

# NATIONAL TURKEY FEDERATION CULINARY CIRICULUM MODULE

## Turkey Fabrication & Application of Turkey Cuts

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**Purpose:** This educational module is designed to familiarize the student with (1) the proper fabrication of whole turkeys into useable cuts, and (2) the application of turkey cuts in foodservice.

**Instructional Strategies:**

It is organized in a series of recommended and sequential lectures and demonstrations; the instructor may use any and all according to available time and resources. The instructor will incorporate the following instructional strategies into the teaching of this module:

- Lecture
- Demonstration
- Internet Research
- Hands-on Skills
- Recipe Production
- Recipe Development and Evaluation

**Learning Objectives:**

After lecture and demonstration by the instructor, and upon review of instructional materials available on the Internet, hands-on practice, and evaluation by the instructor, the student shall be able to:

- Demonstrate a satisfactory understanding and ability to handle whole turkey and turkey products in a safe and sanitary manner.
- Demonstrate the ability to use the Internet as a means of research on turkey and turkey applications in foodservice.
- Identify the major cuts and parts from a whole turkey.
- Demonstrate the ability to fabricate a whole turkey.
- Explain various methods of cookery that can be properly used with turkey.
- Create a recipe using any turkey cut (Mystery Cut Exercise).
- Identify four (4) menu items (appetizer, sandwich, salad and center-of-the-plate entree) that can be made from each separate turkey cut

**Curriculum Content:**

**1. Lecture: Providing an Overview**

**a. Resources**

- [www.eatturkey.com](http://www.eatturkey.com)

**b. Required Instructional Aids**

- Computer with Internet access

- Projector system for computer
- c. **Points to Stress**
- **Purpose of this lecture:** what you will learn
  - **Sanitation and safety:** proper handling procedures
  - **Turkey fabrication:** identification of parts
  - **Hands-on student participation:** learning by doing
  - **Variety of applicable cooking methods:** based on recipe and nature of cut
  - **Student research on Internet:** making use of what's available on-line
- d. **Key Terms**
- **Sanitation:** The design, implementation and application of practices that will prevent food contamination and foodborne illnesses, and conform to HACCP procedures.
  - **Fabrication:** Cutting a large item into smaller portions, including trimming, boning, portioning and so on.

## 2. Lecture/Demo: Setting Up a Safe and Sanitary Work Area

### a. Resources

- <http://www.eatturkey.com/foodsrv/manual/safeintro.html>
- [www.restaurant.org/foodsafety](http://www.restaurant.org/foodsafety)
- [www.foodsafety.gov](http://www.foodsafety.gov)
- <http://vm.cfsan.fda.gov/~comm/nacmcfp.html#princ>
- U.S. Department of Agriculture  
Food Safety and Inspection Service  
1400 Independence Avenue SW, Room 2932-S  
Washington, DC 20250-3700  
1-800-535-4555 or 202-720-3333  
TTY: 1-800-256-7072  
<http://www.fsis.usda.gov>

### b. Required Instructional Aids

- Cutting board
- Cleaning bucket with sanitizer tablet or solution, chlorine test paper/strips and cleaning cloth

### c. Points to Stress

- Wash hands, cutting board, utensils and work surface with hot, soapy water before and after handling raw and cooked poultry.
- Prepare sanitizing solution to measure 50 ppm and test with chlorine test paper/strips
- Keep raw poultry in the refrigerator (40°F). Cover and cook within 1 to 2 days, or freeze it.
- Keep frozen poultry in the freezer (0°F). Cook promptly after thawing. Thaw in the refrigerator; in cold water, changing the water every 30 minutes; or in a microwave oven.

- Keep cooked turkey in the refrigerator. Use within 3-4 days or freeze it.
- Completely cook turkey at one time. Never partially cook, then store and finish cooking later.
- Whole birds should be stuffed just before cooking. Mix dry ingredients with other ingredients (for example, margarine, onion and broth) just before stuffing the bird. Remove stuffing from the bird immediately after cooking. Store stuffing separately in the refrigerator.
- Cook poultry products to an internal temperature of 170°F for breast meat and 180°F for thigh meat.
- Put cooked turkey on a clean plate, never on a plate that held raw poultry and had not yet been thoroughly washed.
- Wash all food preparation surfaces and utensils that have come in contact with raw poultry with soap and hot water.
- When serving turkey, never leave it within the temperature “danger zone” (see description below) for more than 2 hours.
- Eat cooked turkey promptly and refrigerate leftovers within 2 hours after cooking.

#### d. Key Terms

- **Temperature Danger Zone:** The temperature of food in which harmful bacteria may thrive, between 40° to 140° F. Foods should not be held between these temperatures for more than 2 hours.
- **Foodborne illness:** There are more than 250 known foodborne diseases. Bacteria cause most cases, followed by viruses and parasites. Natural and manufactured chemicals in food products also can make people sick. Some diseases are caused by toxins (poisons) from the disease-causing organism, others by bodily reactions to the organism itself.
- **Cross-contamination:** *Salmonella* bacteria can be found in food products such as raw poultry, eggs and beef, and sometimes on unwashed fruit. Food prepared on surfaces that previously contained raw turkey or turkey products, or utensils that have cut or stirred raw turkey products, can in turn become contaminated with the bacteria. This is called cross-contamination.

### 3. Lecture/Demo: Fabrication of the Turkey

#### a. Resources

- <http://www.eatturkey.com/foodsrv/manual/safeintro.html>
- [www.restaurant.org/foodsafety](http://www.restaurant.org/foodsafety)
- [www.foodsafety.gov](http://www.foodsafety.gov)
- <http://www.fsis.usda.gov>.
- <http://vm.cfsan.fda.gov/~comm/nacmcfp.html#princ>

- <http://www.eatturkey.com/foodsrv/manual/purch1.html>
- <http://www.eatturkey.com/foodsrv/manual/serve2.html>

**b. Required Instructional Aids**

- Cleaning bucket with sanitizer tablet or solution, chlorine test paper/strips and cleaning cloth
- Large cutting board
- Large, semi-stiff boning knife
- Steel and sharpening stone
- Watch or clock
- Pocket thermometer
- Food pans

**c. Points to Stress**

- Hazard Analysis and Critical Control Points (HACCP) Regulations
  - HACCP principles
  - HACCP guidelines for application
  - Recognize the importance of the time and temperature principle
  - Design flowcharts for whole turkey and turkey
- Identifying turkey quality points
  - Wholesomeness...quality...class...nutritive value...cost...convenience...and informative labeling are some of the points to consider when purchasing turkey.
- Listing common turkey products available on the market
  - Whole turkey
  - Turkey breast
    - Bone-in
    - Boneless
  - Thighs
    - Bone-in
    - Boneless
  - Drumsticks
    - Bone-in
    - Boneless
  - Wings
  - Roast
  - Bone-in Chops
  - Cutlets/Slices/Steaks
  - Tenderloins/Fillets
    - Medallions
  - Ground turkey
  - Sausage
  - Deli/Cooked turkey products

**d. Instructor Demo**

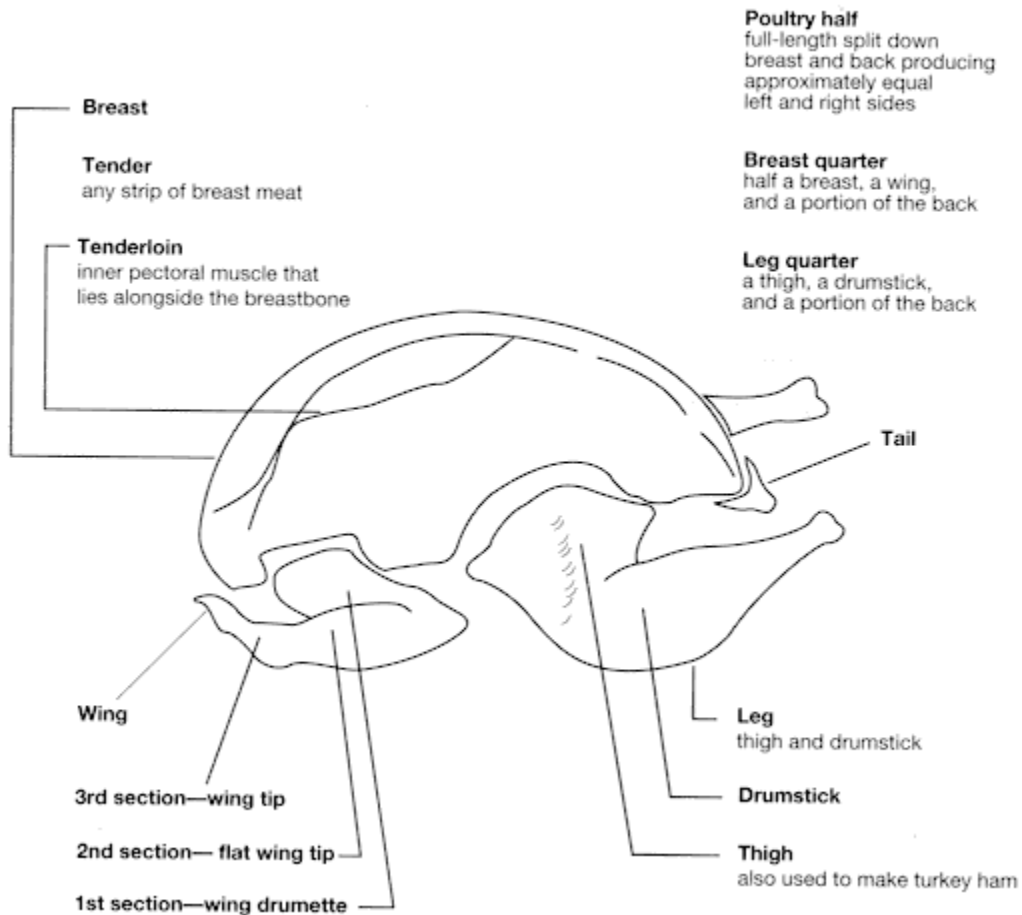
**The Bones of the Turkey:**

- The first bone you will feel in a bird's breast is the wishbone.
- Cartilage joins the apex of the wishbone to the breastbone, and its tips to the collarbones on both sides.
- The collarbones and shoulder blades are also connected by cartilage.
- The breastbone, backbone and rib cage give form to the body.
- Ball and socket joints attach the legs to the body, as well as the wings to the collarbones and shoulder blades.

### **Disjointing the Turkey:**

- Start with a clean and sanitized cutting board, and a clean and sharpened large semi-stiff boning knife.
- **Removing the Legs:** Placing the turkey carcass on the cutting board with its breast side up, pull one leg away from the body and slice through the skin between the body and the thigh using the tip of the boning knife. Bend the whole leg backwards until the ball of the thighbone releases from the socket. Using the whole blade of the knife, cut between the ball and socket to separate the leg. Repeat this same step with the other leg.
- **Dividing the Legs:** Placing each whole leg on the cutting board with the skin side down, cut through the joint between the drumstick and thigh to separate the pieces. Repeat this same step with the other leg.
- **Removing the Wing:** Press the top bone of a wing against the body of the turkey to determine the location of the ball and socket joint. Using the tip of the knife, make an incision between the ball and socket. Pull the wing away from the body and slice through the skin at the base of the wing. Repeat this same step with the other wing.
- **Halving the Carcass:** Insert the whole knife blade into the cavity of the turkey from its tail end. Pierce the thin area bordering the shoulder joint, collarbone and rib cage. Cut toward yourself and parallel to the backbone while slicing the rib cage bones. Repeat the same cut on the opposite side of the turkey's backbone.
- **Removing the Breast:** Pull the back and breast apart to expose the meat covered shoulder blades. Cut through the bones to detach the breast section. The back may be further divided in two pieces, at the end of the rib cage, if desired.

- Halving the Breast:** Place the full breast, with its skin side down, on the cutting board. Using the tip of the knife, slice away the tenderloins on either side of the breastbone, if desired. Cut down the length of the breastbone to separate the breast into two pieces. The breasts halves may be further divided to yield smaller breast portions or turkey steaks. The tenderloins may be cut into medallions.
- Making Cutlets:** Various sized cutlets may be fabricated from the boneless breast by slicing evenly across the grain of the breast with a slicer. Larger portions may be used as cutlets or steaks, while smaller pieces may be placed between wax paper and flattened with a meat mallet (and used similar to veal scallops).



#### d. Key Terms

- **HACCP:** Hazard Analysis and Critical Control Points. A systematic approach to food safety consisting of seven (7) principles:
  - Principle 1: Conduct a hazard analysis.
  - Principle 2: Determine the critical control points (CCPs).
  - Principle 3: Establish critical limits.
  - Principle 4: Establish monitoring procedures.
  - Principle 5: Establish corrective actions.
  - Principle 6: Establish verification procedures.
  - Principle 7: Establish recordkeeping and documentation procedures.
- **Quality Points:** Inspection of turkey for signs of quality and wholesomeness, including its sanitary condition, age, proper conformation, and color.
- **Time and Temperature Awareness:** The conscious effort of the food handler to maintain turkey at proper temperatures, and to prevent the poultry from being in the temperature danger zone for an excessive amount of time.
- **Cartilage:** The tough, whitish elastic connective tissue that helps give structure to the turkey.
- **Carcass:** The cleaned, dressed whole body of the slaughtered turkey.

#### 4. Student Activity: Student Fabrication

##### a. Resources

- Instructor's demo materials

##### b. Required Instructional Aids

- Cutting boards
- Boning knives
- Food pans
- Cleaning buckets with sanitizer, chlorine test paper/strips and towels
- Whole turkeys

##### c. Points to Stress

- Sanitation
- Safety
- Total utilization of product



#### d. Key Terms

- **Total utilization:** The conscious effort of using all meat and by-products after fabrication of the turkey.
- **Trimming:** Scrap pieces suitable for grinding into sausage, or for use in stuffing, stir-fried dishes, appetizers, soups or stock.

### 5. Lecture/Demo: Proper Methods of Cookery

#### a. Resources

- <http://www.turkeyfed.org/foodsrv/manual/prep1.html>
- <http://www.urbanext.uiuc.edu/turkey/techniques.html#good9>
- <http://www.eatturkey.com/consumer/raising/raise.html>

#### b. Required Instructional Aids

- Sauté pan
- Deep fryer with clean oil and thermometer
- Sauce pan
- Steamer
- Roasting pan
- Tongs
- Kitchen fork
- Skimmers
- Cutting board
- Chef knives
- Food pans

#### c. Points to Stress

- Today's more modern turkey production methods have shortened the time it takes to bring turkeys to maturity. The hen usually takes 14 weeks and weighs 15.5 pounds when processed. This compares to the tom, which takes 18 weeks to reach a market weight of 32 pounds.
- Hens are processed and usually sold as whole birds, while toms are further processed into products such as cutlets, tenderloins, turkey sausage, turkey franks and turkey deli meats.
- Domesticated turkeys are also bred to have more breast meat, meatier thighs and white feathers. Turkeys have been bred to have white feathers, so they leave no unsightly pigment spots under the skin when plucked.
- Cooking methods are characterized by the type of heat and type of equipment used to cook. These methods include:
  - **Dry Heat Cooking Method:** uses hot air or fat to transfer heat to the food.

- Roasting
  - Baking
  - Broiling
  - Grilling
  - Pan frying
  - Deep fat frying
  - Sauteing
- **Moist Heat Method:** uses steam, water or other liquids to transfer heat to the food.
    - Simmering
    - Boiling
    - Poaching
    - Steaming
  - **Combination Method:** uses both dry heat and moist heat procedures. Foods are first browned in hot fat, then covered and slowly cooked in a liquid over low heat.
    - Stewing
    - Braising

#### d. Key Terms

- **Tom turkey:** a male turkey
- **Hen turkey:** a female turkey
- **Yearling turkey:** a turkey under 15 months old
- **Dry Heat Method:** uses hot air or fat to transfer heat to the food.
- **Moist Heat Method:** uses steam, water or other liquids to transfer heat to the food.
- **Combination Method:** uses both dry heat and moist heat procedures. Foods are first browned in hot fat, then covered and slowly cooked in a liquid over low heat.

#### 6. Student Activity: Student Research on Internet

##### a. Resources

- [www.eatturkey.com/foodsrv/manual/fsmanual.html](http://www.eatturkey.com/foodsrv/manual/fsmanual.html)

##### b. Required Instructional Aids

- Multiple computers with Internet access
- Projector system for Instructor's computer

##### c. Points to Stress

- Accuracy is paramount to success. The use of proper spelling and correct URL addresses will enable the learner to be successful in their research.

**d. Finding Recipes on the Internet**

*(NOTE: Links to other sites are provided as a service and do not constitute an endorsement of any organization or responsibility for the content of the individual organization Web pages found at this link.)*

There are several ways to locate recipes on the Internet. Here are some suggestions to get started.

**1. Visit these Internet recipe sites**

Many of these sites offer added features of letting you specify certain ingredients, preparation time and nutritional content. They also provide cooking tips, definitions of food terms and much more.

*(NOTE: These links are provided for your general information. The information provided via these sites has not been formally evaluated and inclusion of these links DOES NOT constitute an endorsement of any organization. The links provided are maintained by their respective organizations and they are solely responsible for their content and policies.)*

[www.eatturkey.com/foodsrv/celebrty](http://www.eatturkey.com/foodsrv/celebrty) -- Everything you want to know about turkey, from recipe and restaurant preparation tips to professional turkey cooking demonstrations.

[www.americastestkitchen.com](http://www.americastestkitchen.com) -- Whether or not you watch the corresponding TV show, you may find many tips and recipes that make cooking easier and your foods taste better. Check the “Science Desk,” “Equipment Corner” and “Tasting Lab” at America’s Test Kitchen for information that will help you get the best results from your cooking.

<http://busycooks.About.com> -- This site provides many tips, recipes and resources for busy cooks.

[www.epicurious.com](http://www.epicurious.com) -- This site offers recipes from *Bon Appétit* and *Gourmet* magazine.

[www.foodtv.com](http://www.foodtv.com) -- Find recipes from shows on the television food channel.

[www.mealsmatter.org](http://www.mealsmatter.org) -- This meal planning Web site features recipes and personalized nutrition tips to help families prepare healthy meals. Users can create family cookbooks, shopping lists and plan meals.

[www.recipelink.com](http://www.recipelink.com) -- This site features links to more than 10,000 food and cooking sites.

**2. Type in the name of a food company in the “location” or “address” area on your web browser: [www.company.com](http://www.company.com).**

**3. Use an Internet “search engine”**

Most web browsers offer a button to access various search engines. Just type in the name of the kind of recipes you wish in the “search” blank, such as “sweet potato recipe” or “bread machine recipe.” Check for further tips at the search engine site on how to refine your search. Here are links to two popular search engines that tend to find a lot of recipes:

[www.google.com](http://www.google.com)

[www.yahoo.com](http://www.yahoo.com)

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**e. Key Terms**

- **Cyberspace:** The universe of computers, programs and data.
- **HTTP URL’s:** HyperText Transport Protocol (HTTP) form of Uniform Resource Locator (URL). Commonly used for identifying hypertext documents, such as recipe web sites.
- **Web browser:** A user’s interface to the World Wide Web; it interprets hypertext links and lets the user view sites and navigate from one Internet node to another. Among the companies that produce browsers are NCSA Mosaic, Netscape and Microsoft, as well as commercial services like CompuServe, Prodigy, and America Online.
- **Search engine:** A general class of programs, the term is often used to specifically describe systems like [www.google.com](http://www.google.com) and [www.yahoo.com](http://www.yahoo.com) that enable users to search for documents on the World Wide Web and USENET newsgroups.
- **Links:** The connection that traffic flows over, generally from one URL address to another.

**7. Student Activity: Mystery Cut Exercise (Practical Exam)**

**a. Resources**

- Mystery Cut Score Sheets (Instructor designed)

**b. Required Instructional Aids**

- Cleaning buckets with sanitizer, chlorine test paper/strips and towels
- Assorted cuts of turkey
- Assorted general pantry (Common Kitchen) items, including: vegetables, starches, lentils and legumes, seasonings and

flavoring agents, oils and cooking agents, flour and bread crumbs

- Assorted cooking equipment, including: ranges, ovens, pots, pans, food processors, bowls, kitchen spoons, tongs

**c. Points to Stress**

- Sanitation
- Safety
- Full utilization of product
- Creativity
- Proper method of cookery

**d. Key Terms**

**8. Student Activity: Module Progress Check (Written Exam)**

**a. Resources**

- [www.eatturkey.com/foodsrv/manual/fsmanual.html](http://www.eatturkey.com/foodsrv/manual/fsmanual.html)
- [www.restaurant.org/foodsafety](http://www.restaurant.org/foodsafety)
- [www.foodsafety.gov](http://www.foodsafety.gov)
- <http://lancaster.unl.edu/food/ciqj.htm>
- <http://www.fsis.usda.gov>
- <http://vm.cfsan.fda.gov/~comm/nacmcfp.html#princ>
- <http://www.urbanext.uiuc.edu/turkey/techniques.html#good9>
- <http://www.fightbac.org.main.cfm>

**b. Required Instructional Aids**

- Progress Check (Instructor designed)

**c. Points to Stress**

- Sanitation
- Product utilization
- Menu application
- Methods of cookery
- Internet resources

**d. Key Terms**

**Bibliography:**

**A. Books**

Henrickson, Robert L. *Meat Poultry and Seafood Technology*. Englewood Cliffs, NJ: Prentice Hall, Inc., 1978.

Labensky, Steven and Ingram, Gayle and Labensky, Sarah. *Webster's New World Dictionary of Culinary Arts*. 2<sup>nd</sup> Edition. Upper Saddle River, NJ: Prentice Hall, 2001.

McAndrew, Ian. *Poultry and Game*. New York, NY: Van Nostrand Reinhold, 1990.

Time-Life Books. *Poultry*. Alexandria, VA: 1978.

**B. Web Sites**

[www.eatturkey.com/foodsrv/manual/fsmanual.html](http://www.eatturkey.com/foodsrv/manual/fsmanual.html)

[www.restaurant.org/foodsafety](http://www.restaurant.org/foodsafety)

[www.foodsafety.gov](http://www.foodsafety.gov)

<http://lancaster.unl.edu/food/ciqj.htm>

<http://www.fsis.usda.gov>

<http://vm.cfsan.fda.gov/~comm/nacmcfp.html#princ>

<http://www.urbanext.uiuc.edu/turkey/techniques.html#good9>

<http://www.fightbac.org/main.cfm>