

Information Bulletin
for
Pre-Professional Assessment and Certification
in
Culinary Arts



American Association of Family and Consumer Sciences
Alexandria, VA 22314

(703) 706-4600
www.aafcs.org

Information Bulletin
for
Pre-Professional Assessment and Certification
in
Culinary Arts

Table of Contents

	<u>Page</u>
Overview	3
Description of the Assessment and Certification	3
Uses of the Assessment and Certification	4
Careers	4
Assessment Specifications	5
Format	5
Scoring	6
Assessment at a Glance	7
Content Outline of Domains and Competencies	7
Sample Assessment Items	12
Suggested Preparation Techniques	14
Suggested Instructional Resources	15
Acknowledgements	15

Overview

The American Association of Family and Consumer Sciences (AAFCS), a well-respected leader in the FCS field, proudly offers the Pre-Professional Assessment and Certification (Pre-PAC) Program, creating the ***premier*** family and consumer sciences pre-professional assessment and certification system in the nation. AAFCS added a portfolio of standards-based assessments and industry-recognized certifications to support pre-professional level family and consumer sciences career areas and programs of study for the following reasons:

- To help satisfy the growing emphasis on assessment and accountability in secondary and postsecondary education, including requirements for Perkins funding for Career and Technical Education, and
- To help satisfy the growing emphasis on credentials as a human resource and quality control tool in employment settings throughout the career ladder.

Through these assessments, AAFCS assures that pre-professionals are effectively prepared with the knowledge and skills necessary for demanding career opportunities, therefore providing a workforce to meet the needs of business and industry in the demanding U.S. economy.

Given that the restaurant industry is the largest employer in the nation (outside of government), that the culinary industry is experiencing increased growth, and that the employment outlook for culinary professionals is expected to be plentiful, AAFCS developed a national standards-based competency assessment measuring knowledge and skills in culinary arts. Special attention is given to the application of the concepts and content.

Description of the Assessment and Certification

Assessments in the Pre-PAC portfolio are high quality, rigorous, valid, and reliable as documented through formal psychometric analysis of pilot test data. The assessments are delivered through a premier online testing platform and are used to validate competency at the pre-professional level.

The Culinary Arts Assessment and Certification are:

- driven by business and industry standards;
- based on relevant content standards and consistent with the National Standards for Family and Consumer Sciences Education and the National Career Clusters Initiative;
- appropriate to validate achievement of culinary arts competencies;
- useful in a broad range of education and employment settings, such as secondary and post-secondary education, community-based education programs, and employer-based human resource and staff development programs; and
- advantaged to utilize a gold-standard, computer-based testing platform format that provides for valid and reliable competency measurement and a reporting mechanism for data-driven program improvement, accountability, and individual remediation and acceleration.

Uses of the Assessment and Certification

The assessments have application in a broad range of education, community development, staff development, and human resource settings where there is a need to document or validate competency achievement. Pre-PAC assessments are designed for use with secondary and post-secondary students and programs, pre-professionals working in early employment positions, and employers conducting staff development and training for pre-professionals. Further, the assessment and certification can be used to:

- document exit-level achievement in rigorous secondary programs and lower division post-secondary courses;
- satisfy accountability reporting mandates required by federal Perkins IV legislation as well as state and local policies;
- facilitate seamless articulation, placement, and credit-by exam within post-secondary institutions;
- validate competencies required for employment at the pre-professional and/or paraprofessional level; and
- provide an industry-recognized, pre-professional level certification.

Careers

The Culinary Arts assessment and certification address a skill set necessary for success in the culinary industry. This assessment and certification will facilitate employment in early career ladder positions and promote continuing education at the post-secondary level preparing for careers associated with:

- restaurants,
- institutional food service,
- hospitality and catering, and
- food and beverage operations.

In accordance with those career areas, the assessment is aligned with the following National Career Clusters:



The Career Clusters Icons are being used with permission of the:



States' Career Clusters Initiative, 2010, www.careerclusters.org

Assessment Specifications

The assessment specifications provided in this section of the bulletin are intended to provide test candidates with a comprehensive overview of the domains and competencies that are covered on the assessment.

Format

A large bank of high quality, valid test items have been developed for each Pre-PAC assessment. Each test administered is a unique combination of 80, four-option multiple choice items randomly selected from the item bank. Each of the items has only one (1) correct response. Of the 80 items presented on the assessment, 70 are scored and 10 are non-scored (used for piloting and research purposes).

The online testing software presents the items in five to seven groups or “blocks” corresponding to the domain areas identified on the assessment competency list. Testing is conducted under the supervision of proctors using PC or MAC computers in approved local schools and employment sites. During the assessment administration, it is possible to navigate forward and backward between items within a block of items. As items are viewed, they can be answered, skipped, or flagged for later review prior to submitting the item block. The testing software restricts access to other computer functions while the test is open. Local test administrators and proctors are authorized to make testing accommodations formally specified in Individual Education Plans for those with special needs.

In addition to each item being associated with a domain and competency, the items are also designed to assess appropriate cognitive levels necessary for competent practice. Specifically, some items assess at the lower level, some at the middle levels, and some at higher order levels. The items included on each test proportionally represent three cognitive difficulty levels:

- Level 1- 40%;
- Level 2 – 30%; and
- Level 3 – 30%.

Original Bloom's Taxonomy	Revised Bloom's Taxonomy	Pre-PAC Cognitive Complexity Level
<u>Knowledge</u> Defines, describes, identifies, labels, lists, matches, names, reads, records, selects, states, views	<u>Remember</u> Recognize, retrieve, identify, recall	1
<u>Comprehension</u> Classifies, describes, discusses, lists, matches, names, reads, records, selects, states, views	<u>Understand</u> Interpret, clarify, translate, illustrate, categorize, classify, conclude, predict, summarize, infer, compare, explain	

<u>Application</u> Assesses, determines, develops, discovers, establishes, informs, predicts, projects, provides, relates, shows, uses	<u>Apply</u> Execute, carry out, use, implement	2
<u>Analysis</u> Breaks down, correlates, differentiates, illustrates, infers, points out, recognizes	<u>Analyze</u> Differentiate, select, focus, organize, outline, attribute, determine point of view	
<u>Synthesis</u> Communicates, compares, contrasts, creates, designs, expresses, formulates, plans, reorganizes, reinforces, substitutes	<u>Evaluate</u> Check, coordinate, detect, monitor, test, critique, judge	3
<u>Evaluation</u> Appraises, compares & contrasts, concludes, criticizes, decides, defends, interprets, judges, justifies, supports	<u>Create</u> Generating, hypothesizing, planning, designing, producing, constructing	

Scoring

Once the assessment is submitted, results will be available immediately to the test candidate. The results provide an overall percentage score, a breakdown of scores corresponding to the domain levels on the competency list, and the indication whether pre-professional certification has been achieved. Based on the rigor and difficulty level of the assessment, the national cut score for pre-professional certification eligibility is established annually by AAFCS. Individuals who complete the assessment and earn the cut-score for certification are granted a time-limited pre-professional certification (3 years).

Scores can be used to demonstrate an individual's learning and competency, pinpoint weaknesses or gaps in performance, improve programs and curriculum, and demonstrate accountability to various stakeholders. Through articulation agreements, scores may be used as the basis for advanced placement and/or credit-by-exam by post secondary institutions. Thus, state and local entities have latitude for independently establishing passing or qualifying scores for other purposes.

Assessment At A Glance

The specific content being assessed by the items on the assessment follows the test specifications outlined in this section of the bulletin. Please note the number of items on the assessment in each domain.

Domain	Weighting	Number of Items
1. Safety, Health, and Environment	15%	11
2. Management, Leadership, and Teamwork	10%	7
3. Ethics and Legal Responsibility	10%	7
4. Employability and Career Development	10%	7
5. Technical Skills – Customer Service (FOH)	10%	7
6. Technical Skills (BOH)	21%	14
7. Preparation Techniques (BOH)	24%	17

Content Outline for Domains and Competencies

The following outline provides an overview of the content addressed within the domains and competencies. The outline is provided as a tool to be used for guidance in preparations for the assessment and is not intended to be totally inclusive. The numbered concepts listed under each competency are meant to be representative rather than prescriptive.

Domain 1: Safety, Health, and Environment

Competency 1A: Analyze workplace safety conditions

- 1.A.1 Safety training
- 1.A.2 OSHA
- 1.A.3 Right-to-know requirements
- 1.A.4 Types of fires
- 1.A.5 Fire triangle
- 1.A.6 Treatment of burns
- 1.A.7 Types of hazards (biological, physical, chemical, natural)
- 1.A.8 Lifting procedures
- 1.A.9 Four-step PASS technique
- 1.A.10 Preventing and treating cuts in the kitchen

Competency 1B: Analyze food and beverage safety and sanitation procedures

- 1.B.1 Types of contaminants
- 1.B.2 Types of contamination/poisoning (i.e., Botulinum toxin; E. coli 0157:H7; Listeriosis poisoning; Toxoplasmosis illness; Foodborne botulism; Perfringens poisoning; Salmonellosis infection; Staphylococcal poisoning; Parasites)
- 1.B.3 Foodborne illnesses
- 1.B.4 Proper use of insecticides
- 1.B.5 Safe food handling practices and procedures (i.e., avoiding cross-contamination; thawing foods, etc)
- 1.B.6 HACCP
- 1.B.7 Proper chef attire for safety and sanitation
- 1.B.8 Temperature of foods
- 1.B.9 Fish toxins

Competency 1C: Understand sustainability processes

- 1.C.1 Environmental protection laws
- 1.C.2 Energy Star System
- 1.C.3 Energy saving tips for appliances

Domain 2: Management, Leadership, and Teamwork

Competency 2A: Analyze basic management skills necessary for success

- 2.A.1 Leadership qualities
- 2.A.2 Culinary professional organizations
- 2.A.3 Conflict resolution
- 2.A.4 Problem solving
- 2.A.5 Delegating
- 2.A.6 Managing teams
- 2.A.7 Motivating others

Competency 2B: Apply effective communication skills

- 2.B.1 Active listening techniques
- 2.B.2 Record keeping
- 2.B.3 Verbal and non-verbal communication

Competency 2C: Evaluate procedures of purchasing, receiving, issuing, storing and inventory management

- 2.C.1 Purchasing
- 2.C.2 Receiving
- 2.C.3 Use of stored food
- 2.C.4 Types of inventory
- 2.C.5 Par stock
- 2.C.6 Re-ordering

Competency 2D: Determine effective methods of controlling costs of labor, production and food service facilities

- 2.D.1 Labor costs and factors influencing labor costs
- 2.D.2 Types of work schedules in foodservice operations
- 2.D.3 Uniform System of Accounts for Restaurants
- 2.D.4 Types of insurances for foodservice facilities
- 2.D.5 Calculating cost per serving

Domain 3: Ethics and Legal Responsibility

Competency 3A: Analyze ethical issues and implications

- 3.A.1 Work ethic
- 3.A.2 Code of ethics
- 3.A.3 Ethical issues in the workplace
- 3.A.4 Employee theft
- 3.A.5 Civil Rights Act
- 3.A.6 Liquor sales and laws

Competency 3B: Evaluate organizational policies and procedures

- 3.B.1 Fair Labor Standards Act
- 3.B.2 Legitimate condition of employment
- 3.B.3 Policies and procedures manual

Competency 3C: Analyze risk management and legal liability

- 3.C.1 Laws affecting foodservice industry
- 3.C.2 Governmental regulations
- 3.C.3 Zoning boards and procedures
- 3.C.4 Licenses and inspections
- 3.C.5 Minimum wage

Domain 4: Employability and Career Development

Competency 4A: Understand career opportunities in hospitality, tourism, and recreation

- 4.A.1 Job shadowing and internships
- 4.A.2 Career planning (i.e., career plans, career ladder, etc.)
- 4.A.3 Types of foodservice positions
- 4.A.4 Evaluating job offers
- 4.A.5 Benefits of membership in professional and trade associations

Competency 4B: Demonstrate roles and duties in food production and service careers

- 4.B.1 Role of chef
- 4.B.2 Role of general manager
- 4.B.3 Role of banquet chef
- 4.B.4 Other food preparation and service careers

Competency 4C: Evaluate effective work behaviors and personal qualities

- 4.C.1 Accepting authority
- 4.C.2 Cover letter and résumé development
- 4.C.3 Interviewing skills
- 4.C.4 Portfolio development

Competency 4D: Understand strategies to manage multiple roles and responsibilities

- 4.D.1 Managing stress
- 4.D.2 Managing time
- 4.D.3 Proper nutrition basics
- 4.D.4 Family and Medical Leave Act

Domain 5: Technical Skills – Customer Service (FOH)

Competency 5A: Demonstrate effective customer service skills necessary for success

- 5.A.1 Front-of-house positions and tasks
- 5.A.2 Traits of a successful culinarian
- 5.A.3 Professionalism
- 5.A.4 Customer feedback (i.e., obtaining, purpose of and use)

Competency 5B: Differentiate between the different types and styles of food service

- 5.B.1 Types of restaurants
- 5.B.2 Types of service
- 5.B.3 Independent vs. chain restaurants
- 5.B.4 Franchises

Competency 5C: Summarize types of technology utilized in food service operations

- 5.C.1 Point of sale (POS) systems
- 5.C.2 Computer use and applications in restaurants

Domain 6: Technical Skills (BOH)

Competency 6A: Apply menu planning principles and techniques based on standardized recipes

- 6.A.1 Types of menus
- 6.A.2 Calculating menu price using mark-up method
- 6.A.3 Calculating menu item costs
- 6.A.4 Calculating menu price

Competency 6B: Apply nutrition principles during menu development and food preparation

- 6.B.1 Nutrients (i.e., vitamins, minerals, proteins, carbohydrates, fats, and water)
- 6.B.2 Use of dietary reference intakes (DRI)
- 6.B.3 Current government nutrition guidelines (MyPlate – formerly MyPyramid)
- 6.B.4 Percent Daily Value on Nutrition Facts Panel
- 6.B.5 Healthy food choices

Competency 6C: Apply appropriate weighing and measurement skills and tools

- 6.C.1 Measuring techniques
- 6.C.2 Common measures
- 6.C.3 Formulas for calculating the conversion factor (i.e., increasing or decreasing yield)

Competency 6D: Execute a recipe using correct conversions and menu terminology

- 6.D.1 Reading and following a recipe
- 6.D.2 Mixing techniques
- 6.D.3 Equivalent measures
- 6.D.4 Substitutions
- 6.D.5 Standardized recipes

Competency 6E: Understand the selection, use, storage and maintenance of tools and equipment

- 6.E.1 Types of cooking tools and equipment
- 6.E.2 Proper use of cooking tools and equipment
- 6.E.3 Knives and knife safety

Competency 6F: Understand food cost analysis and controls

- 6.F.1 Invoices
- 6.F.2 Costing recipes
- 6.F.3 Controlling labor costs
- 6.F.4 Food cost percentage
- 6.F.5 Controlling food costs
- 6.F.6 Determining menu price

Domain 7: Preparation Techniques

Competency 7A: Summarize food preparation methods and techniques

- 7.A.1 Proper cooking techniques
- 7.A.2 Types of cooking methods
- 7.A.3 Knife skills
- 7.A.4 Sauces
- 7.A.5 Mise en place

Competency 7B: Create professional plating utilizing garnishing, and food presentation techniques

- 7.B.1 Principles for food arrangement and plating
- 7.B.2 Plate presentation
- 7.B.3 Buffet arrangement
- 7.B.4 Garnishing

Sample Assessment Items

A series of sample test items is provided below. These items are not intended to serve as a study mechanism, but to familiarize candidates with the format, style and structure of the items that can be expected on the tests. Always choose the one best answer.

1. Falls in the kitchen can be prevented by____. (Domain 1, Competency A)
 - A. standing on a stable chair to reach items that are stored in high places
 - B. keeping floors dry and wiping spills immediately after each occurrence
 - C. storing commonly used items on the highest racks in the dry storage area
 - D. being very careful when running in the kitchen or in service areas
2. Which of the following are possible benefits of teamwork? (Domain 2, Competency A)
 - A. Efficiency, job satisfaction, and improved relationships
 - B. Groupthink, combined strengths, and constructive criticism
 - C. Mutual support, speedy decisions, and personal development
 - D. Resolution of conflicts, mutual support, and greater independence
3. A restaurant that has decided to eliminate trans fats and utilize local organic produce from approved sources may be operating with which of the following common organizational objectives in mind? (Domain 3, Competency A)
 - A. Management development
 - B. Ethical objectives
 - C. Desire for diversification
 - D. Employee welfare

4. Which of the following are the areas where liability issues arise in the hospitality business? (Domain 3, Competency C)
- A. Damage to property, guest safety and injuries, guest privacy, and the theft of property
 - B. Food safety and sanitation laws, smoking ordinances, liquor laws, and employment laws
 - C. Worker safety laws, hiring laws, building and zoning laws, and environmental protection
 - D. Zoning and building laws, theft and security laws, work ethics, and health concerns.
5. Alicia has taken a high school culinary arts course and now wants to gain experience in a restaurant kitchen. She could work for pay in the evenings, on the weekends, or during the summer. This is called having _____. (Domain 4, Competency A)
- A. an apprenticeship
 - B. a full-time job
 - C. a part-time job
 - D. a volunteer position
6. Which of the following is commonly part of presetting the dining room area? (Domain 5, Competency A)
- A. Polish dishes with a damp napkin and polish flatware with steam and a clean cloth.
 - B. Polish flatware with silver polish and polish glassware with commercial glass cleaner.
 - C. Polish flatware with a damp napkin and polish glassware with steam and a clean cloth.
 - D. Polish glassware with a dry napkin and polish flatware with a sanitary spray.
7. To measure large quantities of food when it is delivered to the kitchen, foodservice staff uses a _____. (Domain 5, Competency D)
- A. portion-type scale
 - B. balance-beam scale
 - C. receiving scale on floor
 - D. small, but digital scale
8. When measuring, which of the following liquids is one fluid ounce equal to one ounce in weight? (Domain 6, Competency C)
- A. Tomato sauce, cream soup, gravy
 - B. Stock, broth, juice
 - C. Milk, ice cream, whip cream
 - D. Condensed milk, ice cream, whip cream
9. When meat is cooked to its appropriate temperature, the connective tissues that make up the meat are _____. (Domain 7, Competency A)
- A. made stronger
 - B. broken down
 - C. filled with bubbles
 - D. unaffected
10. Chef Tomas' is teaching his apprentice how to sauté' meat. Which of the following is the proper method for sautéing meat? (Domain 7, Competency A)
- A. Quick cooking done over high heat
 - B. Quick cooking done over low heat
 - C. Slow cooking done over low heat
 - D. Slow cooking done over medium heat

Answer Key:

- | | |
|------|-------|
| 1. B | 6. C |
| 2. A | 7. C |
| 3. B | 8. B |
| 4. A | 9. B |
| 5. C | 10. A |

Suggested Preparation Techniques

The assessment measures two things: knowledge of the subject matter and ability to take an assessment. The first depends on the preparation, instruction, and experience gained in the selected content area. The second depends on self-confidence and experience with multiple-choice questions. It also depends upon the ability to recognize related information or solutions to problem situations.

In preparation for the assessments, test candidates should:

- Avoid situations that would trigger emotions such as worry, anger, depression, and lack of confidence right before the test day. These emotions interfere with memory and are sometimes called “memory thieves.”
- Follow the directions! If read too quickly, something important may be missed.
- Read each item very carefully and avoid jumping to conclusions based upon a quick skimming of the wording.
- See if they can answer the item before looking at the four (4) response options.
- Never think they have immediately spotted the correct response. “Back into” the correct response by first eliminating the incorrect choices.
- Answer each item. Look for clues in the item and even in the choices. If able to eliminate some options, the chances of selecting the correct answer are improved. Use the “flag” options to denote items to come back to within the item block.
- Read the “Candidate Guide to Assessments.” It is important to understand details about online testing and navigation.

Suggested Instructional Resources

The Pre-PAC Instructional Resource Directory provides a list of suggested resources providing content addressed within Pre-PAC assessments. Development panel members and instructors have identified resources that would be relevant and useful in addressing the domains and competencies within the assessment. Use of the references and resources do not guarantee successful completion of the assessment.

AAFCS does not endorse any external products (textbooks, curriculum, etc), vendors, consultants, or documentation that may be referenced in the Directory. While every effort will be made to ensure accuracy and reliability of content, AAFCS assumes no responsibility for errors or for use of the information provided. Additionally, AAFCS disclaims any and all liability for any claims or damages that may result from providing information contained on the site, including any Web sites maintained by third parties and linked to the Pre-PAC site. The responsibility for content rests with the organizations that provide the information. The inclusion of links from the site does not imply endorsement by AAFCS.

The Pre-PAC Instructional Resource Directory is available online in the “Assessment and Certification Resources” section of each assessment web page.

Acknowledgements

AAFCS has engaged the assistance of a broad range of esteemed culinary arts professionals and educators from across the nation to assist in identifying relevant industry standards and to develop the assessment instrument. Recognizing the value of a solid assessment tool in assuring effective preparation of individuals with knowledge and high quality culinary skills, the following stakeholders participated on the development panel for the assessment and certification:

- Jeff Santicoloa, LeCordon Bleu Schools North America, Hoffman Estates, IL
- Tony Bayer, Macaroni Grill, Cleveland, OH
- Chris Arreola, Bonefish Grill, Tampa, FL
- Kathy Granquist, Famous Daves of America, Inc., Minnetonka, MN
- Linda Bebee, Texas Beef Council, Austin, TX
- Don J. Bingham, University of Central Arkansas Special Events, Conway, AR
- Jenny Lou Bird, Cast Iron Catering, Rayville, LA
- Micheal McGreal, Joliet Junior College, Joliet, IL
- Mary Etta Moorachian, Johnson and Wales, Tega Cay, SC
- Cheryl Landers, Grandview High School, Grandview, MO
- Andy Mogle, Norwalk High School, Norwalk, IA