Hospitality, Tourism, and Culinary Arts CTAG Alignment

This document contains information for seven (7) Career-Technical Articulation Numbers (CTANs) for the Hospitality, Tourism, and Culinary Arts Career-Technical Assurance Guide (CTAG).

The CTANs are:
1. Sanitation and Safety
2. Introduction to Hospitality and Tourism
3. Basic Food Production
4. Front Office Operations
5. Technology in the Hospitality Industry
6. Front Office Operations and Housekeeping Operations for the Lodging Industry
7. Food Principles and Purchasing

**1. <u>Sanitation and Safety</u>:** CTAN alignment with the Hospitality and Tourism Career Field Technical Content Standards of the Ohio Department of Education

**General Course Description:** This course is a comprehensive course in the study of Servsafe® foundations. Included is a study of the flow of food through HACCP (Hazard Analysis Control Points) procedures; which include the control of microorganisms, contamination, food borne illness, food allergens, the safe food handler, materials handling, care of facilities and equipment, pest control, self-inspection, and safety practices to maintain a safe and healthy environment for the consumer. Applicable federal and state laws and regulations, science-based and best practices relevant to safety and sanitary facilities design are also studied.

**Advising Notes:**
- Students must access credit within 3 years of program completion.
- Students must hold a current ServSafe Manager Certification offered through the National Restaurant Association (NRA).

**Semester Credit Hours**: 2.0
All Learning Outcomes marked with an asterisk are essential and must be taught.

| Learning Outcomes<br><br>The student will be able to: | Competencies from the Ohio Department of Education, Hospitality and Tourism Career Field Technical Content Standards |
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| *1.Identify pathogens, and the toxins that some produce, responsible for foodborne illnesses that can occur in food and develop during the preparation of food | 3.1.3. Identify types of foodborne illness caused by bacteria and viruses, their common symptoms and the food items most at risk for contamination.<br><br>3.1.4. Identify parasites, fungi, and biological toxins by their characteristics and the major foodborne illnesses with which they are linked.<br><br>3.1.5. Identify conditions under which bacteria multiply rapidly (i.e., FAT TOM: food, acidity, temperature, time, oxygen, moisture), and implement preventive measures. |
| *2.Define concepts and procedures for the flow of food through the operation | 1.3.2. Follow protocols and practices necessary to maintain a clean, safe, and healthy work environment<br><br>3.1.1. Identify methods and practices to control or eliminate pathogens and the spread of harmful bacteria, viruses, parasites, fungi and toxins. |

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| | 3.1.6. Identify the symptoms and consequences of allergic reactions and intolerances, and implement exposure-prevention strategies. |
| | 3.1.7. Identify sources of common allergens, and implement exposure prevention strategies |
| | 3.2.1. Identify personal actions and behaviors that contribute to contamination and cross-contamination of food, and describe ways to prevent those issues. |
| | 3.2.2. Identify when hand-washing must occur, and wash hands using the five-step technique. |
| | 3.2.5. Describe situations when food-handlers should be restricted or excluded from working with food or being in the operation. |
| | 3.3.2. Describe the impact of Hazard Analysis and Critical Control Point (HAACP) food safety management system on food service. |
| | 3.3.3. Identify critical control points (Hazard Analysis and Critical Control Point [HAACP]). |
| | 3.3.4. Identify potential biological, chemical and physical hazards. |
| | 3.3.5. Identify potentially hazardous foods (PHF), Time and Temperature Control for Safety of Food (TCS) and foods in the temperature danger zone (TDZ). |
| | 3.3.6. Follow precautionary guidelines established to address food-safety issues for high-risk populations and to reduce potential exposure to harmful pathogens. |
| | 3.3.7. Identify the effects of water characteristics, food pH levels and moisture levels on food safety and sanitation. |
| | 3.3.8. Monitor and track food temperatures throughout the receiving, thawing, storing, cooking and holding processes. |
| | 3.3.9. Control environment for consumer self-service foods. |
| | 3.3.10. Mark, label, store, and dispose of food and food by-products (e.g., fats, oil, grease). |
| | 3.3.11. Identify warning signs indicating potential food-safety issues during the receiving, storing and serving processes based on food type. |
| | 3.3.12. Take corrective actions to maintain food safety. |
| *3. Differentiate among various cleaning products and sanitizing products, and identify common pests and appropriate methods of eradication. | 3.4.1. Distinguish between cleaning, sterilizing and sanitizing. |
| | 3.5.3. Identify signs of infestations. |
| | 3.5.4. Develop and implement pest management procedures. |
| | 3.5.5. Select and mix cleaning or sanitation solutions in the right proportions, and label container. |
| | 3.5.6. Handle, label, store, and dispose of hazardous chemicals and waste. |
| | 3.5.7. Determine actions to take in response to biohazard and contamination incidents. |

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| *4. Describe operational practices that comply with laws, rules and regulations (of the Ohio Department of Health, FDA, USDA and OSHA) governing hospitality/ tourism operations standards and identify training methods to ensure compliance. | 1.1.6. Explain the importance of work ethic, accountability, and responsibility and demonstrate associated behaviors in fulfilling personal, community, and workplace roles.<br><br>1.1.7. Apply problem-solving and critical-thinking skills to work-related issues when making decisions and formulating solutions.<br><br>1.2.1. Extract relevant, valid information from materials and cite sources of information.<br><br>1.2.7. Use problem-solving and consensus-building techniques to draw conclusions and determine next steps.<br><br>1.3.1. Analyze how regulatory compliance affects business operations and organizational performance.<br><br>1.3.2. Follow protocols and practices necessary to maintain a clean, safe, and healthy work environment.<br><br>1.3.4. Identify how federal and state consumer protection laws affect products and services.<br><br>1.3.5. Access and implement safety compliance measures (e.g., quality assurance information, safety data sheets [SDSs], product safety data sheets [PSDSs], U.S. Environmental Protection Agency [EPA], United States Occupational Safety and Health Administration [OSHA]) that contribute to the continuous improvement of the organization.<br><br>3.1.1. Identify methods and practices to control or eliminate pathogens and the spread of harmful bacteria, viruses, parasites, fungi and toxins.<br><br>3.1.2. Describe the nature and scope of the government agencies responsible for the prevention of foodborne illnesses.<br><br>3.1.6. Identify the symptoms and consequences of allergic reactions and intolerances, and implement exposure-prevention strategies.<br><br>3.3.1. Describe food-safety guidelines (e.g., FDA Food Code), local health-code requirements and the consequences of failing to comply.<br><br>3.3.2. Describe the impact of Hazard Analysis and Critical Control Point (HAACP) food safety management system on food service.<br><br>3.3.6. Follow precautionary guidelines established to address food-safety issues for high-risk populations and to reduce potential exposure to harmful pathogens.<br><br>3.3.11. Identify warning signs indicating potential food-°©-safety issues during the receiving, storing and serving processes based on food type<br><br>3.3.12. Take corrective actions to maintain food safety.<br><br>3.4.2. Implement equipment safety requirements, and adhere to health and safety codes that restrict equipment use. |

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| | 3.5.1. Analyze the root causes of accidents, and identify prevention strategies. |
| | 3.5.8. Assess fire hazards, and determine fire prevention strategies. |
| | 3.5.9. Develop and implement evacuation procedures and protocols in a variety of settings. |
| | 3.5.10. Respond to illness outbreaks, medical issues and medical emergencies. |
| | 3.5.11. Respond to health code violations, and develop corrective action plans. |
| | 3.5.12. Prepare for internal and external safety checks and inspections. |
| | 3.5.13. Conduct self-inspection audits. |

**2. Introduction to Hospitality and Tourism:** CTAN alignment with the Hospitality and Tourism Career Field Technical Content Standards of the Ohio Department of Education

**General Course Description:** This course is a comprehensive overview of the related fields in the hospitality industry from the local, national, and global perspective. This course will include exploration and considerations of travel, tourism, hotel lodging, food service, beverage operations, meetings, conventions and expositions, leisure and recreation as career possibilities. Industry guest speakers, study of trade publications, and research provide information on industry trends, career opportunities, sustainability, and industry best practices.

**Advising Notes:**

▪ Students must access credit within 3 years of program completion.

**Semester Credit Hours:** 2.0

All Learning Outcomes marked with an asterisk are essential and must be taught.

| Learning Outcomes<br>The student will be able to: | Competencies from the Ohio Department of Education, Hospitality and Tourism Career Field Technical Content Standards |
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| *1. Recall historical, cultural, political, economic, social, and personal relationships of the hospitality industry | 1.2.1. Extract relevant, valid information from materials and cite sources of information.<br><br>2.1.1. Describe the relationship between the economy and the hospitality and tourism industry.<br><br>2.1.2. Identify the key segments of the hospitality and tourism industry, and explain their interdependence.<br><br>8.1.2. Analyze the effect of cultural, historical and sociological developments and trends on lodging services. |
| *2. Describe functions, goals, missions, and purpose of various professional hospitality organizations, businesses, groups, and associations | 1.1.4. Describe the role and function of professional organizations, industry associations, and organized labor and use networking techniques to develop and maintain professional relationships. |

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| | 2.1.3. | Explain the role of Convention and Visitors Bureaus (CVB), Destination Marketing Organizations (DMO) and tourism distribution organizations in generating hospitality and tourism business. | |
| *3.Select industry trade resources, publications and training references as a means to learn more about field interests and career development opportunities. | 1.2.1. | Extract relevant, valid information from materials and cite sources of information. | |
| | 2.1.4. | Identify changes occurring in hospitality and tourism as a result of technological advancements and competing online services. | |
| *4.Compare and evaluate job positions, and qualifications commonly sought by hospitality employers, and the characteristics of successful hospitality employees in various job positions. | 1.1.1. | Identify the knowledge, skills, and abilities necessary to succeed in careers. | |
| | 1.1.2. | Identify the scope of career opportunities and the requirements for education, training, certification, licensure, and experience. | |
| | 1.1.3. | Develop a career plan that reflects career interests, pathways, and secondary and postsecondary options. | |
| | 1.1.8. | Identify the correlation between emotions, behavior, and appearance and manage those to establish and maintain professionalism. | |
| *5.Recall required steps within the pathway to reach Hospitality career goals and perform a personal audit of skills, behaviors, personality traits, character and strengths to assist in defining career interests. | 1.1.2. | Identify the scope of career opportunities and the requirements for education, training, certification, licensure, and experience. | |
| | 1.1.3. | Develop a career plan that reflects career interests, pathways, and secondary and postsecondary options. | |
| | 1.1.5. | Develop strategies for self-promotion in the hiring process (e.g., filling out job applications, résumé writing, interviewing skills, portfolio development). | |
| | 1.1.6. | Explain the importance of work ethic, accountability, and responsibility and demonstrate associated behaviors in fulfilling personal, community, and workplace roles. | |
| | 1.1.8. | Identify the correlation between emotions, behavior, and appearance and manage those to establish and maintain professionalism. | |
| | 1.1.9. | Give and receive constructive feedback to improve work habits. | |
| *6.Understand the concepts of guest expectations, guest satisfaction, and quality customer service | 1.2.3. | Identify and use verbal, nonverbal, and active listening skills to communicate effectively. | |
| | 1.2.4. | Use negotiation and conflict-resolution skills to reach solutions. | |
| | 1.2.6. | Use proper grammar and expression in all aspects of communication. | |
| | 2.2.1. | Describe how the principles of R.A.V.E. (respect and value everyone), customer satisfaction and quality affect service delivery. | |

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| | 2.2.3. Explain the influence of an organization's mission and vision statement on customer service practices. |
| | 2.2.4. Explain the factors that shape customer expectations of a particular service and how subjective and objective elements of service quality can be assessed. |
| | 2.2.5. Identify the types of outcomes possible during guest recovery and the impact of proactive guest experience management on realizing a positive outcome. |
| | 2.6.1. Interpret unspoken needs based on understanding of human behavior, preference patterns and prior experiences. |
| | 2.6.2. Determine strategies for responding to potentially sensitive, compromising, fraudulent or dangerous situations. |
| | 2.6.8. Identify and deliver on opportunities to make a difference in the customer experience (i.e., positive moments of truth). |
| | 2.7.1. Determine the impact of ethics and social responsibility policies and practices on business operations. |

**3. Basic Food Production Lab:** CTAN alignment with the Hospitality and Tourism Career Field Technical Content Standards of the Ohio Department of Education

**General Course Description:** This course is a comprehensive, laboratory course in which students will learn to produce and serve marketable food products according to standardized recipes in a commercial kitchen environment, through station rotation. Appropriate equipment and utensils' usage, operations, cleaning of commercial foodservice equipment are studied and practiced. Basic knife skills, and standard cooking techniques, will be practiced.

**Advising Notes:**
- Students must access credit within 3 years of program completion.
- Some colleges may require a prerequisite completion of, or concurrent enrollment in, Food Safety Management (Servsafe®)

Semester Credit Hours: 4.0

All Learning Outcomes marked with an asterisk are essential and must be taught.

| Learning Outcomes<br>The student will be able to: | Competencies from the Ohio Department of Education, Hospitality and Tourism Career Field Technical Content Standards |
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| *1.Weigh and measure recipe ingredients and calculate recipe conversions according to standard procedures, using a variety of U.S. Standard measuring devices. | 4.3.1. Explain the importance of product specifications and portion control.<br><br>4.3.2. Measure solids and liquids, and apply ratios and equations to scale, and convert U.S. and metric measurements.<br><br>4.3.4. Adjust recipes and preparation techniques to respond to dietary restrictions. |

| | 4.3.5. | Select production methods (e.g., heat transfer, moist heat, dry heat) appropriate for the food product and environment. |
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| **\*2.**Use and define food service, food production, and menu terminology and develop a "mise en place" mindset**.** | 3.4.8. | Adjust equipment and workstations to respond to allergies, food intolerances, and special requests. |
| | 4.3.6. | Explain mise en place principles and their impact on kitchen operations. |
| | 4.3.7. | Demonstrate mise en place principles in setting up work space. |
| | 4.3.8. | Select tools and equipment that foster best results in food preparation. |
| | 4.3.9. | Perform processing necessary to prepare ingredients for use in a recipe (e.g., clarify, seed, soak, steep, bread, batter, caramelize, reduce, emulsify). |
| *3.Demonstrate safe food and equipment practices | 3.1.1. | Identify methods and practices to control or eliminate pathogens and the spread of harmful bacteria, viruses, parasites, fungi and toxins. |
| | 3.1.3. | Identify types of foodborne illness caused by bacteria and viruses, their common symptoms and the food items most at risk for contamination. |
| | 3.1.4. | Identify parasites, fungi and biological toxins by their characteristics and the major foodborne illnesses with which they are linked. |
| | 3.1.5. | Identify conditions under which bacteria multiply rapidly (I.e., FAT TOM: food, acidity, temperature, time, oxygen, moisture), and implement preventive measures. |
| | 3.1.6. | Identify the symptoms and consequences of allergic reactions and intolerances, and implement exposure-prevention strategies. |
| | 3.1.7. | Identify sources of common allergens, and implement exposure prevention strategies. |
| | 3.2.1. | Identify personal actions and behaviors that contribute to contamination and cross-contamination of food, and describe ways to prevent those issues. |
| | 3.2.2. | Identify when hand-washing must occur, and wash hands using the five-step technique. |
| | 3.2.3. | Select, maintain, and use proper work attire and personal protective clothing and equipment appropriate for job tasks. |
| | 3.2.4. | Handle situations involving body fluids. |
| | 3.2.5. | Describe situations when food-handlers should be restricted or excluded from working with food or being in the operation. |
| | 3.2.6. | Lift and move heavy materials and equipment following established ergonomic processes. |
| | 3.2.7. | Explain how personal safety and sanitation contribute to an organization's response to allergies and intolerances |

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| | 3.3.3. Identify critical control points (Hazard Analysis and Critical Control Point [HAACP]). |
| | 3.3.4. Identify potential biological, chemical and physical hazards. |
| | 3.3.5. Identify potentially hazardous foods (PHF), Time and Temperature Control for Safety of Food (TCS) and foods in the temperature danger zone (TDZ). |
| | 3.3.6. Follow precautionary guidelines established to address food-safety issues for high-risk populations and to reduce potential exposure to harmful pathogens. |
| | 3.3.7. Identify the effects of water characteristics, food pH levels and moisture levels on food safety and sanitation. |
| | 3.3.8. Monitor and track food temperatures throughout the receiving, thawing, storing, cooking and holding processes. |
| | 3.3.9. Control environment for consumer self-service foods. |
| | 3.3.10. Mark, label, store, and dispose of food and food by-products (e.g., fats, oil, grease). |
| | 3.3.11. Identify warning signs indicating potential food-safety issues during the receiving, storing and serving processes based on food type. |
| | 3.3.12. Take corrective actions to maintain food safety. |
| | 3.4.1. Distinguish between cleaning, sterilizing and sanitizing. |
| | 3.4.2. Implement equipment safety requirements, and adhere to health and safety codes that restrict equipment use. |
| | 3.4.3. Set up, program, sanitize, and use commercial equipment and machines. |
| | 3.4.4. Break down and maintain commercial equipment and machines. |
| | 3.4.5. Calibrate temperature probes. |
| | 3.4.6. Inspect, use, sanitize, and store knives, hand tools and implements. |
| | 3.4.7. Clean, sanitize, and store tableware and equipment. |
| | 3.4.8. Adjust equipment and workstations to respond to allergies, food intolerances, and special requests. |
| | 3.4.9. Lock out and tag out equipment until fixed. |
| | 3.5.1. Analyze the root causes of accidents, and identify prevention strategies. |
| | 3.5.2. Handle, maintain, and dispose of garbage and nonfood refuse. |
| *4. Prepare quality, portioned common food menu categories using multiple cooking methods, and apply plating principles and garnishing techniques. | 4.1.3. Analyze food preparation and presentation trends. |
| | 4.1.4. Identify characteristics of various domestic and international cuisines, and recognize notable dishes of cuisines common to different regions. |

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| | 4.1.5. Determine customer behavioral characteristics and factors that influence customer selection of food places and menu items |
| | 4.2.1. Identify types and components of hot and cold sandwiches, which are comprised of base, spread, filling, accent and garnish. |
| | 4.2.2. Prepare sandwich components, and assemble open and closed sandwiches. |
| | 4.2.3. Prepare meat and cheese trays. |
| | 4.3.1. Explain the importance of product specifications and portion control. |
| | 4.3.2. Measure solids and liquids, and apply ratios and equations to scale, and convert U.S. and metric measurements. |
| | 4.3.3. Use and convert standardized recipes to achieve specific quantities and serving sizes. |
| | 4.3.4. Adjust recipes and preparation techniques to respond to dietary restrictions. |
| | 4.3.5. Select production methods (e.g., heat transfer, moist heat, dry heat) appropriate for the food product and environment. |
| | 4.3.8. Select tools and equipment that foster best results in food preparation. |
| | 4.3.9. Perform processing necessary to prepare ingredients for use in a recipe (e.g., clarify, seed, soak, steep, bread, batter, caramelize, reduce, emulsify). |
| | 4.3.10. Use standard knife and fabrication skills and techniques. |
| | 4.4.1. Use quality factors to select food products and produce. |
| | 4.4.2. Identify seasonings, oils, flavor enhancers and food additives by type, class and purpose. |
| | 4.4.5. Prepare egg-based dishes. |
| | 4.4.7. Use dairy products in food dishes. |
| | 4.4.8. Prepare salads and salad dressings. |
| | 4.4.9. Select dip ingredients, and prepare dips. |
| | 4.4.11. Prepare sauces and gravies using appropriate thickening agents. |
| | 4.4.12. Prepare clear soups, thick soups and specialty soups. |
| | 4.4.13. Prepare fruits. |
| | 4.4.14. Prepare vegetables and legumes. |
| | 4.4.15. Prepare starchy foods**.** |
| | 4.5.3. Select meat cuts, and prepare meat dishes. |
| | 4.5.5. Select poultry cuts, and prepare poultry dishes. |
| | 4.5.9. Prepare and cook fish and shellfish. |

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| | 4.6.1. | Plate food using design principles of color, height, focal point, proportion and temperature. |
| | 4.6.3. | Garnish plates, soups and desserts. |
| | 4.6.4. | Maintain nutritional value and dietary restrictions during the plating and presentation process. |
| | 4.7.1. | Select types of coffee and coffee flavorings, and prepare coffee drinks. |
| | 4.7.2. | Select types of tea and tea flavorings, and prepare tea drinks. |
| | 4.7.3. | Prepare milk and dairy-based drinks. |
| | 4.8.1. | Explain the challenges, principles and corrective actions associated with preparing food to serve to large groups. |
| | 4.8.2. | Maintain quality controls, and apply appropriate cooking methodology during batch cooking. |
| | 4.8.3. | Set up stations to support high-volume production. |
| | 4.8.4. | Adjust preparation schedules and sequencing to support high-volume production. |
| *5.Compute food cost. | 1.2.1. | Extract relevant, valid information from materials and cite sources of information. |
| | 1.4.6. | Use electronic database to access and create business and technical information. |
| | 1.6.8. | Identify the features and benefits that make an organization's product or service competitive. |
| | 1.8.1. | Forecast future resources and budgetary needs using financial documents (e.g., balance sheet, demand forecasting, financial ratios). |
| | 1.8.2. | Select and organize resources to develop a product or a service |
| | 4.3.1. | Explain the importance of product specifications and portion control. |
| | 4.3.2. | Measure solids and liquids, and apply ratios and equations to scale, and convert U.S. and metric measurements. |
| | 4.3.3. | Use and convert standardized recipes to achieve specific quantities and serving sizes. |
| | 7.1.2. | Conduct make-or-buy analysis, and determine course of action. |
| | 7.1.3. | Establish food specifications and prep lists. |
| | 7.1.4. | Calculate unit costs, total costs and yield measures for standard recipes. |
| | 7.1.5. | Calculate plate, buffet and salad bar requirements and costs. |
| | 7.1.6. | Develop ingredient and portion control guides. |

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| *6.Develop professional work habits including professional appearance, teamwork concept, observance and maintenance of work areas that are neat, clean and attractive to enhance the service experience and generate revenue**. | 1.1.1. Identify the knowledge, skills, and abilities necessary to succeed in careers.<br><br>1.1.6. Explain the importance of work ethic, accountability, and responsibility and demonstrate associated behaviors in fulfilling personal, community, and workplace roles.<br><br>1.1.7. Apply problem-solving and critical-thinking skills to work-related issues when making decisions and formulating solutions.<br><br>1.1.8. Identify the correlation between emotions, behavior, and appearance and manage those to establish and maintain professionalism.<br><br>1.1.9. Give and receive constructive feedback to improve work habits.<br><br>1.1.10. Adapt personal coping skills to adjust to taxing workplace demands.<br><br>1.1.11. Recognize different cultural beliefs and practices in the workplace and demonstrate respect for them<br><br>1.2.3. Identify and use verbal, nonverbal, and active listening skills to communicate effectively.<br><br>1.2.4. Use negotiation and conflict-resolution skills to reach solutions.<br><br>1.2.6. Use proper grammar and expression in all aspects of communication.<br><br>1.2.7. Use problem-solving and consensus-building techniques to draw conclusions and determine next steps.<br><br>1.2.10. Use interpersonal skills to provide group leadership, promote collaboration, and work in a team.<br><br>1.6.9. Explain how the performance of an employee, a department, and an organization is assessed.<br><br>2.2.1. Describe how the principles of R.A.V.E. (respect and value everyone), customer satisfaction and quality affect service delivery.<br><br>2.2.3. Explain the influence of an organization's mission and vision statement on customer service practices.<br><br>2.2.4. Explain the factors that shape customer expectations of a particular service and how subjective and objective elements of service quality can be assessed.<br><br>2.2.5. Identify the types of outcomes possible during guest recovery and the impact of proactive guest experience management on realizing a positive outcome.<br><br>2.6.1. Interpret unspoken needs based on understanding of human behavior, preference patterns and prior experiences.<br><br>2.6.3. Accommodate special needs and specific requests of customers. |

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| | 2.6.4. Process customer orders accurately and efficiently while building rapport. |
| | 2.6.5. Balance multiple resource demands, and maintain service standards during peak volumes. |
| | 2.6.6. Respond to customer inquiries, resolve their complaints and follow up on situations. |
| | 2.6.7. Take and process customer payments. |
| | 2.6.8. Identify and deliver on opportunities to make a difference in the customer experience (i.e., positive moments of truth). |
| *7. Recognize how professional, ethical, and legal behaviors contribute to continuous improvement in organizational performance and regulatory compliance | 1.1.1. Identify the knowledge, skills, and abilities necessary to succeed in careers. |
| | 1.1.2. Identify the scope of career opportunities and the requirements for education, training, certification, licensure, and experience. |
| | 1.1.6. Explain the importance of work ethic, accountability, and responsibility and demonstrate associated behaviors in fulfilling personal, community, and workplace roles. |
| | 1.1.7. Apply problem-solving and critical-thinking skills to work-related issues when making decisions and formulating solutions. |
| | 1.1.8. Identify the correlation between emotions, behavior, and appearance and manage those to establish and maintain professionalism. |
| | 1.2.5. Communicate information (e.g., directions, ideas, vision, workplace expectations) for an intended audience and purpose. |
| | 1.2.7. Use problem-solving and consensus-building techniques to draw conclusions and determine next steps. |
| | 1.2.16. Identify ways to affect workplace change. |
| | 1.3.1. Analyze how regulatory compliance affects business operations and organizational performance. |
| | 1.3.2. Follow protocols and practices necessary to maintain a clean, safe, and healthy work environment. |
| | 1.3.3. Use ethical character traits consistent with workplace standards (e.g., honesty, personal integrity, compassion, justice). |
| | 1.3.4. Identify how federal and state consumer protection laws affect products and services. |
| | 1.3.5. Access and implement safety compliance measures (e.g., quality assurance information, safety data sheets [SDSs], product safety data sheets [PSDSs], U.S. Environmental Protection Agency [EPA], United States Occupational Safety and Health Administration [OSHA]) that contribute to the continuous improvement of the organization. |

| | 1.3.6. | Identify deceptive practices (e.g., bait and switch, identity theft, unlawful door-to-door sales, deceptive service estimates, fraudulent misrepresentations) and their overall impact on organizational performance. |
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| | 1.3.7. | Identify the labor laws that affect employment and the consequences of noncompliance for both employee and employer (e.g., harassment, labor, employment, employment interview, testing, minor labor laws, Americans with Disabilities Act, Fair Labor Standards Acts, Equal Employment Opportunity Commission [EEOC]). |
| | 1.3.9. | Identify potential conflicts of interest (e.g., personal gain, project bidding) between personal, organizational, and professional ethical standards. |
| | 1.5.1. | Describe how cultural understanding, cultural intelligence skills, and continual awareness are interdependent. |
| | 1.5.2. | Describe how cultural intelligence skills influence the overall success and survival of an organization. |
| | 1.5.3. | Use cultural intelligence to interact with individuals from diverse cultural settings. |
| | 1.5.4. | Recognize barriers in cross-cultural relationships and implement behavioral adjustments. |
| | 1.5.5. | Recognize the ways in which bias and discrimination may influence productivity and profitability. |
| | 1.6.9. | Explain how the performance of an employee, a department, and an organization is assessed. |
| | 1.8.10. | Analyze how business management and environmental management systems (e.g., health, safety) contribute to continuous improvement and sustainability. |
| | 2.7.1. | Determine the impact of ethics and social responsibility policies and practices on business operations. |

**4. <u>Front-Office Operations</u>:** CTAN alignment with the Lodging and Travel Services Pathway in the Hospitality and Tourism Career Field Technical Content Standards of the Ohio Department of Education.

**General Course Description:** This course introduces students to front-office operations, management, and the accounting function as they relate to the front office. The course also discusses successful operational strategies used by front-desk professionals for day-to-day operations.

**Advising Notes*:***
- Students must access credit within 3 years of program completion.

**Semester Credit Hours:** 2.0

All Learning Outcomes marked with an asterisk are essential and must be taught.

| Learning Outcomes<br><br>The student will be able to: | Competencies from the Ohio Department of Education, Hospitality and Tourism Career Field Technical Content Standards |
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| *1.Discuss hotel classifications by ownership and level of service | 1.6.4.  Identify types of businesses, ownership, and entities (i.e., individual proprietorships, partnerships, corporations, cooperatives, public, private, profit, not-for-profit)<br><br>1.7.1.  Compare and contrast the four types of business ownership (i.e., individual proprietorships, partnerships, corporations, cooperatives).<br><br>8.1.1.  Explain the components of the lodging "product" and the role of services in providing the lodging product.<br><br>8.1.3.  Describe the classifications of lodging accommodations and room types.<br><br>8.1.4.  Differentiate service levels and features by accommodation types and classifications.<br><br>8.1.6.  Describe the role of hotel management companies and the use of management contracts.<br><br>8.1.9.  Explain lodging market segments. |
| *2.Describe the operations of the front office as it pertains to the four stages of the guest cycle. | 8.2.1.  Identify the factors that impact the customer experience throughout the guest life cycle.<br><br>8.2.2.  Analyze the effect of guest services, concierge and guest relations on the lodging guest's experience.<br><br>8.2.3.  Book direct and indirect individual room reservations, and block group reservations.<br><br>8.2.6.  Describe check-in and check-out processes available to lodging customers.<br><br>8.2.7.  Check in and orient guests to the lodging property.<br><br>8.2.8.  Determine services to offer arriving guests.<br><br>8.2.9.  Process guest requests, and complete front-desk transactions.<br><br>8.2.10. Follow front-desk procedures to maintain guest safety and security.<br><br>8.2.11. Process guest departures and late-guest checkouts, and provide services to departing guests.<br><br>8.5.2.  Check cashiers in and out, and verify banks at shift end. |
| *3.Discuss the interrelationship between the front desk, maintenance, and housekeeping | 8.2.10. Follow front-desk procedures to maintain guest safety and security.<br><br>8.2.11. Process guest departures and late-guest checkouts, and provide services to departing guests.<br><br>8.2.12. Maintain up-to-date guest room status using the Property Management System. |

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| | 8.3.4. Determine whether room conditions warrant facilities management involvement. |
| | 8.4.2. Schedule preventive maintenance, repair and renovation. |
| | 8.7.2. Explain the role and components of property management systems, and describe their importance in maintaining accurate guest room status and accounts. |
| *4. Explain the functions of how a property management system assists in the management of a property and the departments it influences. | 8.2.3. Book direct and indirect individual room reservations, and block group reservations. |
| | 8.2.4. Confirm, modify, and cancel reservations. |
| | 8.2.8. Determine services to offer arriving guests. |
| | 8.2.10. Follow front-desk procedures to maintain guest safety and security. |
| | 8.2.11. Process guest departures and late-guest checkouts, and provide services to departing guests. |
| | 8.2.12. Maintain up-to-date guest room status using the Property Management System. |
| | 8.3.9. Create and monitor performance and productivity standards for all cleaning areas. |
| | 8.4.2. Schedule preventive maintenance, repair and renovation. |
| | 8.7.2. Explain the role and components of property management systems, and describe their importance in maintaining accurate guest room status and accounts. |
| | 8.7.3. Create and monitor standards for front-office operations. |
| *5. Describe the importance of quality customer service and the impact it has on Front Desk Operations. | 1.10.1 Identify how the roles of marketing, sales, advertising, and public relations contribute to a company's brand. |
| | 2.6.1 Interpret unspoken needs based on understanding of human behavior, preference patterns and prior experiences. |
| | 2.6.2 Determine strategies for responding to potentially sensitive, compromising, fraudulent or dangerous situations. |
| | 2.6.4 Process customer orders accurately and efficiently while building rapport. |
| | 2.6.5 Balance multiple resource demands, and maintain service standards during peak volumes. |
| | 2.6.6. Respond to customer inquiries, resolve their complaints and follow up on situations. |
| | 2.6.8. Identify and deliver on opportunities to make a difference in the customer experience (i.e., positive moments of truth). |
| | 2.6.9. Leverage customer experiences to build brand preference and brand loyalty. |
| | 8.2.2. Analyze the effect of guest services, concierge and guest relations on the lodging guest's experience. |
| | 8.2.5. Resolve reservation issues. |

| | 8.2.9. Process guest requests, and complete front-desk transactions. |
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| | 8.2.10. Follow front-desk procedures to maintain guest safety and security. |
| | 8.2.11. Process guest departures and late-guest checkouts, and provide services to departing guests. |

**5. Technology in the Hospitality Industry:** CTAN alignment with the Hospitality and Tourism Career Field Technical Content Standards of the Ohio Department of Education

**General Course Description:** This course explores the basics of Property Management Systems (PMS), Point of Sales Systems (POS), and accounting applications as they relate to the hospitality industry. System selection, security, and the Internet are also discussed.

**Advising Notes*:*
- Students must access credit within 3 years of program completion.

**Semester Credit Hours:** 2.0

All Learning Outcomes marked with an asterisk are essential and must be taught.

| Learning Outcomes<br>The student will be able to: | Competencies from the Ohio Department of Education, Hospitality and Tourism Career Field Technical Content Standards |
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| *1. Explain the criteria utilized to evaluate hospitality technology. | 1.4.2. Select and use software applications to locate, record, analyze, and present information (e.g., word processing, electronic mail, spreadsheet, databases, presentation, Internet search engines).<br><br>1.4.3. Verify compliance with security rules, regulations, and codes (e.g., property, privacy, access, accuracy issues, client and patient record confidentiality) pertaining to technology specific to industry pathway.<br><br>1.9.3. Review and summarize savings, investment strategies, and purchasing options (e.g., cash, lease, finance, stocks, bonds).<br><br>1.11.2. Identify the difference between monetary and nonmonetary incentives and explain how changes in incentives cause changes in behavior. |
| *2. Describe the various PMS, POS, and GDS systems and how they function in the hospitality industry. | 1.8.7. Collect information and feedback to help assess the organization's strategic planning and policymaking processes.<br><br>1.10.5. Monitor customer expectations by using measurement tools to ensure product or service satisfaction.<br><br>1.10.9. Use product management (e.g., product mix, product line, bundling) to maximize sales revenues, market share, and profit margins. |

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| | 1.10.12 Use pricing strategies and tactics throughout the product and customer lifecycle. |
| | 2.2.6. Maintain and mine databases of customer or visitor activity and preferences. |
| | 2.3.5. Coordinate people, processes and technology to deliver the brand promise. |
| | 2.4.6. Collect quantitative and qualitative marketing-research data. |
| | 2.4.8. Conduct analytical review of marketing data. |
| | 6.4.1. Analyze sociocultural trends, food habits, preferences and nutritional guidelines to identify menu options. |
| | 8.7.2. Explain the role and components of property management systems, and describe their importance in maintaining accurate guest room status and accounts. |
| | 8.6.11. Classify, maintain, and manage key customer accounts. |
| | 9.3.5. Utilize Global Distribution System (GDS) to fulfill travel requests. |
| *3.Explain how technology assists in the accounting functions of hospitality facilities. | 1.4.8. Use electronic media to communicate and follow network etiquette guidelines. |
| | 1.8.1. Forecast future resources and budgetary needs using financial documents (e.g., balance sheet, demand forecasting, financial ratios). |
| | 1.8.3. Analyze the performance of organizational activities and reallocate resources to achieve established goals. |
| | 1.8.5. Use inventory and control systems to purchase materials, supplies, and equipment (e.g., Last In, First Out [LIFO]; First In, First Out [FIFO]; Just in Time [JIT]; LEAN). |
| | 1.8.14 Track usage, profitability and productivity measures. |
| | 1.9.1. Create, analyze, and interpret financial documents (e.g., budgets, income statements). |
| | 1.9.8. Identify income sources and expenditures. |
| | 1.9.11. Implement established accounting processes and internal cash controls. |
| | 8.5.5. Calculate and analyze revenue per available room (RevPAR). |
| | 8.5.7. Forecast rooms and occupancy rates, and manage yield. |
| | 8.5.8. Complete night audit, reconcile accounting issues, and produce reports. |
| | 8.5.9. Analyze room rates and departmental allocations. |
| *4.Discuss the elements and impact of e-commerce on hospitality | 1.4.6. Use electronic database to access and create business and technical information. |
| | 1.4.8. Use electronic media to communicate and follow network etiquette guidelines. |

| | 1.6.1. | Identify business opportunities. |
| | 2.5.2. | Explain the use of social media marketing in the hospitality and tourism industry. |
| | 2.5.3. | Differentiate between the use of social media for personal and business purposes. |
| | 2.5.6. | Create social-media content. |
| | 2.5.8. | Use communications strategies to manage crises and protect or recover reputation. |
| | 2.5.9. | Develop policies and procedures to guide internal and external communications. |

**6. Front Office Operations and Housekeeping Operations for the Lodging Industry:** CTAN alignment with the Hospitality and Tourism Career Field Technical Content Standards of the Ohio Department of Education

**General Course Description:** This course introduces students to front office operations, management, and the accounting function as they related to the front office. The course also discusses successful operational strategies used by front desk professionals for day-to-day operations. Students learn the key role housekeeping plays in the operation of a successful Lodging facility. The course covers the care of guest rooms and public areas, as well as purchasing, storage, and procedures used by hotel housekeeping departments to assure a safe, comfortable stay for guests.

**Advising Notes*:*
- Students must access credit within 3 years of program completion.

**Semester Credit Hours:** 3.0

All Learning Outcomes marked with an asterisk are essential and must be taught.

| Learning Outcomes<br><br>The student will be able to: | Competencies from the Ohio Department of Education, Hospitality and Tourism Career Field Technical Content Standards |
|---|---|
| *1. Discuss hotel classifications by ownership and level of service | 1.6.4. Identify types of businesses, ownership, and entities (i.e., individual proprietorships, partnerships, corporations, cooperatives, public, private, profit, not-for-profit) |
| | 1.7.1. Compare and contrast the four types of business ownership (i.e., individual proprietorships, partnerships, corporations, cooperatives). |
| | 8.1.1. Explain the components of the lodging "product" and the role of services in providing the lodging product. |
| | 8.1.3. Describe the classifications of lodging accommodations and room types. |
| | 8.1.4. Differentiate service levels and features by accommodation types and classifications. |
| | 8.1.6. Describe the role of hotel management companies and the use of management contracts. |
| | 8.1.9. Explain lodging market segments. |

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| *2. Describe the operations of the front office as it pertains to the four stages of the guest cycle. | 8.2.1. Identify the factors that impact the customer experience throughout the guest life cycle. |
| | 8.2.2. Analyze the effect of guest services, concierge and guest relations on the lodging guest's experience. |
| | 8.2.3. Book direct and indirect individual room reservations, and block group reservations. |
| | 8.2.6. Describe check-in and check-out processes available to lodging customers. |
| | 8.2.7. Check in and orient guests to the lodging property. |
| | 8.2.8. Determine services to offer arriving guests. |
| | 8.2.9. Process guest requests, and complete front-desk transactions. |
| | 8.2.10. Follow front-desk procedures to maintain guest safety and security. |
| | 8.2.11. Process guest departures and late-guest checkouts, and provide services to departing guests. |
| | 8.5.2. Check cashiers in and out, and verify banks at shift end. |
| *3. Discuss the interrelationship between the front desk, maintenance, and housekeeping | 8.2.10. Follow front-desk procedures to maintain guest safety and security. |
| | 8.2.11. Process guest departures and late-guest checkouts, and provide services to departing guests. |
| | 8.2.12. Maintain up-to-date guest room status using the Property Management System. |
| | 8.3.4. Determine whether room conditions warrant facilities management involvement. |
| | 8.4.2. Schedule preventive maintenance, repair and renovation. |
| | 8.7.2. Explain the role and components of property management systems, and describe their importance in maintaining accurate guest room status and accounts. |
| *4. Explain the functions of how a property management system assists in the management of a property and the departments it influences. | 8.2.3. Book direct and indirect individual room reservations, and block group reservations. |
| | 8.2.4. Confirm, modify, and cancel reservations. |
| | 8.2.8. Determine services to offer arriving guests. |
| | 8.2.10. Follow front-desk procedures to maintain guest safety and security. |
| | 8.2.11. Process guest departures and late-guest checkouts, and provide services to departing guests. |
| | 8.2.12. Maintain up-to-date guest room status using the Property Management System. |
| | 8.3.9. Create and monitor performance and productivity standards for all cleaning areas. |
| | 8.4.2. Schedule preventive maintenance, repair and renovation. |

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| | 8.7.2. | Explain the role and components of property management systems, and describe their importance in maintaining accurate guest room status and accounts. |
| | 8.7.3. | Create and monitor standards for front-office operations. |
| *5.Describe the importance of quality customer service and the impact it has on Front Desk Operations. | 1.10.1 | Identify how the roles of marketing, sales, advertising, and public relations contribute to a company's brand. |
| | 2.6.1 | Interpret unspoken needs based on understanding of human behavior, preference patterns and prior experiences. |
| | 2.6.2 | Determine strategies for responding to potentially sensitive, compromising, fraudulent, or dangerous situations. |
| | 2.6.4 | Process customer orders accurately and efficiently while building rapport. |
| | 2.6.5 | Balance multiple resource demands, and maintain service standards during peak volumes. |
| | 2.6.6 | Respond to customer inquiries, resolve their complaints and follow up on situations. |
| | 2.6.8 | Identify and deliver on opportunities to make a difference in the customer experience (i.e., positive moments of truth). |
| | 2.6.9 | Leverage customer experiences to build brand preference and brand loyalty. |
| | 8.2.2. | Analyze the effect of guest services, concierge and guest relations on the lodging guest's experience. |
| | 8.2.5. | Resolve reservation issues. |
| | 8.2.9. | Process guest requests, and complete front-desk transactions. |
| | 8.2.10. | Follow front-desk procedures to maintain guest safety and security. |
| | 8.2.11. | Process guest departures and late-guest checkouts, and provide services to departing guests. |
| *6.Maintain guest rooms consistent with brand and quality standards; and manage housekeeping services to meet organizational standards. | 3.4.1. | Distinguish between cleaning, sterilizing and sanitizing. |
| | 8.3.2. | Determine whether guest rooms and public areas meet quality standards. |
| | 8.3.3. | Select lodging cleaning supplies, equipment and processes based on the situation. |
| | 8.3.5. | Prepare, clean, monitor, and stock rooms and assigned areas. |
| | 8.3.8. | Create, implement, and monitor a housekeeping plan. |
| | 8.3.9. | Create and monitor performance and productivity standards for all cleaning areas. |
| *7.Describe the major functions of the Housekeeping Department. | 3.4.1. | Distinguish between cleaning, sterilizing and sanitizing. |
| | 3.5.2. | Handle, maintain, and dispose of garbage and nonfood refuse. |

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| | 3.5.5. Select and mix cleaning or sanitation solutions in the right proportions, and label container. |
| | 3.5.6. Handle, label, store, and dispose of hazardous chemicals and waste. |
| | 3.5.8. Assess fire hazards, and determine fire prevention strategies. |
| | 8.3.2. Determine whether guest rooms and public areas meet quality standards. |
| | 8.3.5. Prepare, clean, monitor, and stock rooms and assigned areas. |
| | 8.3.7. Maintain rooms and public areas. |
| *8. Identify the role and responsibilities of the Executive Housekeeper in the lodging facility | 1.1.6. Explain the importance of work ethic, accountability, and responsibility and demonstrate associated behaviors in fulfilling personal, community, and workplace roles. |
| | 1.1.7. Apply problem-solving and critical-thinking skills to work-related issues when making decisions and formulating solutions. |
| | 1.2.3. Identify and use verbal, nonverbal, and active listening skills to communicate effectively. |
| | 1.2.10. Use interpersonal skills to provide group leadership, promote collaboration, and work in a team. |
| | 1.2.14. Use motivational strategies to accomplish goals. |
| | 1.2.16. Identify ways to affect workplace change. |
| | 2.6.3. Accommodate special needs and specific requests of customers. |
| | 2.6.6. Respond to customer inquiries, resolve their complaints and follow up on situations. |
| | 2.7.3. Recruit, screen, and interview job applicants. |
| | 2.7.4. Make hiring decisions and job offers. |
| | 2.7.6. Train, cross-train, and coach employees and volunteers using talent-development and motivation theories |
| | 2.7.7. Schedule employees and volunteers across shifts and during peak service times. |
| | 2.7.8. Plan, delegate, and direct the work of employees and volunteers. |
| | 2.7.9. Identify procedures for employee termination. |
| | 2.7.10. Assess and document employee performance. |
| | 2.7.11. Communicate outcomes of employee assessment. and take corrective measures. |
| | 2.7.12. Supervise union and nonunionized staff and volunteers. |
| | 2.7.13. Develop employee handbook. |

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| | 3.4.4. Break down and maintain commercial equipment and machines. |
| | 3.5.1. Analyze the root causes of accidents, and identify prevention strategies. |
| | 3.5.4. Develop and implement pest management procedures. |
| | 8.3.3. Select lodging cleaning supplies, equipment, and processes based on the situation. |
| | 8.3.4. Determine whether room conditions warrant facilities management involvement. |
| | 8.3.8. Create, implement, and monitor a housekeeping plan. |
| | 8.3.9. Create and monitor performance and productivity standards for all cleaning areas. |
| | 8.3.10. Develop a green cleaning program. |
| *9.Describe the importance of guest areas being both clean and sanitary | 2.2.1. Describe how the principles of R.A.V.E. (respect and value everyone), customer satisfaction and quality affect service delivery. |
| | 2.2.4. Explain the factors that shape customer expectations of a particular service and how subjective and objective elements of service quality can be assessed. |
| | 8.4.1. Assess quality of facilities and guest rooms. |
| | 8.4.3. Develop a cleaning and maintenance program for carpets, window treatments and furniture. |
| | 8.4.6. Establish a schedule for grounds maintenance and landscaping care. |
| *10.Describe the importance of timely communication between Housekeeping, and the other departments in a Lodging facility | 3.4.9. Lock out and tag out equipment until fixed. |
| | 3.5.8. Assess fire hazards, and determine fire prevention strategies. |
| | 3.5.12. Prepare for internal and external safety checks and inspections. |
| | 7.3.8. Maintain eating areas, meeting spaces and serving stations. |
| | 8.2.10. Follow front-desk procedures to maintain guest safety and security. |
| | 8.2.11. Process guest departures and late-guest checkouts, and provide services to departing guests. |
| | 8.3.4. Determine whether room conditions warrant facilities management involvement. |
| | 8.3.6. Remove stains from hotel surfaces and linens. |
| | 8.3.7. Maintain rooms and public areas. |
| | 8.3.9. Create and monitor performance and productivity standards for all cleaning areas. |

**7. <u>Food and Beverage Purchasing</u>**:  CTAN alignment with the Hospitality and Tourism Career Field Technical Content Standards of the Ohio Department of Education

**General Course Description:** This is a course in the identification, nutritional consideration, uses, and preparation methods of various foods and beverages. Food and non-food service purchasing, including product specifications, evaluating product quality, determining order quantities, yield percentages, costing, receiving, handling, storage and issuing, evaluation processes, and selecting suppliers are discussed and practiced.

**Advising Notes*:***
- Students must access credit within three years of program completion

**Semester Credit Hours:** 3.0

All Learning Outcomes marked with an asterisk are essential and must be taught.

| Learning Outcomes<br>The student will be able to: | Competencies from the Ohio Department of Education, Hospitality and Tourism Career Field Technical Content Standards |
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| *1. Identify and define quality characteristics and standards of food and beverage preparation ingredients, and list purchasing criteria for them. | 1.2.1.  Extract relevant, valid information from materials and cite sources of information.<br><br>1.3.6.  Identify deceptive practices (e.g., bait and switch, identity theft, unlawful door-to-door sales, deceptive service estimates, fraudulent misrepresentations) and their overall impact on organizational performance.<br><br>1.3.9.  Identify potential conflicts of interest (e.g., personal gain, project bidding) between personal, organizational, and professional ethical standards.<br><br>1.6.1.  Identify business opportunities.<br><br>1.6.8.  Identify the features and benefits that make an organization's product or service competitive.<br><br>1.6.10. Describe the impact of globalization on an enterprise or organization.<br><br>1.6.11. Describe how all business activities of an organization work within the parameters of a budget.<br><br>1.8.1.  Forecast future resources and budgetary needs using financial documents (e.g., balance sheet, demand forecasting, financial ratios).<br><br>1.8.2.  Select and organize resources to develop a product or a service.<br><br>1.8.3.  Analyze the performance of organizational activities and reallocate resources to achieve established goals.<br><br>1.8.4.  Identify alternative actions to take when goals are not met (e.g., changing goals, changing strategies, efficiencies).<br><br>1.8.5.  Use inventory and control systems to purchase materials, supplies, and equipment (e.g., Last In, First Out [LIFO]; First In, First Out [FIFO]; Just in Time [JIT]; LEAN). |

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| | 1.8.6. Identify the advantages and disadvantages of carrying cost and Just in Time (JIT) production systems and the effects of monitoring inventory (e.g., perishable, shrinkage, insurance) on profitability. |
| | 1.8.7. Collect information and feedback to help assess the organization's strategic planning and policymaking processes. |
| | 1.8.11. Select and manage suppliers (e.g., qualification, selection, billing, quality control, resolution of issues). |
| | 1.8.12. Analyze environmental issues and trends, and identify sustainable efforts and initiatives that organizations use in response. |
| | 1.8.14. Track usage, profitability and productivity measures. |
| | 1.10.5. Monitor customer expectations by using measurement tools to ensure product or service satisfaction. |
| | 1.10.6. Discuss the importance of correct pricing to support a product's or service's positioning in the marketing mix. |
| | 1.10.7. Describe the importance and diversity of distribution chains (e.g., intensive, selective, exclusive) to sell a product. |
| | 1.10.11. Evaluate competitors' products, brands and activities. |
| | 1.10.12. Use pricing strategies and tactics throughout the product and customer lifecycle. |
| | 1.10.13. Implement and assess seasonal and situational pricing policies. |
| | 1.11.3. Use economic indicators to measure economic trends and conditions (e.g., relative scarcity, price, quantity of products and services). |
| | 1.11.4. Determine how the quality, quantity, and pricing of goods and services are affected by domestic and international competition in a market economy. |
| | 1.11.8. Identify the relationships between economy, society, and environment that lead to sustainability. |
| | 1.11.9. Describe how laws and regulations influence domestic and international trade. |
| | 4.1.1. Differentiate among the segments of the culinary and foodservice operations industry, and identify the types of food served by these segments. |
| | 4.4.4. Identify types and grading of egg products. |
| | 4.4.6. Identify types, grading and classification of dairy products. |
| | 4.5.1. Identify types, grades and cuts of beef, veal, lamb and pork. |
| | 4.5.2. Identify how meat composition influences food quality and preparation. |
| | 4.5.4. Identify types, grades and cuts of chicken, turkey, duck and goose. |

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| | 4.5.8. Identify and assess the quality of fish and shellfish. |
| | 7.1.1. Determine how food and beverage purchasing decisions are influenced by food defense, security and supplier's agricultural and manufacturing practices. |
| | 7.1.9. Identify sustainability considerations in purchasing food and nonfood products. |
| | 7.1.10. Develop and implement food and nonfood waste-reduction management program. |
| *2.Perform recipe conversion and ingredient cost calculations such as volume to weight conversions, conversion factors, yield percentages, scaling and portioning recipe adjustments. | 4.3.1. Explain the importance of product specifications and portion control. |
| | 4.3.2. Measure solids and liquids, and apply ratios and equations to scale, and convert U.S. and metric measurements. |
| | 4.3.3. Use and convert standardized recipes to achieve specific quantities and serving sizes. |
| | 4.3.4. Adjust recipes and preparation techniques to respond to dietary restrictions. |
| | 7.1.4. Calculate unit costs, total costs and yield measures for standard recipes. |
| | 7.1.5. Calculate plate, buffet and salad bar requirements and costs. |
| | 7.1.6. Develop ingredient and portion control guides. |
| *3.Determine order quantities and associated costs | 1.2.1. Extract relevant, valid information from materials and cite sources of information. |
| | 1.2.7. Use problem-solving and consensus-building techniques to draw conclusions and determine next steps. |
| | 1.4.2. Select and use software applications to locate, record, analyze, and present information (e.g., word processing, electronic mail, spreadsheet, databases, presentation, Internet search engines). |
| | 1.6.7. Identify the effect of supply and demand on products and services. |
| | 1.8.1. Forecast future resources and budgetary needs using financial documents (e.g., balance sheet, demand forecasting, financial ratios). |
| | 1.8.3. Analyze the performance of organizational activities and reallocate resources to achieve established goals. |
| | 1.8.4. Identify alternative actions to take when goals are not met (e.g., changing goals, changing strategies, efficiencies). |
| | 1.8.5. Use inventory and control systems to purchase materials, supplies, and equipment (e.g., Last In, First Out [LIFO]; First In, First Out [FIFO]; Just in Time [JIT]; LEAN). |

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| | 1.8.6. Identify the advantages and disadvantages of carrying cost and Just in Time (JIT) production systems and the effects of monitoring inventory (e.g., perishable, shrinkage, insurance) on profitability. |
| | 1.8.7. Collect information and feedback to help assess the organization's strategic planning and policymaking processes. |
| | 1.8.14. Track usage, profitability and productivity measures. |
| | 4.3.3. Use and convert standardized recipes to achieve specific quantities and serving sizes. |
| | 4.4.1. Use quality factors to select food products and produce. |
| | 7.1.2. Conduct make-or-buy analysis, and determine course of action. |
| | 7.1.3. Establish food specifications and prep lists. |
| | 7.1.4. Calculate unit costs, total costs and yield measures for standard recipes. |
| | 7.1.5. Calculate plate, buffet and salad bar requirements and costs. |
| | 7.1.6. Develop ingredient and portion control guides. |
| | 7.1.7. Determine sources of food loss, and select corrective procedures. |
| | 7.1.8. Apply first-in first-out (FIFO) inventory control method to store and use food products. |
| | 7.1.9. Identify sustainability considerations in purchasing food and nonfood products. |
| *4. Write purchase specifications for food and non-food supplies using resource materials | 1.4.4. Use system hardware to support software applications. |
| | 4.3.1. Explain the importance of product specifications and portion control. |
| | 4.3.3. Use and convert standardized recipes to achieve specific quantities and serving sizes. |
| | 4.3.5. Select production methods (e.g., heat transfer, moist heat, dry heat) appropriate for the food product and environment. |
| | 4.3.6. Explain mise en place principles and their impact on kitchen operations. |
| | 4.4.1. Use quality factors to select food products and produce. |
| | 7.1.1. Determine how food and beverage purchasing decisions are influenced by food defense, security and supplier's agricultural and manufacturing practices. |
| | 7.1.2. Conduct make-or-buy analysis, and determine course of action. |
| | 7.1.3. Establish food specifications and prep lists. |

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| *5.Identify and explain various markets and distribution systems. | 1.2.1.   Extract relevant, valid information from materials and cite sources of information. |
| | 1.2.7.   Use problem-solving and consensus-building techniques to draw conclusions and determine next steps. |
| | 1.6.6.   Identify the target market served by the organization, the niche that the organization fills, and outlook of the industry. |
| | 1.6.7.   Identify the effect of supply and demand on products and services. |
| | 1.10.6. Discuss the importance of correct pricing to support a product's or service's positioning in the marketing mix. |
| | 1.10.7. Describe the importance and diversity of distribution chains (e.g., intensive, selective, exclusive) to sell a product. |
| | 1.10.9. Use product management (e.g., product mix, product line, bundling) to maximize sales revenues, market share, and profit margins. |
| | 1.11.1. Identify the economic principles that guide geographic location of an industry's facilities (e.g., relative scarcity, price, quantity of products and services). |
| | 1.11.3. Use economic indicators to measure economic trends and conditions (e.g., relative scarcity, price, quantity of products and services). |
| | 1.11.4. Determine how the quality, quantity, and pricing of goods and services are affected by domestic and international competition in a market economy. |
| | 1.11.5. Analyze factors that affect currency and exchange rates. |
| | 1.11.6. Explain how financial markets and government policies influence interest rates (credit ratings/debt ceiling), trade deficits, and unemployment. |
| | 1.11.7  Describe how economic performance and culture are interdependent. |
| | 1.11.8  Identify the relationships between economy, society, and environment that lead to sustainability. |
| | 1.11.9. Describe how laws and regulations influence domestic and international trade. |
| *6.Discuss ethical buying procedures and supplier relationships | 1.1.4.   Describe the role and function of professional organizations, industry associations, and organized labor and use networking techniques to develop and maintain professional relationships. |
| | 1.1.6.   Explain the importance of work ethic, accountability, and responsibility and demonstrate associated behaviors in fulfilling personal, community, and workplace roles. |
| | 1.1.7.   Apply problem-solving and critical-thinking skills to work-related issues when making decisions and formulating solutions. |

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| | 1.2.7. Use problem-solving and consensus-building techniques to draw conclusions and determine next steps. |
| | 1.3.1. Analyze how regulatory compliance affects business operations and organizational performance. |
| | 1.3.3. Use ethical character traits consistent with workplace standards (e.g., honesty, personal integrity, compassion, justice). |
| | 1.3.4. Identify how federal and state consumer protection laws affect products and services. |
| | 1.3.5. Access and implement safety compliance measures (e.g., quality assurance information, safety data sheets [SDSs], product safety data sheets [PSDSs], U.S. Environmental Protection Agency [EPA], United States Occupational Safety and Health Administration [OSHA]) that contribute to the continuous improvement of the organization. |
| | 1.3.6. Identify deceptive practices (e.g., bait and switch, identity theft, unlawful door-to-door sales, deceptive service estimates, fraudulent misrepresentations) and their overall impact on organizational performance. |
| | 1.3.7. Identify the labor laws that affect employment and the consequences of noncompliance for both employee and employer (e.g., harassment, labor, employment, employment interview, testing, minor labor laws, Americans with Disabilities Act, Fair Labor Standards Acts, Equal Employment Opportunity Commission [EEOC]). |
| | 1.3.9. Identify potential conflicts of interest (e.g., personal gain, project bidding) between personal, organizational, and professional ethical standards. |