Date:	Presented by: Sonoma Food Safety, Jeff Feldman		
Class #	www.sonomafoodsafety.com	415-578-3779	
Introduction Take notes (write it, read it, know Where are you from? What position do you hold in you What is Food Safety?			
The S Chapter 1 ~ Providing Safe Food ~ (Slides 1) Concepts ~ page 1-2	Sanitation Challenge		
Foodborne Illness			
Foodborne Illness Outbreak			
Flow of Food			
FDA Food Code			
Cal Code			
Ready-to-eat Food			
Time – Temperature Abuse _			
Potentially Hazardous Food			
Cross – Contamination			
Preventing Foodborne Illness (R			
Cost (\$) of Foodborne Illness to	your Establishment ∼ page1-5		

Video #1 "Introduction to Food Safety" (11 minutes)

Chapter 2 ~ The Microworld ~ (Slides 8 – 45) Concepts ~ page 2-2
Microorganism
Pathogens
Bacteria
Virus
Parasite
Fungi
pH
Spore
FAT TOM ~ page 2-5
Temperature Danger Zone
Water Activity (a _w)
Mold
Yeast

Review the chart on page 2-10

Chapter 3 – Contamination, Food Allergens, and Foodborne Illness (Slides 46 – 60) Concepts ~ page 3-1 Biological contamination _____ Chemical Contamination _____ Physical contamination _____ Food Security ____ Biological toxins Ciguatera fish poisoning Scombroid Poisoning (Histamine) Toxic metal poisoning _____ Food Allergy (IMPORTANT) 5 Shellfish toxins

Mushroom toxins	
Plant toxins	
Toxic Metals	
Chemicals	
Pesticides	
Food Allergens (Symptoms)	
1	
2	
34	
56	
7	
8 <u>Death</u>	
Student reads: Something to think about ~ page 3-20	
Student reads: A Case in Point ~ page 3-21	
Video #2 "Overview of Foodborne Microorganisms and Allergens" (24 Minutes)	
~BREAK~	

Chapter 4 The Safe Food handler (Slides 61 – 72)

Concepts ~ page 4-2 Gastrointestinal Illness
Gastrointestinal Illness
Carriers
Infected Lesion
Hand Antiseptic
Finger cot
Hair Restraint
Exclusion _ (Cal Code)
Restriction _ (Cal Code)
Personal Hygiene
Bare Hand Contact w/ Ready to Eat Food
Single – use Gloves _ (Cal Code Page 40)
Jaundice
Hand washing
1
2
3
4
5
6
7 <u> </u>
9
10
Proper Work Attire
Create policies

Video #3 "Personal Hygiene" (14 Minutes)

Unit 2

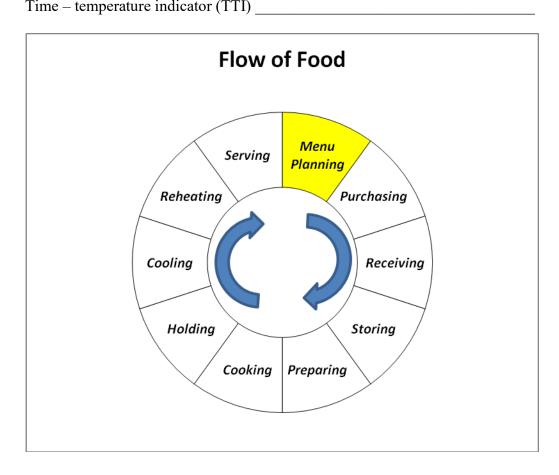
The Flow of Food through the Operation

Chapter 5

The Flow of Food: An Introduction (Slides 73 – 81)

Concepts ~ page 5-2

Boiling Point Method 212°
Calibration
Flow of Food
Ice Point Method 32°
Thermometer
Time temperature indicator (TTI)



Preventing Cross Contamination Page 5-3
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-ear foods at different times.
Purchase ingredients that require minimal preparation.
Time and Temperature Control
Temperature Danger Zone
 Time / Temperature Abuse happens when Potentially Hazardous Food (PHF) is <u>not</u>: 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

Monitoring Time and Temperature

Page 5-7

Choosing the right Thermometer

- Bimetallic Thermometer (0°-220°)
 - o Adjustable Calibration
 - o Easy to read
 - o A dimple to mark the end of the sensor area
 - o Accuracy to +/- 2°
- Thermocouples and Thermistors
 Measure temperature through a metal probe

Calibrate Thermometers / Thermometer Guidelines ~ page 5-10

• Calibrate thermometers regularly to ensure accuracy

Chapter 6 ~ The Flow of Food: Purchasing and Receiving ~ (Slides 82 – 94)

Concepts ∼ page 6-2	
Reduced Oxygen Packaging (ROP)	
Modified atmosphere packaging (MAP)	
Sous vide	
Ultra-high temperature (UHT) pasteurized food _	
Shellstock identification 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 Page 6-5

Meat
Poultry
Fish
Shellfish
Crustaceans
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

Flow of Food: Storage (Slides 95 – 113)
Concepts ~ page 7-2
Refrigerated Storage
Frozen Storage
Dry Storage
First in – First out (FIFO)
Shelf Life
Hydrometer

General Storage Guidelines page 7-3

Label Food

Chapter 7

- 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 ~ Page 7-5

Refrigerated Storage
Frozen Storage
Dry Storage
Storing Specific Food ~ Page 7-9
Meat
Poultry
Fish
Eggs & Egg Products
Shellfish
Dairy
Ice Cream / Frozen Yogurt
Fresh Produce
ROP Food
UHT Food
Canned & Dry Food

Video #4 "Purchasing, Receiving and Storage" (20 Minutes)

The Flow of Food: Preparation ~ (Slides 114 – 136) Concepts ~ page 8-2	
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	

Chapter 8 ∼

Salads Containing Potentially Hazardous Food (slide 116) Page 8-4				
Eggs and Egg Mixtures (Slide 117) Page 8-5				
Batter and Breading Page 8-5				

Produce ~ (slide 119-121) Page 8-6	
Fresh Juice!! Page 8-7	
ce Page 8-8	

Cooking Food ~ (slides 122 – 131)

Minimum Internal Cooking Temperatures Page 8-10 to 8-13

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 ~ (slides 132 – 135) Page 8-15

From	IN
Then From	IN
Methods of Cooling Food	
Storing Cooked Food	
Reheating Food	

Chapter 9 The Flow of Food: Service \sim (slides 137 – 148) Concepts ~ page 9-2 Hot-holding equipment _____ Cold-holding equipment Sneeze Guard _____ Off-Site Services Vending Machine Single Use Items _____ General Rules for Holding Food ~ page 9-3 Hot Food

Cold Food					
II 11' F	1 1.1	,	O . 1		
Holding Food	l without Te	mperature (Control		
_	l without Te	-			
_					
Cold Food					
Cold Food					

Serving Food Safely ~ (slides 144)

Kitchen •	Staff
•	
•	
•	
•	
W-:4 G4	
vait St	aff (Servers) (no slide)
•	
•	
•	
•	
•	
Re-Serv	ving Food Safely (slide 147)
•	
•	
•	
•	

f Service	Areas ~ (slide	148)		
•				
•				
•				
•				
•			 	
•				
Site Ser	vices / Delivery	(no slide)		
•				
•				
•				
•				
•				

atering	(no slide)			
_				
• –			 	
•				
• _				
• _				
•				
_			 	
•				
4.	3.6.11	/ 11 1 X		
ending	Machines ((no slide)		
•				
_				
•				
•			 	
•				

Video #5 "Preparation, Cooking and Serving" (18 Minutes)

Food	Chapter 10 Food Safety Management ~ (slides 149 – 167) Concepts ~ page 10-2						
Food S	Food Safety Management System						
Active	e Managerial Control						
Hazar	d Analysis Critical Control Point (HACCP)						
Page 1 1. 2. 3. 4. 5.	Paguisites for a Food Safety Program 0-3 For your Food Safety Management system to be effective, you must first have the following Food Safety Programs in place. Personal Hygiene Program Supplier Selection and Specification Programs Sanitation Program Pest Control Program Facility Design and Equipment Maintenance Programs Food Safety Training Programs						
Page 1	e Managerial Control (CAL CODE) 0-3 the "Five Most Common Risk Factors"						
4.							

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.

<u>HACCP</u> Hazard Analysis Critical Control Point

(Excerpt from the FDA backgrounder) What is HACCP?

HACCP involves seven principles:

- 1. Analyze Hazards (Conduct a Hazard Analysis)
- 2. Identify Critical Control Points (Determine CCP's)
- 3. Establish preventive measures with critical limits for each CCP (Establish Limits)
- 4. Establish procedures to monitor the CCP's (Establish Monitoring Procedures)
- 5. Establish Corrective actions to be taken when monitoring shows that a critical limit has not been met (Identify Corrective Actions)
- 6. Establish procedures to verify that the system is working properly (Verify the system works)
- 7. Establish effective record keeping to document the HACCP system (Establish procedures for record keeping and documentation)

When a HACCP plan is required Page ~ 10-12 1. 2. 3. 4. 5. 6. 7.

Crisis Management Page ~ 10-13

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

Unit 3 Sanitary Facilities and Management Video #6 "Facilities Cleaning and Sanitizing & Pest Management" (37 Minutes)

Chapter $11 \sim (\text{slides } 168 - 184)$ Concepts $\sim \text{page } 11\text{-}2$
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

Page ~ 11-5

Materials

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.

<u>Contact the Building and Zoning Department & County Health Department for requirements first!</u>

Page 11-7 Flooring ~ (areas to consider for non absorbent flooring) Nonporous Resilient Flooring ~ (is the best choice because) Hard Surface Flooring (disadvantages)

Carpetii	ng (areas to avoid Carpeting)
•	
•	
•	
-	Flooring Needs
•]	Non-Slip
•	Coving
Consid	erations for specific areas of the facility
Hand w	rashing Stations
• .	
• .	
• .	
• .	
•	

Sanitation Standards for Equipment

Page ~ 11-12

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
Page 11-13
1
2.
3
3
4
5
Clean-in-Place Equipment
1
2.
3.
Installing and Maintaining Kitchen Equipment
Page ~ 11-14
Installing Kitchen Equipment
1.
2.
3.
4.
5
6.
Maintaining Equipment
Utilities
Othities
Water Supply
1
2.
3.
4
6
Well water
Emergency Plan

Plumbing

Page ~ 11-17
Cross-connection
Backflow Prevention
Grease Condensation & leaking pipes
Sewage
Lighting
Ventilation
Garbage Disposal
Recycling
Vegetable waste Bucket
Cleaning and Sanitizing (slides 185 – 197)
If you don't keep your facility and equipment clean and sanitary, food can become contaminated and you'll make people sick.
If you don't keep your facility and equipment clean and sanitary, food can become
If you don't keep your facility and equipment clean and sanitary, food can become contaminated and you'll make people sick.
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:
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:
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:
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
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

Deterger Page ~ 1	
Solvent Page ~ 1	Cleaners 1-23
Acid Cle Page ~ 1	
Abrasivo Page ~ 1	e Cleaners
Sanitiz Page ~ 1	
Heat Saı	nitizing
Chemica	al Sanitizing
Factors :	Influencing Sanitizer Effectivness

Machine Dishwashing
High Temperature Machines
Chemical- sanitizing Machines
IMPORTANT!! Cleaning & Sanitizing in a "3 Compartment Sink" Page ~ 11-28
Properly Set-Up Station 1.
2. 3.
4
Before Cleaning and Sanitizing: Page ~ 11-28 1.
2. 3.
4
5

Cleaning and Sanitizing Equipment

Page ~	- 11-30
Station	nary Equipment
2.	
3.	
4.	
_	
6.	
7.	
Clean	ing and Sanitizing the Premises
Servic	e Stations
1.	
2.	
3.	
4.	
•	for Cleaning Brushes Scouring Pads Mops & Brooms
	g Utensils, Tableware and Equipment
_	
4.	
5.	
Clean	ing Tool and Supplies
•	

Using Hazardous Materials

Page ~ 11-35

Purchase chemicals that are 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

MSDS contain the following information:	
1	
2	
3	
4	
5	
6	
7	
8	
Description of Classics Description	
Developing a Cleaning Program	
Page ~ 11-36	
• Create a "Master Cleaning Schedule"	
0	
0	
0	
0	
 Implement the Cleaning Program 	
0	
0	
0	
 Monitoring the Program 	
0	
0	
0	
0	
0	
0	

Integrated Pest Management (IPM)

Program: Deny Pest Access to your establishment Page ~ 11-39 0 0 Deny Pests Food & Shelter Page ~ 11-40 0 Grounds and Outdoor Dining areas Page ~ 11-41 0

Page ~ 11-38

Identify Pests

Cockroaches -	- check for these signs:
	0
	0
	0
Use Glue Trap	s to find out what type of cockroaches they are.
Rodents – che	ck for these signs
	0
	0
	0
	0
	0
Working with	your (PCO) Pest Control Officer
_	0
	0
	0
	0
How to choose	e a PCO
	0
	0
	0
	0
	0
Using and Stor	rage of Pesticides

Page ~ 11-44

Food Safety Regulations (slides 209-219)

Chapter 12 Food Safety Regulations and Standards Concepts ~ Page 12-1 U.S. Department of Agriculture (USDA) Food & Drug Administration (FDA) FDA Food Code (CAL CODE, 2007) Health Inspector _____ Purpose of Inspections: Government Regulatory System for Food Page ~ 12-3 FDA Regulation FDA Food Code 2005 & the new CAL CODE 2007

The Inspection Process: Page ~ 12-5 Traditional Inspections:		
0		
HACCE	P Based Inspections: Page ~ 12-6	
0	Based hispections. Tage 12 0	
0		
0		
0		
0		
Inspecti	on Frequency Page ~ 12-7	
0		
0 _		
0 _		
0 _		
	pection Process Page ~ 12-8	
3.		
4.		
5.		
6.		
7.		
_	Page ~ 12-10	
1. 2.		
3.		
4.		
5.		
6.		
-		
	NSPECTIONS Page ~ 12-11	
0 -		
o <u>.</u>		
0		
~ _		

Chapter 13 Employee Food Safety Training (slides 220- 225) Concepts ~ page 13-2

Trainir	ng need
Trainir	ng Objective
Trainir	ng Plan
Trainir	ng Delivery Methods
Evalua	tion
	duction
1.	
2.	
3. Δ	
Initia	l and Ongoing Employee Training
1.	
2.	
3.	
Cuitic	ool Food safaty Wnawladge for Employees
Page 1	cal Food safety Knowledge for Employees 3-5
1	Droper Personal Hygione
1. 2	Proper Personal Hygiene
2. 3	Safe Food Preparation Proper Cleaning and Sanitizing
<i>3</i> .	Safe Chemical Handling
5.	Pest Identification and Prevention

The End