Food Safety Manager Certification

Study Guide and Reference Material

Jeff Feldman, "Mr. F"
Food Safety & Culinary Instructor

Website
www.foodsafetyEDU.org

Podcast
https://foodsafetyedu.podbean.com/

USE YOUR FOOD SAFETY TEXTBOOK TO FILL IN THE BLANKS

"To know and not do, is really not to know."
Stephen Covey

Behavior Modification!

Review your habits and techniques

Warranty of Sale _____

Reasonable Care Defense _____

Foodborne Illness _____

Foodborne Illness Outbreak _____

Flow of Food _____

Certified Food Protection Manager (ANSI/CFP)_____

FDA Food Code _____

USCG TTP _____

Contamination _____

Ready-to-eat Food _____

Time – Temperature Abuse _____

Potentially Hazardous Food _____

TCS Foods _____

Cross – Contamination _____

Personal Hygiene _____

Hazards to Food _____

Person in Charge _____

Tri Service Food Code_____

Preventing Foodborne Illness~

Cost ($) of Foodborne Illness to your Establishment~

The Food Safety Responsibilities of a Manager~

~ 2 ~ The Microworld ~ Forms of Contamination

Microorganism _____

Pathogens _____

Bacteria _____

Virus _____

Parasite _____

Fungi _____

pH _____

Acidity _____

Spore _____

FAT TOM ~ _____

Temperature Danger Zone _____

Water Activity (a_w) _____

Mold _____

Yeast _____

Fungi _____

Toxins _____

Biological Toxins _____

Emerging Pathogens and Issues _____

Bovine Spongiform Encephalopathy _____

Food irradiation _____

Cold pasteurization _____

Foodborne infections (Slow, Pathogen) _____

Foodborne intoxication (Fast, Toxin) _____

Foodborne toxin-mediated infection
(Pathogens that creates Toxins) _____

Hepatitis A _____

Norovirus _____

Campylobacteriosis _____

Bacillus Cereus (Diarrhea) _____

Bacillus Cereus (Vomiting) _____

Listeria Monocytogenes _____

Hemorrhagic colitis (Shiga toxin-producing E. coli) _____

Clostridium Perfringens _____

Clostridium Botulinum _____

Salmonella Typhi _____

Non-Typhoidal Samonella _____

Shigellosis _____

Staphylococcus aureus _____

Vibro Parahaemolyticus Gastroenteritis _____

Vibro Vulnificus Primary Septicemia _____

Vibro Vulnificus Gastroenteritis _____

Anisakiasis _____

Cyclosporidiosis_____

Cryptosporidiosis _____

Giardiasis _____

~ 2 ~ Contamination, Food Allergens, and Foodborne Illness

Biological Contamination _____

Biological Toxins _____

Systemic Toxins _____

Chemical Contamination _____

Physical Contamination _____

Food Security _____

Biological toxins _____

Ciguatera fish poisoning

_____
_____
_____
_____

Scombroid Poisoning (Histamine)

_____
_____
_____
_____

Toxic metal poisoning _____

Food Allergy (IMPORTANT)

1_____
2_____
3_____
4_____
5_____
6_____
7_____
8_____
9_____

Shellfish toxins

1. Brevetoxin (NSP)_____
2. Domoic Acid (ASP)_____
3. Saxitoxin (PSP)_____

Mushroom toxins _____

Plant toxins _____

Toxic Metals _____

Chemicals _____

Pesticides _____

Food Allergens (Symptoms)

1_____
2_____
3_____
4_____
5_____
6_____
7_____
8_____ **Death** _____

Cross Contact _____

Most Common Food Allergens

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

~ 3 ~ The Safe Food Handler

Gastrointestinal Illness _____

Carriers _____

Infected Lesion _____

Hand Antiseptic _____

Finger cot – Single Use Gloves – Impermeable Covers _____

Hair Restraint _____

Exclusion _____

Restriction _____

Personal Hygiene _____

No Bare Hand Contact w/ Ready to Eat Food _____

Single – Use Gloves _____

Jaundice _____

Hand washing
1_____
2_____
3_____
4_____
5_____
6_____
7_____
8_____
9_____
10_____

Proper Work Attire _____

Create policies _____

Person in Charge (P.I.C.) _____

The Flow of Food through the Operation

~ 4 ~ The Flow of Food: An Introduction

Boiling Point Method 212° _____

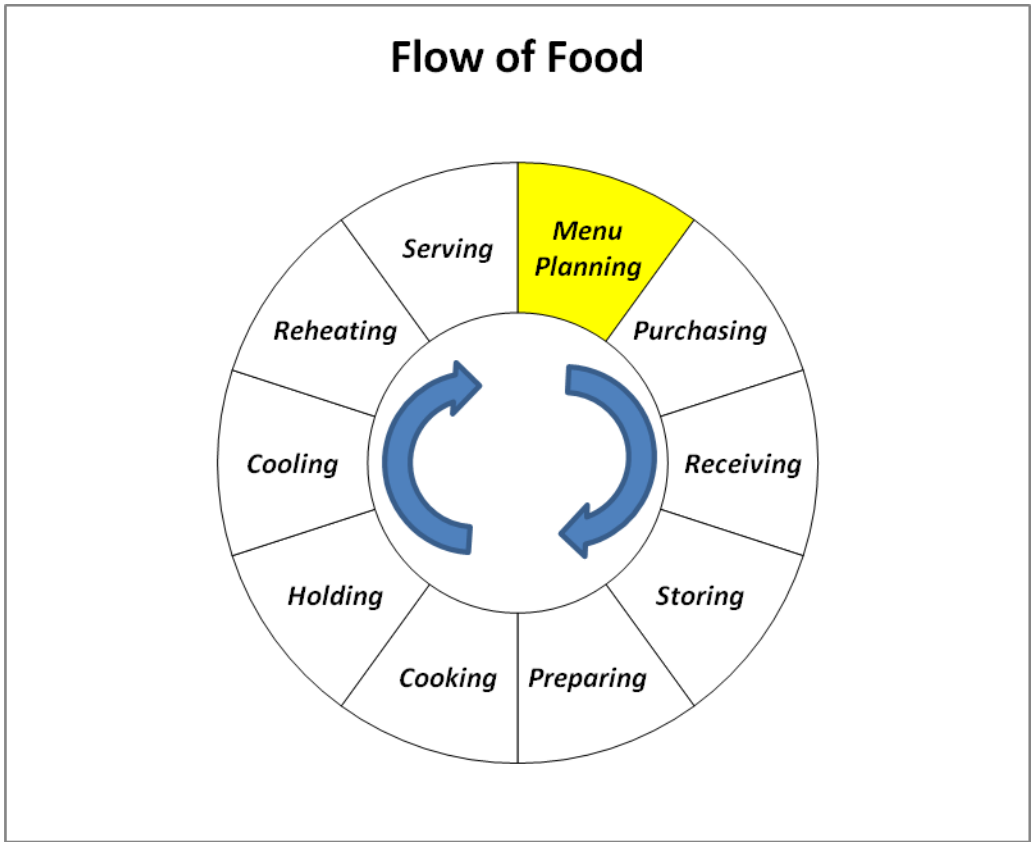
Calibration _____

Flow of Food _____

Ice Point Method 32° _____

Thermometer _____

Time – Temperature Indicator (TTI) _____



Preventing Cross Contamination

Physical Barriers _____

Assign Specific Equipment to each type of food product.

Clean and Sanitize all work surfaces, equipment and utensils after each task.

Procedural Barriers _____

When using the same prep table, prepare raw meat, fish, poultry and ready-to-eat foods at different times. And make sure to clean and sanitize when changing to another item "SEPARATE"

Purchase ingredients that require minimal preparation.

Time and Temperature Control

Temperature Danger Zone _____

Time / Temperature Abuse happen when Potentially Hazardous Foods (TCS/PHF) are ***not***:

- Cooked to the required minimum internal temperature.
- Cooled Properly
- Reheated Properly
- Held at the proper temperature

Preventing Time / Temperature Abuse: _____

- Determine the best way to monitor Time and Temperature in your establishment
- Make sure the establishment has the proper kind if thermometers readily available
- Make sure employees regularly record temperatures and the time taken
- Incorporate time and Temperature controls into SOPs for employees
- Develop a set of corrective actions

TCS _____

PHF _____

Monitoring Time and Temperature

Choosing the right Thermometer

- Bimetallic Stemmed Thermometer (0°-220°) _____
    - Adjustable Calibration
    - Easy to read
    - A dimple to mark the end of the sensor area
    - Accuracy to +/- 2°

- Thermocouples and Thermistors _____
    - Measure temperature through an interchangeable metal probe
        - Immersion
        - Surface
        - Penetration
        - Air

- Infrared (Laser) Thermometers _____

Calibrate Thermometers / Thermometer Guidelines ~

- Calibrate thermometers regularly to ensure accuracy

Time Temperature Indicators (TTI)

Temperature Sensitive Tape

Food Storage Thermometers must be accurate within _____

Thermometers used to measure food temps must be accurate within _____

~ 5 ~ The Flow of Food: Purchasing and Receiving

Reduced Oxygen Packaging (ROP) _____

Modified atmosphere packaging (MAP) _____

Sous vide _____

Ultra-high temperature (UHT) pasteurized food _____

Shellstock identification tags _____

Fish Parasite Destruction tags _____

General Purchasing and Receiving Principles

- Buy from suppliers who get their products from approved sources
- Make sure suppliers are reputable
- Schedule deliveries for off-peak hours and receive only one delivery at a time
- Make sure enough trained staff are available to promptly receive, inspect, and store food
- Inspect deliveries carefully
- Use properly calibrated thermometers to sample temperatures of received food items
- Check shipments for intact packaging and signs of refreezing, prior wetness, and pest infestation.
- Inspect deliveries immediately and put items away as quickly as possible

Receiving and Inspecting Food

Meat _____

Poultry _____

Fish _____

Shellfish _____

Crustacean _____

Eggs _____

Dairy _____

Produce _____

Refrigerated Ready-to-Eat Food _____

Frozen Processed Food _____

Reduced Oxygen Packaged (ROP) Food _____

Canned Food _____

Dry Food _____

Ultra-high Temperature (UHT) Pasteurized and Aseptically Packaged Food _____

_____

Bakery Goods _____

Potentially Hazardous Hot Food _____

~ 5 ~ Flow of Food: Storage

Refrigerated Storage _____

Frozen Storage _____

Dry Storage _____

First in – First out (FIFO) _____

Shelf Life _____

Hydrometer _____

General Storage Guidelines

- Label Food
- Rotate products to ensure the oldest is used first (FIFO)
- Establish a schedule to ensure that stored product is depleted on a regular basis.
- Discard food that has passed the manufacturer's expiration
- Transfer food between containers properly
- Keep potentially hazardous food out of the temperature danger zone.
- Check temperatures of stored food and storage areas.
- Store food in designated storage areas
- Keep all storage areas clean and dry
- Clean dollies, carts, transporters, and trays often.

Storage Areas ~

Refrigerated Storage _____

Frozen Storage _____

Dry Storage _____

Storing Specific Food ~

Meat _____

Poultry _____

Fish _____

Eggs & Egg Products _____

Shellfish _____

Dairy _____

Ice Cream / Frozen Yogurt _____

Fresh Produce _____

ROP Food _____

UHT Food _____

Canned & Dry Food _____

Frozen Fish in ROP Packaging –

- Remain frozen until ready for use.
- Remove from packaging before thawing in refrigeration
- Remove from packaging before or immediately after thawing under running water

If you are packaging fish using a ROP method

- The fish must be frozen before during and after packaging
- Include a label that states the fish must be frozen until used.

~ 6 ~ The Flow of Food: Preparation

Variance _____

Minimum Internal Cooking Temperature _____

Two-Stage Cooling _____

_____

Ice-Water Bath _____

Ice Paddle _____

Thawing Food Properly

Acceptable methods of thawing

- _____
- _____
- _____
- _____

Preparing Specific Foods

Meat, Fish, and Poultry

_____

_____

_____

_____

Salads Containing Potentially Hazardous Food

_____

_____

_____

_____

Eggs and Egg Mixtures

_____

_____

_____

_____

Batter and Breading

_____

_____

_____

Produce

_____

_____

_____

_____

_____

_____

_____

_____

_____

Fresh Juice!! Needs a variance if you package juice onsite for sale at a later time, unless the juice has a warning label that complies with local regulations.

_____

Ice used to keep food or beverages cold will never be used as an ingredient! Ice is a food, and must be treated as such! Potable "Safe" water is used to make useable ice, ensure the ice never gets contaminated and the scoops are cleaned and sanitized often.

_____

_____

~9~ Cooking Food

Minimum Internal Cooking Temperatures

Poultry _____

Stuffing _____

Ground Meat _____

Injected Meat _____

Microwave Food _____

Steaks / Chops _____

Roasts _____

Fish _____

Ground Minced or Chopped Fish _____

Eggs Immediate Service _____

Eggs Held for Service _____

Fruit or Vegetables (Hot held for service) _____

Commercially Processed, Ready to Eat Food (hot held for service) _____

Cooling Food

From _____IN _____

Then From _____IN _____

Methods of Cooling Food

_____

_____

_____

_____

_____

Storing Cooked Food

_____

_____

_____

Reheating Food

_____

_____

_____

The Flow of Food: Service

Hot-holding equipment _____

Cold-holding equipment _____

Sneeze Guard _____

Off-Site Services _____

Vending Machine _____

Single Use Items _____

General Rules for Holding Food

_____

_____

_____

_____

_____

Hot Food

_____

_____

_____

_____

Cold Food

_____

_____

_____

Holding Food without Temperature Control

_____

Cold Food _____

_____

Hot Food _____

_____

Time as a Public Health Control _____

Serving Food Safely

Kitchen Staff

- _____
- _____
- _____
- _____
- _____

Wait Staff (Servers)

- _____
- _____
- _____
- _____
- _____
- _____
- _____

Re-Serving Food Safely

- _____
- _____
- _____
- _____

Self Service Areas

- _____
- _____
- _____
- _____
- _____
- _____

Off Site Services / Delivery

- _____
- _____
- _____
- _____
- _____
- _____

Catering

- _____
- _____
- _____
- _____
- _____
- _____

Vending Machines

- _____
- _____
- _____
- _____

~ 8 ~ Food Safety Management

Food Safety Management System (FSMS) _____

"Prepare to overcome food safety risks that will occur!"

- Requires Commitment!! At all levels from the leaders to the Staff!
- Requires Systems – SOPs, SSOPs, Recipes, USCG TTP, FDA Food Code
- Requires Training – Education, Initial and Ongoing, "Practice makes better"
- Proper Facilities- Designed for proper cleaning and sanitizing and designed with the flow of food in mind.
- Execution – verification, to know that the training and procedures are actually being followed

1. Know your suppliers and their food safety practices
2. Know your regulations and compliance processes
3. Practice retail food safety habits to stay in business and keep people safe.

Active Managerial Control _____

Hazard Analysis Critical Control Point (HACCP) _____

Prerequisites for a Food Safety Program

- **For your Food Safety Management system to be effective, you must first have the following Food Safety Programs in place.**

1. Personal Hygiene Program
2. Supplier Selection and Specification Programs
3. Sanitation Program
4. Pest Control Program
5. Facility Design and Equipment Maintenance Programs
6. Food Safety Training Programs

Active Managerial Control (CAL CODE)

Name the "Five Most Common Risk Factors"

1. 37%_____
2. 19%_____
3. 16%_____
4. 11% _____
5. 6%_____

The Active Managerial Control Approach

1. Consider the five risk factors as they apply throughout the flow of food and identify any issues that could impact food safety.

2. Develop policies and procedures that address the issues that were identified

3. Regularly monitor the policies and procedures that have been developed.

4. Verify that the policies and procedures you have established are actually controlling the risk factors.

HACCP
Hazard Analysis Critical Control Point
"HACCP is a scientific, systematic approach to food safety"

(Excerpt from the FDA backgrounder)
HACCP five preliminary steps

1. Assemble the team
2. Gather resources
3. Identify the product and method of distribution
4. Create a flowchart
5. Verify (actually walk the flowchart and practice)

HACCP involves seven principles:

1. Conduct a Hazard Analysis of each item / recipe
2. Identify Critical Control Points
3. Establish critical limits for each CCP (Prevent, Eliminate, Reduce to safe levels)
4. Establish Monitoring Procedures for the CCP's
5. Establish Corrective Actions (when monitoring dictates)
6. Establish effective record keeping and documentation
7. Establish procedures to verify that the system is working properly

When a HACCP plan is required

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Crisis Management

Develop a Plan _____

- Develop a crisis management team
- Identify potential crises
- Develop simple instructions for responding to each type of crisis
- Assemble a contact list with names and numbers, and post it by phones.
    - All team members
    - Outside resources
        - Health services
        - Fire
        - Police
        - Testing labs
        - Issue experts
        - & Management and Headquarters Personnel.

- Develop a crisis communication plan
    1. A list of media "responses" (question & answer sheet)
    2. Sample press release that can be adjusted to each incident
    3. A list of media contacts to call for press conferences or news briefings.
        - Include a list of "do's & Don'ts" for dealing with the media
    - A plan for communicating with employees during the crisis
    - Assign a trained spokesperson to handle the media relations
    - Assemble a crisis kit for the establishment
    - Test the plan by running a simulation to make sure it works properly

- Crisis Response
    1. _____
    2. _____
    3. _____
    4. _____
    5. _____
    6. _____
    7. _____
    8. _____
    9. _____

- Crisis Recovery and Assessment
    1. _____
    2. _____
    3. _____
    4. _____

Deliberate Contamination of Food A.L.E.R.T.

- A _____
- L _____
- E_____
- R_____
- T_____

~ 9 ~ Safe Facilities and Pest Management

Air Gap _____

Backflow _____

Cross-connection _____

Potable Water _____

Vacuum Breaker _____

Cleaning _____

Sanitizing _____

Heat Sanitizing _____

Chemical Sanitizing _____

Sanitizer _____

Material safety data Sheets (MSDS) _____

Master Cleaning Schedule _____

Integrated Pest Management (IPM) _____

Pest Control Operator (PCO) _____

Infestation _____

Sanitary Facilities and Equipment

Designing a Sanitary Establishment

- Layout & Design
    1. Workflow
    2. Contamination
    3. Equipment accessibility
- Plan Review
    1. A Proposed Layout & Design
    2. Mechanical Plans
    3. Type of construction material to be used
    4. Types of equipment, names and models, proposed
    5. Specifications for utilities, plumbing, and ventilation.

Contact the Building and Zoning Department & County Health Department for requirements first!

Materials

Flooring ~ (areas to consider for non absorbent flooring)

- _____
- _____
- _____
- _____
- _____

Nonporous Resilient Flooring ~ (is the best choice because)

- _____
- _____
- _____
- _____
- _____

Hard Surface Flooring (disadvantages)

- _____
- _____
- _____
- _____
- _____
- _____

Carpeting (areas to avoid Carpeting)

- _____
- _____
- _____
- _____

Special Flooring Needs

- Non-Slip_____
- Coving _____

Considerations for specific areas of the facility

Hand washing Stations

- _____
- _____
- _____
- _____
- _____

Sanitation Standards for Equipment

Purchase only equipment designed with sanitation in mind.
Food Contact surfaces must be:

- Safe
- Durable
- Corrosion Resistant
- Nonabsorbent
- Sufficient in weight and thickness to withstand repeated cleaning
- Smooth and easy to clean
- Resistant to pitting, chipping, crazing (spider cracks), scratching, scoring, distortion, and decomposition.

Purchase equipment with labels from:

NSF International
Underwriters laboratories (UL)

These companies have established standards for sanitary equipment, the mark NSF indicates the equipment has been evaluated, tested, and certified.

Dishwashing Machines

1. _____
2. _____
3. _____
4. _____
5. _____

Clean-in-Place Equipment

1. _____
2. _____
3. _____

Installing and Maintaining Kitchen Equipment

Installing Kitchen Equipment

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Maintaining Equipment

Utilities

Water Supply

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Well water _____

Emergency Plan _____

Plumbing

Cross-connection _____

Backflow Prevention _____

Grease Condensation & leaking pipes _____

Sewage _____

Lighting _____

Ventilation _____

Garbage Disposal _____

Recycling _____

Vegetable waste Bucket _____

~ 10 ~ Cleaning and Sanitizing

If you don't keep your facility and equipment clean and sanitary, food can become contaminated and you'll make people sick.

Wash, rinse, and sanitize when:

- _____
- _____
- _____
- _____

Cleaning Agents

- _____
- _____
- _____

Detergents

- _____
- _____

Solvent Cleaners

- _____
- _____

Acid Cleaners

- _____
- _____

Abrasive Cleaners

- _____
- _____

Sanitizing

Heat Sanitizing _____

Chemical Sanitizing _____

Factors Influencing Sanitizer Effectivness

- _____
- _____
- _____
- _____
- _____

Machine Dishwashing

High Temperature Machines _____

Chemical- sanitizing Machines _____

IMPORTANT!!
Cleaning & Sanitizing in a "3 Compartment Sink" _____

Properly Set-Up Station

1. _____
2. _____
3. _____
4. _____

Before Cleaning and Sanitizing:

1. _____
2. _____
3. _____
4. _____
5. _____

Cleaning and Sanitizing Equipment
Stationary Equipment

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Cleaning and Sanitizing the Premises

Service Stations

1. _____
2. _____
3. _____
4. _____

Tools for Cleaning

- **Brushes**
- **Scouring Pads**
- **Mops & Brooms**

Storing Utensils, Tableware and Equipment

1. _____
2. _____
3. _____
4. _____
5. _____

Cleaning Tool and Supplies

- _____
- _____
- _____

Using Hazardous Materials

Purchase chemicals that are EPA approved for foodservice establishments.

Set up a MSDS Binder that is available to all employees with all of the "Material Safety Data Sheets" for each chemical you have on site.

YOU MUST LABEL IF YOU TRANSFER

Labeling

- Name
- Manufacturers name and address
- Potential hazard of chemical

Safety Data Sheet (SDS) contain the following information:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

Developing a Cleaning Program

- Create a "Master Cleaning Schedule"
    - _____
    - _____
    - _____
    - _____
- Implement the Cleaning Program
    - _____
    - _____
    - _____
- Monitoring the Program
    - _____
    - _____
    - _____
    - _____
    - _____

Integrated Pest Management (IPM)

Program:
Deny Pest Access to your establishment

- _____
- _____
- _____
- _____

Deny Pests Food & Shelter

- _____
- _____
- _____
  - _____
  - _____
  - _____
  - _____
- _____
  - _____
  - _____
  - _____
  - _____
  - _____
  - _____

Grounds and Outdoor Dining areas

- _____
- _____
- _____
- _____
- _____
- _____

Identify Pests

Cockroaches – check for these signs:

- _____
- _____
- _____

Use Glue Traps to find out what type of cockroaches they are.

Rodents – check for these signs

- _____
- _____
- _____
- _____
- _____

Working with your (PCO) Pest Control Officer

- _____
- _____
- _____
- _____

How to choose a PCO

- _____
- _____
- _____
- _____
- _____

Using and Storage of Pesticides

Food Safety Regulations

~ **x**~ Food Safety Regulations and Standards

U.S. Department of Agriculture (USDA) _____

Food & Drug Administration (FDA) _____

FDA Food Code _____

Health Inspector _____

Purpose of Inspections:

- _____
- _____
- _____
- _____

Government Regulatory System for Food

FDA

- _____
- _____
- _____

Regulation

- _____
- _____
- _____
- _____

FDA Food Code 2017

- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____

The Inspection Process:

Traditional Inspections:

- _____
- _____

HACCP Based Inspections:

- _____
- _____
- _____
- _____
- _____

Inspection Frequency

- _____
- _____
- _____
- _____

The Inspection Process

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Closure

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

SELF INSPECTIONS

- _____
- _____
- _____
- _____

~ x ~ Employee Food Safety Training

Training need _____

Training Objective _____

Training Plan _____

Training Delivery Methods _____

Evaluation _____

Introduction

1. _____
2. _____
3. _____
4. _____

Initial and Ongoing Employee Training

1. _____
2. _____
3. _____

Critical Food safety Knowledge for Employees

1. Proper Personal Hygiene _____
2. Safe Food Preparation _____
3. Proper Cleaning and Sanitizing _____
4. Safe Chemical Handling _____
5. Pest Identification and Prevention _____

California Food Handler Card – required for ***all food service employees*** by 1 July 2011
California Food Allergen Cert. – required for ***all food handlers*** starting 1 Jan 2020

The End

Updated to the 7th Edition from the 4th Edition 9-4-2019