Learning Objectives

What exactly do I need to know to pass the certification exam?

January 2008

Learning Objectives spell out what topics you need to know to successfully pass the certification exam. If you are contemplating taking the exam without coursed preparation, then you should be familiar with the learning objectives outlined below. The learning objectives originate from the material used to create the Food Code. If you were to carefully read and understand the food code you would be more than 90% prepared for the exam. The USU course is designed to present this same information in a format that is easier to understand.

There are 4 main sections with 20 total subsections in the USU course.

USU[1]	Utah State FSMC Learning Objectives	ULO[2]
	Section 1.	
1.1	Define foodborne illness	1.a.i.
1.2	Know some symptoms of foodborne illness	1.f.*
1.3	Understand who gets foodborne illness, including highly susceptible populations	1.*
1.4	Define a foodborne illness outbreak	1.a.ii.
1.5	Know the 5 major risk factors contributing to foodborne illness in foodservice operations	1.e.
2.1	Know the 4 groups of microorganisms	1.b.i-iv.
2.2	Know what a pathogen is	1.a.vi.
2.3	Understand how pathogens get into food	1.f.
2.4	Know what a bacterial spore is	1.b*
2.5	Know what a bacterial toxin is	1.b.
2.6	Differentiate between foodborne infection and foodborne intoxication	1.a.iii-iv.
3.1	Know what a Potentially Hazardous Food (PHF) is	1.c.
3.2	Know what “FAT TOM” stands for	*
3.3	Know and understand how FAT TOM principles affect microbial growth	*
3.4	Know how food is commercially preserved using FAT TOM principles	*
4.1	Know major F.B.I. organisms	1.*
4.2	Know some factors that make them especially hazardous	1.*
4.3	Know some of the PHF each organism is associated with	1.*
4.4	Know the 5 major risk factors associated with F.B.I.	1.e.
5.1	Know the 3 main sources of foodborne illness	1.d.
5.2	Know some sources of biological hazards other than microorganisms	1.d.
5.3	Know some sources chemical hazards	1.d.
5.4	Know and understand allergens as chemical hazards	1.d.

5.5	Know some physical hazards	1.d.
5.6	Know some preventative measures for specific biological, chemical, and physical hazards	1.d.
	Section 2.	
1.1	Know some safe and unsafe sources of food	4.b.
1.2	Know some foodborne illnesses that come from unsafe sources of food	4.b.
2.1	Know some foodborne illnesses that come from undercooked or raw foods	2.a.iv.
2.2	Know the list of foods that must be cooked to 145, 155, or 165ºF	2.a.iv.
2.3	Use pasteurized eggs when uncooked eggs are needed	2.a.iv.
2.4	Understand the requirements of a consumer advisory for raw or undercooked foods	2.a.iv.
3.1	Know and understand the temperature danger zone	2.a.
3.2	Know to keep hot foods hot and cold foods cold	2.a.
3.3	Know how to safely cool foods	2.a.vii.
3.4	Know the recommended freezer temperature	2.a.
3.5	Know how to safely thaw foods	2.a.iii.
3.6	Know and understand date marking	2.a.v.
4.1	Know employees are a significant source of contamination and illness may be transmitted to foods	3.a-c.
4.2	Understand employee restriction	3.c.i-ii.
4.3	Understand Employee Exclusion	3.c.i-ii.
4.4	Know and understand good employee hygiene	3.b.
4.5	Know and understand proper hand washing	3.a.
4.6	Understand bare-hand contact with food policies and glove use	3.a.ii-iii.
5.1	Know and understand contamination	4.a.i-v.
5.2	Know contamination hazards at each step from purchasing to serving	2.a.i-x. / 4.c.i-x.
5.3	Know prevention behaviors to minimize the hazards of contamination from purchasing to serving	2.a.i-x. / 4.c.i-x.
	Section 3.	
1.1	Know some different types of thermometers	2.b.i.
1.2	Know the accuracy requirements for thermometers used to measure temperatures of (a) food and (b) ambient air or water	2.b.
1.3	Understand how to check accuracy and calibrate a thermometer	2.b.iii.
2.1	Know what types of food contact surfaces that are recommended and those that are restricted	6.a.iii.
2.2	Understand what makes good placement of equipment	6.b.
2.3	Know facility requirements for water, plumbing, waste handling, and restrooms	6.a.vi-iii.
3.1	Know that sanitation involves both cleaning and sanitizing	5.a.
3.2	Understand cleaning agents	5.a.i.
3.3	Understand biofilms	*
3.4	Understand sanitizers	5.a.ii.
4.1	Know daily sanitation requirements	
4.2	Know how to clean & sanitize wares, equipment, food contact surfaces, and non-food contact surfaces	5.d.i-iii.

4.3	Know when to clean & sanitize	5.e.
5.1	Know the parts of a Sanitation Program	7.c.
5.2	Know how to identify cleaning tasks	7.c.
5.3	Know how to write a SSOP	7.c.
5.4	Know how to train and supervise employees	7.c.
	Section 4.	
1.1	Understand “re”-active, active, and “pro”-active food safety programs	7.
1.2	Know and understand the Food Code	7.
1.3	Understand health inspections	7.
1.4	Know and understand the requirements of a Food Safety Manager	7.
2.1	Understand SOP’s	7.
2.2	Know how to write an SOP	7.
2.3	Know responsibilities of SOP’s	7.
2.4	Understand assessment of SOP’s	7.
3.1	Employee training is required	7.
3.2	Know what you need to teach	7.
3.3	Know how to motivate employees to learn	7.
3.4	Know some methods to deliver training	7.
3.5	Know how to verify your training is effective	7.
4.1	Know pest “control” vs. “prevention”	7.b.
4.2	Know how to choose a pest control company	7.b.
4.3	Know 1st & 2nd lines of pest prevention	7.b.
4.4	Know some pests to look out for	7.b.
4.5	Know how to create a pest sighting log	7.b.
4.6	Know your responsibility as a Food Safety Manager for posting MSDS sheets	7.b.
5.1	Know the benefits of self-inspection	7.a.
5.2	Know what HACCP stands for	7.
5.3	Know what Prerequisite Programs are	7.
5.4	Know what a Hazard Analysis, Critical Control Point, Critical Limit, and Corrective Action is	7.

[1]USU=Utah State Univ. FSMC Course Subsection. [2]ULO = Utah Learning Objectives (Rule 392-101) See below.

State of Utah Learning Objectives

January 2008

What is this? *The following is text from the Utah Code. It outlines the learning objectives required of all certification exams.*

Rule R392-101. Food Safety Manager Certification. As in effect on May 1, 2007.

a) Exam must contain at least 50 multiple choice questions, drawn from a pool of at least three times the number of questions given in the examination. (b) All questions shall be multiple choice with 4 choices. (c) 6-20% of the exam shall come from each of the seven learning objectives sections below.

Utah Learning Objectives. Certification and recertification examinations shall require the examinee to demonstrate knowledge in food protection management in the following areas:

(1) Identify foodborne illness.

(a) Define terms associated with foodborne illness.
   i. foodborne illness
   ii. foodborne outbreak
   iii. foodborne infection
   iv. foodborne intoxication
   v. diseases communicated by food
   vi. foodborne pathogens

(b) Recognize the major organisms and toxins that can contaminate food and the problems that can be associated with the contamination.
   i. Bacteria
   ii. Viruses
   iii. Parasites
   iv. fungi

(c) Define and recognize potentially hazardous foods.

(d) Define and recognize chemical and physical contamination and illnesses that can be associated with chemical and physical contamination.

(e) Define and recognize the major contributing factors for foodborne illness.

(f) Recognize how microorganisms cause foodborne disease.

(2) Identify time/temperature relationship with foodborne illness.

(a) Recognize the relationship between time/temperature and microorganisms survival, growth, and toxin production during the following stages:

i. Receiving
ii. Storing
iii. Thawing
iv. Cooking
v. holding/displaying
vi. serving
vii. cooling
viii. storing or post production
ix. reheating
x. transporting

(b) Describe the use of thermometers in monitoring food temperatures.

i. types of thermometers
ii. techniques and frequency
iii. calibration and frequency

(3) Describe the relationship between personal hygiene and food safety.

(a) Recognize the association between hand contact and foodborne illness.

i. hand washing technique and frequency
ii. proper use of gloves, including replacement frequency
iii. minimal hand contact with food

(b) Recognize the association of personal habits and behaviors and foodborne illness.

i. Smoking
ii. eating and drinking
iii. wearing clothing that may contaminate food
iv. personal behaviors, including sneezing, coughing and scratching.

(c) Recognize the association of health of a food handler to foodborne disease

i. free of symptoms of communicable disease
ii. free of infections spread through food on contact
iii. food protected from contact with open wounds

(d) Recognize how policies, procedures and management contribute to improved hygiene practices.

(4) Describe methods for preventing food contamination from purchasing to serving.

(a) Define terms associated with contamination:

i. Contamination
ii. Adulteration
iii. Damage
iv. approved source
v. sound and safe condition

(b) Identify potential hazards prior to delivery and during delivery.

i. approved source
ii. sound and safe condition

(c) Identify potential hazards and methods to minimize or eliminate hazards after delivery:

i. personal hygiene

ii. cross contamination from food to food
iii. cross contamination between equipment and utensils
iv. contamination from chemicals
v. contamination from additives
vi. physical contamination
vii. contamination during service and display
viii. contamination from customers
ix. storage
x. re-service

(5) Identify correct procedures for cleaning and sanitizing equipment and utensils:

(a) Define terms associated with cleaning and sanitizing.
i. Cleaning
ii. sanitizing
(b) Apply principles of cleaning and sanitizing
(c) Identify materials: equipment, detergent and sanitizer
(d) Identify appropriate methods of cleaning and sanitizing.
i. manual dishwashing
ii. mechanical dishwashing
iii. clean-in-place
(e) Identify frequency of cleaning and sanitizing

(6) Recognize problems and potential solutions associated with facility, equipment and layout.

(a) Identify facility, design and construction suitable for food establishments:
i. Refrigeration
ii. heating and hot-holding
iii. floors, walls and ceilings
iv. pest control
v. lighting
vi. Plumbing
vii. Ventilation
viii. water supply
ix. wastewater disposal
x. waste disposal
(b) Identify equipment and utensil design and location

(7) Recognize problems and potential solutions associated with temperature control, preventing cross contamination, housekeeping and maintenance:

(a) by self inspection program.
(b) by pest control program.
(c) by cleaning schedules and procedures.
(d) by equipment and facility maintenance program