



# INFECTION CONTROL OFFICER COURSE CURRICULUM



# INTRODUCTION

After two introductory modules that establish the fundamentals of onboard hierarchy and the maritime regulatory environment - including explanations on how cultural awareness and communication can impact success - the competences listed below are the base for the curriculum of our Infection Control Training program:

## **+ Module 3 - Key Concepts of Infectious Disease Epidemiology**

- Understand what an infectious disease is and how they occur.
- Recognize the relationship between the pathogen, host, and environment (i.e., The Transmission Triangle).
- Differentiate between the various pathogenic modes of transmission.
- Comprehend the Chain of Infection and progression of disease (e.g., incubation period, infectivity, pathogenicity etc.).
- Incorporate The Epidemiologic Approach - Case definitions, Descriptive Epidemiology, Epidemic Curves, Period of Exposure - to plan and evaluate strategies to prevent illness and guide the management of control measures.

## **+ Module 4 - Classification of Infectious Diseases and the General Principles of Prevention and Control**

- Distinguish between the various terminology used to classify and characterize infectious diseases.
- Describe the four main types of pathogens and how they are generally transmitted.
- Understand core disease prevention and control measures, such as health screening, disease surveillance, isolation and quarantine, contact tracing, PPE selection and use, personal hygiene, etc.
- Explain the differences between cleaning, sanitizing, disinfection, and sterilization.
- Apply the Hierarchy of Controls methodology to your risk assessment of hazards.

## **+ Module 5 – Food Safety**

- Know the 4 pillars of Food Safety (i.e., Clean, Separate, Cook and Chill).
- Explain the importance of hygiene in Food Areas, describing the various processes and applicable regulatory standards.
- Identify and implement strategies to prevent all biological, chemical, and physical cross-contamination.
- Recognize Potentially Hazardous Food and common food-borne illnesses.
- Comprehend cooking and reheating temperature requirements.
- Understand how to chill, freeze and defrost food safely.

## **+ Module 6 – Prevention and Control Onboard**

- Apply infectious disease prevention and control in real-world areas on a ship, including the Medical Center, Housekeeping, Child Activity Centers and various onboard revenue facilities.
- Recognize and monitor elements important for patient care and the environment (e.g., hand hygiene, PPE, respiratory etiquette, patient placement, medical histories, safe use and disposal of sharps etc.).
- Assess infection risks in shipboard design and construction.
- Collaborate on the evaluation and monitoring of environmental cleaning and disinfection practices/technologies, and understand the relevance of Log Reduction.
- Explain public health regulatory requirements for onboard operations and areas (e.g., public toilets, Child Activity Centers etc.).

## **+ Module 7 – Train the Trainer, Education, and Development**

- Understand how adults learn best.
- Apply didactical principles and presentation aids.
- Provide effective feedback and motivation techniques.
- Assist in developing and conducting training programs.

## **+ Module 8 –Water Safety and Pest Control**

- Recognize the key principles and requirements of water safety and how they apply to bunkering, production, distribution and storage of Potable Water onboard a ship.
- Assess the risks in distribution systems and the strategies applied to preclude the growth of certain bacteria such as Legionella.
- Describe disease prevention and control methodology in Recreational Water Facilities from their design to their operational parameters (e.g., circulation, flow rates and turnover rates, filtration, disinfection etc.).
- Know what to do after a fecal, vomit or blood accident in a pool.
- Identify appropriate microbiologic sampling guidelines to verify water safety control measures.
- Explain the role of Integrated Pest Management in maintaining hygiene standards.

## **+ Module 9 – Principles of Outbreak Investigation**

- Use your knowledge to conduct a communicable disease outbreak investigation by:
  - Detecting a potential outbreak.
  - Verifying the diagnosis.
  - Constructing a working case definition.
  - Finding and recording cases.
  - Developing hypotheses about likely sources.
  - Testing hypotheses.
  - Performing an environmental investigation.
  - Implementing effective response measures.
  - Maintaining surveillance and,
  - Communicating your findings.