

**APPENDIX I: BASIC HACCP TRAINING COURSE AGENDA
(16.5 Contact Hours Minimum with SHA HACCP Training Manual and FDA Hazards Guide)**

NOTE: The agenda below provides guidelines for time per topic. The standard agenda must be a minimum 16.5 contact hours. Supervisory Trainers must submit a course agenda and SHA Hours Verification form with their Domestic or International Course Registration Form. When submitting the agenda with the course application, provide actual proposed times and show that the course is a minimum of 16.5 contact hours.

It is required that the course be taught over at least a 4-day period. The times allotted to each section are to allow for sufficient learning opportunities. However, there is flexibility in the design based on the nature of the audience (i.e., homogeneous audience by species or processing methods or very small class size). Regardless of the format of the course, allow 3-4 contact hours from the 16.5 hours, for the practical exercise. One useful alternative approach to stimulate participation is to arrange the work sessions following the respective instruction, e.g., work session on hazard analysis to follow the lecture on Determining Critical Control Points, and the work session on developing the HACCP Plan following the lecture on Record-Keeping. The example agenda below is set up in this way. Instructors may also elect to supplement information in Chapter 3 (Seafood Safety Hazards) with additional seafood-specific hazards unique to the audience, product types, or region.

Day 1 (210-335)

30-60 min TECHNOLOGY CHECK AND TROUBLESHOOTING

- Allow for some time to ensure all student can connect to the virtual platform and have adequate audio and video capabilities to participate.
- This is also a good time to ensure they have the required materials (Hazards Guide) and access to shared documents, if using.

15-20 min. ORIENTATION AND INTRODUCTION TO ALLIANCE COURSE AND HACCP

- Describe the purpose of the course
- Explain the relationship of the Alliance and AFDO
- Introduce the HACCP concept for food safety

60-90 min. OVERVIEW OF FDA SEAFOOD HACCP REGULATION

- Introduce the FDA seafood HACCP regulation and its format
- Discuss each of the elements of the regulation using the curriculum manual format

Break and Roll Call 10-20 Min

30-60 min. PREREQUISITE PROGRAMS

- Review programs that need to be in place before implementation of a HACCP program
- Describe the relationship between Good Manufacturing Practices (GMPs), sanitation control procedures (SCPs), and HACCP
- Describe monitoring, corrections, and record-keeping requirements for 8 areas of sanitation in the FDA Seafood HACCP regulation
- Review examples of SCPs, monitoring, and records in curriculum manual
- Review other relevant regulatory requirements that may apply to the audience

60-75 min. SEAFOOD SAFETY HAZARDS

- Describe the general types of hazards including species-related hazards and process-related hazards
- Describe the species and process related seafood safety hazards found in the FDA Hazards Guide with emphasis on:
 - What causes the seafood safety hazard
 - What seafood products and processes are affected by the hazard
 - How the hazard can be controlled (prevented, eliminated, or reduced to an acceptable level)

Knowledge Assessment 1 (See example questions at the end)

15-30 min. PRELIMINARY STEPS

- Introduce preliminary steps that must be completed prior to applying HACCP principles
- Introduce the XYZ Seafood Company model example to demonstrate preliminary steps

Day 2 (260-345)

30-45 min. REVIEW AND INTRODUCTION OF PRACTICAL WORK SESSIONS

- Divide students into groups of 5 people or less and select a Teaching Model for each group to work on.
- Teaching models are available from <https://www.flseagrant.org/seafood-safety/seafood-haccp-training-and-education/>

20-30 min. GROUP WORK SESSIONS ON PRELIMINARY STEPS

- Students review their assigned model and complete the product description forms.

90 min. CONDUCTING A HAZARD ANALYSIS

- Describe the steps in the Hazard Analysis process
- Introduce and describe the Hazard Analysis form
- Describe how to identify all potential species and process related hazards using the FDA Hazards Guide table in Chapter 3 of the Guide
- Describe how to determine what hazards are significant using information from the Hazard chapter in the FDA Hazards Guide and justify the decision
- Describe control measures for specific types of hazards
- Use the XYZ seafood model to illustrate how to conduct a hazard analysis using the FDA Hazard Guide

Knowledge Assessment 2 (See example questions at the end)

Break and Roll Call 10-20 Min

30-60 min. DETERMINING CRITICAL CONTROL POINTS

- Define critical control points (CCPs)
- Continue with teaching example to identify CCPs

- Discuss tools to help identify CCP including the FDA Hazards Guide and the ‘Decision Tree’

90-120 min. GROUP WORK SESSIONS ON CONDUCTING A HAZARD ANALYSIS

Students identify all potential food safety hazards and complete the Hazard Analysis worksheet for their assigned model using the FDA Hazards Guide.

Day 3 (180-240 min)

Note: Instructors may want to break the Hazard Analysis work session up over two days and finish on Day 3 to keep each day within 4-5 hours.

45-60 min. ESTABLISHING CRITICAL LIMITS

- Define and list typical critical limits (CLs) using examples from the curriculum manual
- Introduce the HACCP Plan Form
- Describe control strategy options from the hazard chapters of the FDA’s Hazards Guide
- Describe how to select one or more critical limits from a control strategy in Hazards Guide
- Discuss use of operating limits
- Use the XYZ seafood model to illustrate how to set up HACCP plan form and select a critical limit using the FDA Hazards Guide

Knowledge Assessment 3 (See example questions at the end)

45-60 min. CRITICAL CONTROL POINTS MONITORING

- Define and explain the purpose for monitoring
- Describe the 4 elements of a complete monitoring procedure
- Describe how to identify appropriate monitoring procedures for the critical limit option selected from the FDA Hazards Guide
- Use the XYZ seafood model to illustrate how to identify monitoring procedures using the FDA Hazards Guide

Break and Roll Call 10-20 Min

45-60 min. CORRECTIVE ACTIONS

- Define and explain need for predetermined corrective actions
- Explain and identify the components required for a complete corrective action procedure
- Describe how to identify appropriate corrective actions using the FDA Hazards Guide
- Use the XYZ seafood model to illustrate how to identify corrective actions using the FDA Hazards Guide

45-60 min. ESTABLISH VERIFICATION PROCEDURES

- Define and explain the need for verification procedures
- Explain types of verification procedures including: validation, routine and periodic verification
- Give examples of typical verification procedures needed including accuracy checks, calibration, testing

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- Describe how to identify appropriate verification procedures using the FDA Hazards Guide
- Use the XYZ seafood model to illustrate how to identify verification procedures using the FDA Hazards Guide

Day 4 (225-270 min)

45-60 min. RECORD-KEEPING PROCEDURES

- Define and explain the need for record-keeping procedures
- Explain types of records needed and the record-keeping requirements in the FDA regulation
- Review examples of types of records in the curriculum
- Describe how to identify appropriate record-keeping procedures using the FDA Hazards Guide
- Use the XYZ seafood model to illustrate how to identify record-keeping procedures using the FDA Hazards Guide

60-90 GROUP WORK SESSIONS ON DEVELOPING HACCP PLANS

- Students complete the HACCP Plans for the assigned models based on their Hazard Analysis with instructor facilitation as necessary

Break and Roll Call 10-20 Min

90 min. GROUP PRESENTATIONS

- Each group presents the results of their Hazard Analysis and HACCP Plan with comments and discussion from students and instructors

30 min. REVIEW, Q&A, AND ADJOURN

RECOMMENDATIONS: The agenda MUST include breaks and/or lunches to allow the students to rest and better concentrate on the training. Although the required topics must be taught, they can be arranged to best suit the audience and situations. Experience has shown that the first portion should proceed through Critical Control Points then conduct the practical exercises for completing the Hazard Analysis. This is followed by proceeding through the remainder of the curriculum and concluding with a final exercise for developing the HACCP plans. It is recommended the course be taught over at least 4-days and no more than 5 contact hours per day. Courses held within less than 4 days and/or less than 16.5 contact hours require written justification detailing mitigations and equivalency to the recommended protocol.

Knowledge Assessments (KA) can be used throughout the training to gauge participant understanding of the content and actively engage participants in the virtual setting. Example KA's are provided below and times for implementing them are suggested in the above example agenda.

Ex: Knowledge assessments (KA) 1: Seafood Hazards

1. Where in the hazards guide can you find more information on the hazard of allergens?
 - a. Chapter 7
 - b. Chapter 9
 - c. Chapter 12
 - d. Chapter 19

2. Where in the hazards guide can you find more information on the hazard of *Clostridium botulinum* toxin formation?
 - a. Chapter 7
 - b. Chapter 9
 - c. Chapter 13
 - d. Chapter 19

Ex: Knowledge assessment (KA) 2: Identifying Hazards

1. Which of the following hazards **IS** a concern in Bluefish (*Pomatomus saltatrix*)?
 - a. Parasites
 - b. Natural Toxins
 - c. Environmental Chemicals
 - d. Aquaculture Drugs

2. Which of the following hazards **IS** a concern in Cod (*Gadus macrocephalus*)?
 - a. Environmental Chemicals
 - b. Scombrototoxin (Histamine)
 - c. Natural Toxins
 - d. Parasites

Ex: Knowledge assessment (KA) 3: CCP's

1. On what page of the hazards guide can you find a table of potential control strategies for aquaculture drugs?
 - a. Page 193
 - b. Page 201
 - c. Page 245
 - d. Page 297

2. On what page of the hazards guide can you find a table of potential control strategies for glass inclusion?
 - a. Page 385
 - b. Page 398
 - c. Page 245
 - d. Page 297