COURSE OVERVIEW HE0712
Food Poisoning Outbreak Investigation

Course Title
Food Poisoning Outbreak Investigation

Course Date/Venue
June 15-19, 2025/Boardroom 1, Elite Byblos Hotel a l Barsha, Sheikh Zayed Road, Dubai, UAE

Course Reference
HE0712

Course Duration/Credits
Five days/3.0 CEUs/30 PDHs

Course Description

This practical and highly-interactive course includes real-life case studies where participants will be engaged in a series of interactive small groups and class workshops.

This course is designed to provide participants with a detailed and up-to-date overview of Food Poisoning Outbreak Investigation. It covers the foodborne illness and key principles of outbreak prevention; the types of outbreaks like point source, continuous source and propagated; the epidemiology of common foodborne pathogens covering bacteria, viruses, parasites and toxins; the public health surveillance systems; the role of health departments and laboratories; the legal and ethical considerations, data collection forms and interview techniques; the tools for data analysis and laboratory diagnostic methods; the outbreak, define cases and population at risk; and the data collection, management and hypothesis generation.

Further, the course will also discuss the environmental health assessments, laboratory diagnostics and sample collection; the descriptive epidemiology, study design for outbreak investigations; the statistical analysis in outbreak investigations; interpreting epidemiological finding and risk communication during outbreaks; and implementing control measures and food safety inspections.

During this interactive course, participants will learn the performance of long-term prevention strategies; the outbreak communication and reporting and the advanced laboratory methods; the effectiveness of control measures and update policies and procedures based on findings; the role of international organizations in outbreak responses, cultural and regional differences in food safety challenges; and building global collaboration networks.

Course Objectives

Upon the successful completion of this course, each participant will be able to:-

- Apply and gain an in-depth knowledge on food poisoning outbreak investigation
- Discuss the foodborne illness and key principles of outbreak prevention
- Recognize the types of outbreaks like point source, continuous source and propagated
- Explain the epidemiology of common foodborne pathogens covering bacteria, viruses, parasites and toxins
- Apply public health surveillance systems and discuss the role of health departments and laboratories
- Identify the legal and ethical considerations, data collection forms and interview techniques as well as the tools for data analysis and laboratory diagnostic methods
- Identify an outbreak, define cases and population at risk and carryout data collection and management and hypothesis generation
- Employ environmental health assessments, laboratory diagnostics and sample collection
- Recognize descriptive epidemiology, study design for outbreak investigations and the statistical analysis in outbreak investigations
- Interpret epidemiological finding and discuss risk communication during outbreaks as well as implement control measures and food safety inspections
- Perform long-term prevention strategies and carryout outbreak communication and reporting and advanced laboratory methods
- Evaluate the effectiveness of control measures and update policies and procedures based on findings
- Discuss the role of international organizations in outbreak responses, cultural and regional differences in food safety challenges and building global collaboration networks

Exclusive Smart Training Kit - H-STK®

*Participants of this course will receive the exclusive "Haward Smart Training Kit" (**H-STK®**). The **H-STK®** consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.*

Who Should Attend

This course provides an overview of all significant aspects and considerations of food poisoning outbreak investigation for public health professionals, food safety and regulatory officials, healthcare providers, food industry representatives and emergency response teams.

Course Certificate(s)

Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours.

Certificate Accreditations

Certificates are accredited by the following international accreditation organizations: -

- British Accreditation Council (BAC)

  Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

- The International Accreditors for Continuing Education and Training (IACET - USA)

  Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

  Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units** (CEUs) in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

  Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. a permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:

Dr. Hala Hashim, PhD, MSc, BSc, is a **Licensed Medical Doctor** and a **Food Expert** with over **30 years** of extensive experience in **Food Control** and **Public Health**. Her experience covers **Incident Investigation** & **Reporting**, **Environmental Health** & **Safety** Management, **Diagnosis of animal and common diseases**, **Isotopic techniques in sustainable animal production**, **Epidemiological and transboundary animal disease surveillance programme**, the Hazard Analysis of Critical Control Points (**HACCP**), **Industrial Hygiene**, **Food Safety Management**, **Food Hygiene**, **Food Sampling**, **Food Risk Analysis**, Risk Assessment & Management, Public Health and Medical Statistics as well as Infection Control, Trauma Life Support (ATS), Techniques for Inspection of Feed and Animal Food, Animal Wealth and Agriculture Affairs, Incident Investigation & Root Cause Analysis, Incident Investigation (Basic), Process Hazard Analysis (**PHA**), Process Safety Management **(PSM), Environment, Health & Safety** Management, Process Risk Analysis, Cardiac Life Support (CLS), Critical Care Support and Communicable Disease Epidemiology. She is currently the Department Head and Professor of Public Health & Community Medicine. Further, she is a Certified Trainer & HRD Consultant (IBCT) and Assessor of promotion committee of professors and assistant professors.

As part of Dr. Hala's practical experience, she has played a big role to the community for being the **Food Analyst**, **Food Risk Assessor**, **Food Control Manager**, **Community Demonstrator**, **General Practitioner**, **Hospital Officer** and **Professor**.

Dr. Hala has **PhD** and **Bachelor** degrees in **Medicine & Surgery** and a **Master** degree in **Public Health**. Further, she is a respected member of various Professional Bodies such as the "Medical Education and Development Center (MEDC)", "Association of Community Medicine", "Association of Occupational Medicine" and "Egyptian Doctor Union". Her passion for development and acquiring new skills and knowledge has taken her to share her expertise in **numerous publications** worldwide.

Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

30% Lectures
20% Practical Workshops & Work Presentations
30% Hands-on Practical Exercises & Case Studies
20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Course Fee

US$ 5,500 per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the workshop for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1:	***Sunday, 15th of June 2025***
0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0930	***Introduction to Foodborne Illness*** *Definition & Significance of Foodborne Diseases • Common Pathogens & Toxins Causing Food Poisoning • The Burden of Foodborne Illnesses Globally & Locally • Key Principles of Outbreak Prevention*
0930 – 0945	*Break*
0945 – 1030	***Understanding Outbreaks*** *Definition of an Outbreak • Types of Outbreaks: Point Source, Continuous Source, Propagated • Key Epidemiological Concepts (Attack Rate, Incubation Period) • Overview of Outbreak Investigation Steps*
1030 – 1130	***Epidemiology of Common Foodborne Pathogens*** *Bacteria: Salmonella, E. Coli, Listeria • Viruses: Norovirus, Hepatitis A • Parasites: Giardia, Cryptosporidium • Toxins: Botulinum, Staphylococcal Toxins*
1130 – 1215	***Public Health Surveillance Systems*** *Passive versus Active Surveillance • Role of Health Departments & Laboratories • Importance of Syndromic Surveillance in Outbreak Detection • Case Definitions: Standardized Criteria for Case Identification*
1215 – 1230	*Break*
1230 – 1330	***Legal & Ethical Considerations*** *Public Health Laws & Regulatory Frameworks • Ethical Responsibilities in Foodborne Illness Investigations • Balancing Individual Rights & Public Safety • Communicating Risks & Findings to Stakeholders*
1330 – 1420	***Overview of Investigation Tools*** *Data Collection Forms & Interview Techniques • Tools for Data Analysis: Spreadsheets, Software & Apps • Overview of Laboratory Diagnostic Methods • Importance of Documentation & Reporting*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day One*

Day 2:	Monday, 16th of June 2025
0730 – 0830	***Identifying an Outbreak*** *Recognizing Patterns & Clustering of Cases • Confirming Cases & Differentiating from Background Noise • Importance of Time, Place & Person Analysis • Early Alert Systems for Public Health*
0830 – 0930	***Defining Cases & Population at Risk*** *Components of a Case Definition: Clinical, Epidemiological & Laboratory Criteria • Categories of Cases: Confirmed, Probable, Possible • Identifying the Population at Risk • Understanding the Importance of Demographic Data*
0930 – 0945	*Break*
0945 – 1100	***Data Collection & Management*** *Types of Data: Clinical, Environmental, Epidemiological • Structured Questionnaires & Interview Guides • Data Cleaning & Standardization • Confidentiality & Data Security*
1100 – 1215	***Hypothesis Generation*** *Developing Hypotheses from Descriptive Data • Exploring Potential Sources & Vehicles of Infection • Tools for Hypothesis Generation: Brainstorming, Fishbone Diagrams • Preliminary Discussions with Lab & Environmental Health Teams*
1215 – 1230	*Break*
1230 – 1330	***Environmental Health Assessments*** *Site Visits to Suspected Locations (e.g., Restaurants, Food Production Facilities) • Inspection Techniques: Storage, Preparation, Handling of Food • Environmental Sampling: Water, Surfaces, Equipment • Coordination with Regulatory Agencies*
1330 – 1420	***Laboratory Diagnostics & Sample Collection*** *Specimen Collection: Stool, Vomit, Food Samples • Diagnostic Techniques: Culture, PCR, Serology • Role of Reference Laboratories • Challenges in Interpreting Laboratory Results*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Two*

Day 3:	Tuesday, 17th of June 2025
0730 – 0830	***Descriptive Epidemiology*** *Line Listing: Organizing & Analyzing Case Data • Time-Series Analysis: Epidemic Curves • Mapping Cases: Geographic Patterns & Clusters • Identifying Trends & Anomalies*
0830 – 0930	***Study Design for Outbreak Investigations*** *Cohort Studies: Strengths & Limitations • Case-Control Studies: When to Use & How to Implement • Cross-Sectional Studies & Rapid Assessments • Randomized Trials in Outbreak Settings*
0930 – 0945	*Break*
0945 – 1100	***Statistical Analysis in Outbreak Investigations*** *Attack Rate Calculations: Overall, Exposed & Unexposed • Relative Risk (RR) & Odds Ratio (OR) Calculations • Confidence Intervals & P-Values • Tools for Statistical Analysis: Software & Calculators*

1100 – 1215	***Interpreting Epidemiological Findings*** *Linking Exposure to Illness: Causation versus Association • Triangulating Data from Epidemiology, Lab & Environmental Health • Recognizing Biases & Limitations in Findings • Presenting Results to Stakeholders*
1215 – 1230	*Break*
1230 – 1330	***Risk Communication During Outbreaks*** *Communicating with the Public & Media • Addressing Misinformation & Fear • Framing Messages for Different Audiences • Importance of Transparency & Trust-Building*
1330 – 1420	***Teamwork & Coordination*** *Roles of Multidisciplinary Teams in Investigations • Coordinating with Local, State & Federal Agencies • Role of International Organizations (e.g., WHO, CDC) • Maintaining Effective Communication Channels*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Three*

Day 4: ***Wednesday, 18th of June 2025***

0730 – 0830	***Implementing Control Measures*** *Immediate Actions to Limit Further Exposure • Removing Contaminated Food from the Supply Chain • Educating the Public & Affected Establishments • Monitoring Effectiveness of Control Measures*
0830 – 0930	***Food Safety Inspections*** *Key Principles of Food Safety: HACCP, Temperature Control • Identifying Critical Control Points in Food Production • Observing Food Handling Practices in Real-Time • Documentation & Enforcement of Corrective Actions*
0930 – 0945	*Break*
0945 – 1100	***Long-Term Prevention Strategies*** *Food Safety Training for Food Handlers • Strengthening Regulatory Frameworks & Standards • Enhancing Public Awareness About Foodborne Diseases • Importance of Ongoing Surveillance & Research*
1100 – 1215	***Outbreak Communication & Reporting*** *Preparing Reports for Stakeholders & Decision-Makers • Sharing Findings with Public Health Authorities • Utilizing Lessons Learned for System Improvement • Drafting Press Releases & Media Statements*
1215 – 1230	*Break*
1230 – 1330	***Advanced Laboratory Methods*** *Whole Genome Sequencing & Its Role in Outbreak Detection • Pulsed-Field Gel Electrophoresis (PFGE) • Molecular Epidemiology: Linking Cases to a Common Source • Emerging Diagnostic Technologies*
1330 – 1420	***Case Studies in Outbreak Investigation*** *Review of Major Outbreaks (e.g., Jack in the Box, Chipotle, Peanut Corporation of America) • Lessons Learned from Past Investigations • Interactive Group Analysis of Fictional Outbreak Scenarios • Applying Knowledge to Solve Real-World Problems*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Four*

Day 5:	***Thursday, 19th of June 2025***
0730 – 0930	***Simulation Exercise: Outbreak Investigation*** *Dividing Participants into Multidisciplinary Teams • Conducting a Mock Outbreak Investigation from Start to Finish • Role-Playing as Epidemiologists, Lab Scientists & Health Inspectors • Presenting Findings & Recommendations*
0930 – 0945	*Break*
0945 – 1100	***Post-Investigation Activities*** *Evaluating the Effectiveness of Control Measures • Continuous Monitoring & Follow-Up Studies • Updating Policies & Procedures Based on Findings • Coordinating with Stakeholders for Long-Term Improvements*
1100 – 1230	***Global Perspectives on Foodborne Outbreaks*** *Role of International Organizations in Outbreak Responses • Case Studies of Transboundary Outbreaks • Cultural & Regional Differences in Food Safety Challenges • Building Global Collaboration Networks*
1230 – 1245	*Break*
1245 – 1345	***Emerging Trends in Food Safety*** *Climate Change & its Impact on Foodborne Illnesses • Advances in Food Safety Technology & Traceability • Challenges in Global Food Supply Chains • The Role of Artificial Intelligence in Outbreak Prediction*
1345 – 1400	***Course Conclusion*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course*
1400 – 1415	***POST-TEST***
1415 – 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

Practical Sessions

This practical and highly-interactive course includes real-life case studies and exercises:-

Course Coordinator

Mari Nakintu, Tel: +971 2 30 91 714, Email: mari1@haward.org