparedness and Crisis Managemet                  | 2           |
| AHSH 7225                               | Behavioural Based Safety                                     | 2           |
| AHSH 7227                               | Process Safety                                               | 2           |
| <b>Classification: Research Project</b> |                                                              |             |
| AHSH 7441                               | Research Project 2                                           | 4           |
| <b>Classification: Elective Courses</b> |                                                              |             |
| AHSH 7231                               | Pollution Control, Industrial and Scheduled Waste Management | 2           |
| AHSH 7233                               | Environmental Health and Sustainability                      | 2           |
| AHSH 7235                               | Environmental Monitoring and Control Technology Management   | 2           |
| <b>Total Credit Hours</b>               |                                                              | <b>12</b>   |



## 2.0 COURSE DESCRIPTION

### CORE COURSES

#### 1. AHS 7211 OCCUPATIONAL SAFETY AND HEALTH LEGISLATIONS

This course aims to gain valuable insight into the legal and ethical aspect of the occupational safety and health (OSH) field by learning the related laws and legislations. It will assist in learning strategies and concepts around ethics, theories, perspectives, and obligations to employers, co-workers and the community.

#### 2. AHS 7212 INTEGRATED MANAGEMENT SYSTEM

This course will provide the students with knowledge on Occupational Safety & Health, Environmental and Quality (OSHEQ) Integrated Management Systems (IMS). An IMS integrates all organization's systems and processes into one complete framework, enabling an organization to work as a single unit with unified objectives. The future Safety, Health and Environmental (SHE) professionals will be able to contribute to the establishment of the manual, standard operating procedures, objectives and targets of the IMS in their workplaces. In today's competitive business environment, streamlining operations is essential to keeping overhead costs low. Implementing an integrated management system provides a framework for reducing duplication and improving efficiency, providing greater benefit than running separate management systems in parallel and maximizing potential savings. The IMS implementation at the workplace will lead to the safety and health of workers and environmental sustainability.

#### 3. AHS 7215 INDUSTRIAL AND ENVIRONMENTAL TOXICOLOGY

This course is designed for safety, health and environmental (SHE) professionals with little or no background in toxicology. Upon completion of the course, students will be able to utilize basic principles of toxicology such as dose response, exposure routes, thresholds, hazard, risk, as well as acute, subacute and chronic characteristics of chemical exposure. An overview of target organs toxicity, issues of carcinogenicity, mutagenicity and reproductive effects will be presented. Students also will be able to use toxicological data in performing industrial and occupational health risk assessment.

#### 4. AHS 7216 OCCUPATIONAL SAFETY AND HEALTH DATA ANALYSES

The Industrial Revolution 4.0 is marked by networked and intelligent devices, machines and systems. As such, current and future OSHE professionals have to adapt to a changing workplace where OSHE data would most likely be managed using information systems. This course aims to provide students with knowledge on information systems that can manage the collection, analysis and dissemination of OSHE data for workplace improvement. Consequently, future SHE professionals will obtain the skills to pursue knowledge independently for either personal or professional reasons.



## **5. AHSB 7217 OCCUPATIONAL SAFETY AND SECURITY**

This course introduces the safety of the physical environment at the workplace and the total well-being of the employee. Students will explore relevant and necessary strategies in creating a conducive environment through safe work practices, procedures, and occupational safety, and health (OSH) management systems to protect workers while performing their job. At the end of the course, students will understand the essential elements required in managing various safety and security issues at the workplace.

## **6. AHSB 7219 OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT**

This course introduces students to the occupational safety and health (OSH) management aspects at the workplace as an important element in various organisations. Students will be exposed to the rationale behind the OSH management concept and its implementation through the country's legal system such as OSHA (Amendment 2022). Among the topics to be lectured are in occupational safety and health aspects from the policy and legal perspective, safety and health risk management, OSH programme and promotion, occupational health and global issues on OSH at the workplace. At the end of the course, students should understand the management system, common issues and will be able to manage the basic aspects of safety and health in an organization.

## **7. AHSB 7221 OCCUPATIONAL SAFETY AND HEALTH LEADERSHIP & ENTREPRENEURSHIP**

This course is designed to provide students with an in-depth understanding of how economics, leadership, and entrepreneurship intersect within the field of occupational safety and health (OSH). Students will explore key economic drivers such as globalization, industrial growth, and labour market trends, gaining insights into how these factors shape workplace safety policies and practices. Through interactive discussions, role play, case study, and problem-based learning, students will examine how technological advancements, regulatory changes, and economic challenges influence workplace safety priorities. The course also focuses on building essential leadership skills, including strategic decision-making, stakeholder engagement, and ethical leadership, to foster a culture of safety and well-being. In addition, students will be introduced to entrepreneurial opportunities within the OSH sector. They will learn how to identify gaps in the market, develop innovative solutions such as safety technologies and risk management systems, and create business plans that align with current economic trends. Practical activities, such as problem-based learning and team projects, will help students apply their knowledge and develop actionable solutions. By the end of the course, students will be equipped to lead OSH initiatives, address economic challenges with confidence, and pursue entrepreneurial ventures that contribute to advancing workplace safety and health standards.

## **8. AHSB 7223 EMERGENCY PREPAREDNESS AND CRISIS MANAGEMENT**

Emergency Preparedness and Crisis Management provides a comprehensive exploration of strategies and frameworks for preparing, responding to, and recovering from emergencies and crises. Students will develop a deep understanding of risk assessment, crisis response planning, leadership during crises, and disaster recovery. The course incorporates theoretical knowledge, real-world case studies, and practical simulations to equip students with the skills necessary to manage emergencies effectively. Emphasis is placed on ethical decision-making, interagency coordination, and the use of technology in emergency management. By the end of the course, students will be able to design robust emergency plans, lead crisis response efforts, and contribute to building resilient communities.

## **9. AHSB 7225 BEHAVIOUR BASED SAFETY**

Behaviour based safety dictates that an organization with a strong safety culture is one that promotes safe behaviour and discourages unsafe behaviour. By focusing on worker behaviour, organisations can be guided by leading indicators rather than laggards. This course will emphasise on the knowledge and skills to positively change the behaviour of workers in the workplace. Students will be exposed to behaviour based approaches/tools that can be used in industries or any organisations to reduce/prevent the risk of occupational injuries or illnesses.

## **10. AHSB 7227 PROCESS SAFETY**

This course introduces students to the process safety management system, including major process safety elements and process safety designs. It will allow students to understand the process safety management standard in the process or chemical plants. Students will learn about the previous case history accidents in the process or chemical industries that led to the recognition of process safety technologies in the world. Also, this course will assist students to implement and apply the risk-based approach, process safety culture, and management standard in managing process safety hazards in a workplace that suits their needs as safety and health professionals.

## **11. AHSB 7242 RESEARCH PROJECT 1**

This course is designed to enhance the students' understanding on how to integrate theoretical knowledge and research skills in an occupational safety and health research project. Students will identify a topic for their research study, conduct a literature review, select appropriate methods and prepare a written research proposal. By the end of the course, students will submit a research proposal and defend the proposal orally.

## **12. AHSB 7313 INDUSTRIAL HYGIENE**

This course provides the students with the advanced benefit of industrial hygiene techniques and approaches. It will allow them to anticipate, recognize, evaluate and control the environmental factors or stresses arising in or from the workplace. These factors may cause sickness, impaired health and wellbeing, or significant discomfort and inefficiency among workers or other persons who may be affected by the work carried out. It will impress upon them their responsibility as health and safety professionals at the workplace. Students also can obtain the practical experience to perform the qualitative workplace assessments.

## **13. AHSB 7314 OCCUPATIONAL HEALTH AND WORKERS' WELLBEING**

The course aims to provide students with knowledge of how to design occupational health activities and health promotion programmes for workers. The course will assist future Safety Health and Environmental (SHE) professionals to refer the workers for appropriate occupational health services such as health surveillance, return to work and fitness to work programme, and disability management. The SHE professionals also will be able to construct programme objectives, plan and execute the strategies, review, improve and sustain the programme at the place of work. They will also be imbued with Islamic values that will guide them to be ethical and professional SHE practitioners.

## **14. AHSB 7318 HUMAN FACTORS AND ERGONOMICS**

In many workplaces, mismatches between workers and their tasks, either physically, mentally, or emotionally, can jeopardise their performance, safety, and health. The principles espoused in human factors and ergonomics can address these concerns by ensuring that tasks are designed to fit workers. In this course, students will learn how to identify, analyse, and manage human factors and ergonomics issues in their workplace. Among others, students will be taught practical workplace design/redesign principles that are directed at improving worker well-being and organisational profitability.

## **15. AHSB 7441 RESEARCH PROJECT 2**

This course is designed to enhance the students' understanding of how to integrate theoretical knowledge and research skills in an occupational safety and health research project. Students will identify a topic for their research study, conduct a literature review, select appropriate methods, write and defend a research proposal, conduct data collection, analyse data, and develop a critical discussion with the guidance of a supervisor. By the end of this course, students will present their findings orally, being evaluated in viva and submit a project paper.

## ELECTIVE COURSES

### 1. AHS 7231 POLLUTION CONTROL, INDUSTRIAL AND SCHEDULED WASTE MANAGEMENT

This course will introduce students to worldwide environmental pollution issues which are related to the occupational safety, health, environmental and sustainability (OSHES) aspects. This course will cover the main industrial pollution (e.g., air pollution, water pollution etc.) and industrial and scheduled waste management. The environmental pollution principles, sources, effects and mechanism for pollution control and its management will be emphasized on this course. The students will also be provided with an understanding regarding the environmental pollution issues and its implementation through the country's legal system such as the Environmental Quality Act 1974 as well as related international legal systems.

### 2. AHS 7233 ENVIRONMENTAL HEALTH AND SUSTAINABILITY

The principal aim of the course is to provide students with an understanding of the interactions between ecosystem, sustainable development and population health. The course will introduce how poor industrial management will lead to environmental degradation and jeopardize the population's health and the important measures to prevent and control industrial pollution. The course will also touch on climate change and the increasingly observed health effects of climate change, mitigation and adaptation measures for sustainability of the nation and country. The students will be learned on Islamic perspectives and ethical issues on environmental health and sustainability in a series of seminars. The content of the course is aligned with the role of the “khalifah” or vicegerent of the earth's resources.

### 3. AHS 7235 ENVIRONMENTAL MONITORING AND CONTROL TECHNOLOGY MANAGEMENT

Monitoring is critical to the assessment of environmental hazards (physical, biological and chemical). Standard sampling and analytical techniques have been developed to assess contaminant levels for a variety of media, including water, air, and living systems. This course introduces environmental sampling techniques and technology control involved, processes and analytical methods for determining contaminant levels. Students will learn and practice many technical methods to be able to collect samples in their research and in their professions. Emphasis on quality control, including documentation, calibration, and sample management, will ensure that students can fully defend their data and can base good occupational safety, health, and environment (OSHE) decisions on their measurements and management.

## 3.0 ORGANIZATIONAL CHART





#### 4.0 ACADEMIC STAFF AND FIELD OF SPECIALIZATION



**Asst. Prof. Ts. Dr. Mohd Zubairy  
Bin Shamsuddin**

Human Factors and Ergonomics

Human Performance and Error



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## 5.0 STUDENT REGISTRATION PROCESS

