



Regional Occupational Program

Bakery Occupations 2026-2027

COURSE DESCRIPTION

Culinary Arts ignites a passion for food. As a student in our culinary program, you'll receive practical training in a modern kitchen from instructors with real-world experience and you'll begin this culinary journey learning fundamentals associated with commercial bakery occupations. In this course, you'll learn everything from basic business operations of a retail bakery to sanitation and safety, to working as part of a team. You will learn baking and pastry techniques including principles for preparation, storage, and serving bakery products, the study of ingredients, principles of food science, preparation of classic and artisan breads, rich yeast dough, and the creation, plating and serving of specialty desserts. The curriculum for this course includes very important 21st century skills, such as effective communication, critical thinking, creativity, and collaboration that have been identified as foundational to success at school and at work.

Learn to earn an industry-recognized certification. The curriculum in the course provides you with the knowledge and skills you will need to be successful in further culinary and baking courses or as an entry level Baker Helper. In addition, this course provides students with foundational knowledge and skills as a precursor to post-secondary opportunities that may include certification as a Master Baker or Cake Decorator, an Associate Degree in Bakery and Pastry Arts at a community college, or a bachelor's degree in Bakery Science and Management or Hospitality Food and Beverage Management from a four-year college or university.

Course Information

Course Length: 1 Year
 Prerequisite: None
 Course Level: Concentrator
 UC: No
 Articulated: No
 Industry Cert.: Food Handlers Card
 Industry Sector: Hospitality, Tourism, and Recreation
 Pathway: Food Service and Hospitality
 CALPADS: 8020

O*Net SOC Codes

51-3011 Bakers
 51-3092 Food Batchmakers
 35-2012 Cooks, Institution and Cafeteria
 35-1012 First-Line Supervisors of Food Preparation and Serving Workers
 35-1011 Chefs and Head Cooks

Legend

CTE - PS CTE Pathway Standards
 CRP Career Ready Practices
 CTE - AS CTE Anchor Standards
 CCSS Common Core State Standards
 ISTE International Society for Technology in Education

*Includes updates from the 25/26 Hospitality Tourism and Recreation Advisory
[Advisory Minutes](#)*

Bakery Occupations

Course Orientation

- a. Discuss objectives for this course, including competencies, teacher expectations, classroom policies, and procedures.
- b. Identify and discuss the acquisition of transferable skills (communication, collaboration, creativity, and critical thinking) and their importance to being college and career ready and for future personal and professional success.
- c. Review objectives, competencies, and course syllabus.
- d. Discuss student and teacher expectations, including behavior, class rules, appropriate dress, pre-course knowledge, and grading policies, including enrollment and attendance requirements and procedures, and classroom/school safety and disaster procedures.
- e. Discuss next steps in course sequence related to the career pathway, the need for reinforcement of basic skills, transferrable skills, and postsecondary and career options.
- f. Discuss the Big Six: Career Ready Essentials and the Standards for Career Ready Practice as they relate to this course, all aspects of the industry sector, and being college and career ready.

Big Six: Career Ready Essentials

1. Effective Communication	CTE - PS	CRP	CTE - AS	CCSS	ISTE
<ol style="list-style-type: none"> a. Demonstrate effective verbal communication and conflict resolution skills. Use the writing process to develop written communication with the appropriate tone, organization, and format for the identified audience. b. Use the writing process to develop written communication with the appropriate tone, organization, and format for the identified audience. c. Explain the effect of interpersonal skills on one's ability to communicate effectively and develop relationships. d. Describe the impact of ineffective communication on business relationships. e. Analyze the impact of vocabulary, body language, and tone on verbal communication. f. Demonstrate active listening skills. g. Accurately interpret industry-specific written communication. h. Model responsible and effective use of various communication technologies. i. Identify valid and reliable digital reference and resource materials. j. Gather information from multiple digital sources to compare and contrast, synthesize, and summarize. k. Identify and use appropriate communication and collaboration technologies. l. Utilize technology to problem solve, accomplish tasks, and to produce or publish products. 		<u>1</u> <u>2</u> <u>11</u>	<u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>7</u> <u>8</u> <u>9</u> <u>10</u> <u>11</u>	<u>LS</u> <u>9-10</u> <u>11-12.6</u> <u>SLS</u> <u>11-12.2</u> <u>9-10</u> <u>11-12.1</u> <u>11-</u> <u>12.1d</u> <u>WS</u> <u>11-12.7</u> <u>11-12.6</u>	<u>1b,c</u> <u>2c</u> <u>3b,c</u> <u>5c</u> <u>6b,c,d</u>
2. Collaboration, Creativity, and Critical Thinking	CTE - PS	CRP	CTE - AS	CCSS	ISTE
<ol style="list-style-type: none"> a. Demonstrate critical thinking skills for a variety of purposes and in different settings. Collaborate to reach consensus on an identical objective through the sharing of knowledge, tasks, and learning. 		<u>2</u> <u>4</u> <u>5</u>	<u>2</u> <u>3</u>	<u>LS</u> <u>9-10</u> <u>11- 12.6</u>	<u>1c</u> <u>3c,d</u> <u>4a-d</u>

<p>b. Collaborate to reach consensus on an identical objective through the sharing of knowledge, tasks, and learning.</p> <p>c. Discuss the importance of the critical thinking process to real-world applications.</p> <p>d. Evaluate the impact of creative thinking on problem solving and innovation in real-world applications.</p> <p>e. Compile work that demonstrates the process used to (elaborate, refine, analyze) evaluate original ideas and maximize creative efforts.</p> <p>f. Apply divergent and convergent thinking to the development of an original idea or solution.</p> <p>g. Examine real-world limits to adopting ideas.</p> <p>h. Demonstrate creative thinking (preparation, insight, evaluation, elaboration, and communication) to create a new idea or concept.</p> <p>i. Assume shared responsibility for collaborative work, and value the individual contributions made by each team member.</p> <p>j. Evaluate evidence, arguments, claims, and beliefs to identify connections.</p> <p>k. Identify bias, prejudice, propaganda, self-deception, distortion, and misinformation.</p> <p>l. Produce intellectual, informational, or material products that serve an authentic purpose.</p> <p>m. Work effectively and respectfully with those from diverse backgrounds or cultures.</p> <p>n. Demonstrate respect, trust, commitment, and the ability to compromise in collaborative projects.</p>		<p><u>7</u> <u>9</u> <u>10</u> <u>11</u></p>	<p><u>4</u> <u>5</u> <u>7</u> <u>8</u> <u>9</u> <u>11</u></p>	<p>SLS <u>9-10</u> <u>11-12.1</u> <u>11-</u> <u>12.1d</u> <u>11-12.2</u></p> <p>WS <u>11-12.7</u> <u>11-12.6</u></p>	<p><u>5c,d</u> <u>6c</u> <u>7b,c,d</u></p>
<p>3. Leaders and Teams: Roles and Responsibilities</p>	<p>CTE - PS</p>	<p>CRP</p>	<p>CTE - AS</p>	<p>CCSS</p>	<p>ISTE</p>
<p>a. Determine the individual and team members' roles and responsibilities.</p> <p>b. Demonstrate leadership skills and qualities (i.e., reliability, negotiation skills, initiative, positive reinforcement, recognition of others' efforts, problem-solving skills, conflict resolution, and delegation).</p> <p>c. Explain the importance of technical, social, and communication skills to team success.</p> <p>d. Compare and contrast leadership styles and their effectiveness in various situations.</p> <p>e. Organize and delegate responsibilities in a team setting to encourage ideas, perspectives, and contributions from all team members.</p> <p>f. Develop a strong sense of team identity by brainstorming solutions, volunteering, assisting others, practicing respect and courtesy, and taking initiative.</p> <p>g. Examine situations in which a follower becomes the leader.</p> <p>h. Describe twenty-first-century skills required across all occupations.</p> <p>i. Identify and discuss the characteristics of a successful team (i.e., leadership, cooperation, and effective decision-making).</p> <p>j. Leverage social and cultural differences to increase innovation and quality of work.</p>		<p><u>7</u> <u>8</u> <u>9</u></p>	<p><u>3</u> <u>7</u> <u>8</u> <u>9</u> <u>11</u></p>	<p>SLS <u>11-12.2</u> <u>9-10</u> <u>11-12.1</u> <u>11-</u> <u>12.1d</u></p> <p>WS <u>11-12.6</u></p>	<p><u>7a,c</u></p>

4. Legal, Ethical, and Environmental Considerations	CTE - PS	CRP	CTE - AS	CCSS	ISTE
<ul style="list-style-type: none"> a. Demonstrate industry specific ethical and legal practices. b. Identify eco-friendly industry specific practices and resources. c. Identify local, state, and federal regulatory agencies, entities, laws, and regulations. d. Identify discrimination based on race, nationality, religion, gender, age, disability, or sexual orientation. e. Summarize the ethical and legal implications of workplace discrimination and harassment. f. Explain the concept of corporate citizenship. g. Examine an employer's role in protecting the health and welfare of employees, the community, and the environment. h. Analyze current environmental laws and regulations and their impact on industry. i. Compare and contrast both society's and industry's impact on the environment. 		<u>5</u> <u>7</u> <u>8</u> <u>12</u>	<u>3</u> <u>5</u> <u>7</u> <u>8</u> <u>9</u> <u>11</u>	<u>WS</u> <u>11-12.6</u> <u>11-12.7</u> <u>SLS</u> <u>9-10</u> <u>11-12.1</u> <u>11-</u> <u>12.1d</u> <u>11-12.2</u>	<u>2a,b</u> <u>3a,b</u> <u>5c</u> <u>6c</u>
5. Personal Growth and Career Planning	CTE - PS	CRP	CTE - AS	CCSS	ISTE
<ul style="list-style-type: none"> a. Demonstrate continued personal development and growth. b. Develop and manage a personal growth and career plan. c. Explain the relationship between sound financial habits and financial security. d. Create and manage a personal financial plan. e. Demonstrate initiative in achieving personal and professional goals. f. Apply time management strategies to meet deadlines. g. Demonstrate a growth mindset through flexibility and a positive attitude. h. Select and demonstrate appropriate job-search and retention techniques. i. Demonstrate strategies to prepare for employment. j. Demonstrate interpersonal skills appropriate for the workplace. k. Elaborate on the importance of perseverance to personal and professional success. l. Discover personal career interests, aptitudes, and skills. 		<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>6</u>	<u>2</u> <u>3</u> <u>4</u> <u>7</u> <u>8</u> <u>11</u>	<u>LS</u> <u>9-10</u> <u>11-12.6</u> <u>SLS</u> <u>9-10</u> <u>11-12.1</u> <u>11-</u> <u>12.1d</u> <u>11-12.2</u> <u>WS</u> <u>11-12.6</u>	<u>1a</u> <u>3a,c</u> <u>4d</u> <u>6a,d</u> <u>7b</u>
6. Workplace Safety and Personal Wellness	CTE - PS	CRP	CTE - AS	CCSS	ISTE
<ul style="list-style-type: none"> a. Demonstrate proper industry specific safe work practices to prevent injury or illness. b. Assess the potential impact of goal setting on personal and professional success. c. Describe the role of security and emergency procedures in workplace safety. d. Describe the effect of preventative measures on emergencies in the workplace. e. Identify and describe the causes, prevention, and treatment of common accidents. f. Identify local, state, and federal agencies that regulate workplace safety. g. Explain the role of the California Occupational Safety and Health Administration (Cal-OSHA) and the Environmental Protection Agency (EPA). h. Discuss the basics of system operations. i. Demonstrate the proper use of personal protective equipment (PPE). 		<u>2</u> <u>5</u> <u>6</u> <u>8</u> <u>12</u>	<u>2</u> <u>5</u> <u>6</u> <u>7</u> <u>8</u> <u>10</u> <u>11</u>	<u>LS</u> <u>9-10</u> <u>11-12.6</u> <u>WS</u> <u>11-12.7</u> <u>11-12.6</u> <u>SLS</u> <u>9-10</u>	<u>1a,d</u> <u>2a,d</u> <u>5b</u>

<ul style="list-style-type: none"> j. Explain the purpose of and accurately interpret a Safety Data Sheet (SDS). k. Identify hazardous materials and chemicals. l. Demonstrate proper procedures to respond to work-related accidents and injuries. m. Describe how ergonomics, housekeeping, and maintenance are related to accidents and injuries. n. Demonstrate cyber ethics, cyber safety, and cybersecurity. o. Assess the potential impact of preventative physical and mental health measures on workplace safety. 				11-12.1 11-12.1d	
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Bakery Occupations Units of Instruction

7. Bakery Equipment and Utensils	CTE - PS	CRP	CTE - AS	CCSS	ISTE
<ul style="list-style-type: none"> a. Demonstrate knowledge of the types of equipment, tools, and supplies used in commercial or industrial kitchens for the preparation of baked goods. b. Apply the procedures for cleaning and maintaining culinary equipment, tools, and supplies and the importance of preventative maintenance in health and safety. c. Practice the procedures for maintaining inventories: ordering food, equipment, and supplies, and the proper storing and restocking of supplies and materials. d. Explain the operation and function of bakery equipment, e.g., mixers, rack ovens, convection ovens, bucket opener, portion scoops, and scales. e. Demonstrate the proper operation of bakery equipment, e.g., mixers, rack ovens, convection ovens, etc. f. Understand health and safety regulations and perform routine maintenance or cleaning of bakery equipment as necessary. 	B3.4 B5.3 B7.1	1 2 5 6 11	1 2 5 6 11	LS 9-10 11-12.6 WS 11-12.7 RSTS 9-10 11-12.4	
8. Weights, Measures, and Equivalents	CTE - PS	CRP	CTE - AS	CCSS	ISTE
<ul style="list-style-type: none"> a. Demonstrate knowledge of the types of measurement systems, measuring and scaling equipment, and proper measuring techniques used in the bakery industry. b. Explain the International System of Units (SI), identify metric prefixes, and properly apply functions to measure mass/weight, length, volume, time, and temperature. c. Describe the proper techniques and tools for measuring dry and liquid ingredients; explain formulas, Bakers Percentages and correctly calculate ingredient proportions between fractions, decimal expressions, and percentages. d. Explain the importance of calculating equivalents or conversions from one measurement to another; successfully utilize common conversion charts, tables, or calculators. e. Display accurate measurement of ingredients. f. Understand fractions and sectioning of cakes; discuss pan sizes, ¼ sheet, ½ sheet, and full sheet, and identify number of servings. 	B6.3 B7.4	1 2 5 11	1 2 5 11	LS 9-10 11-12.6 WS 11-12.7	

9. Ingredients and their Function	CTE - PS	CRP	CTE - AS	CCSS	ISTE
<p>a. Demonstrate knowledge of basic food science and chemistry principles used within the bakery industry to produce high quality baked goods.</p> <p>b. Correctly identify common ingredient categories and describe their types and functions, e.g., strengtheners, fats/shortenings, sweeteners, flavorings, chemical, organic, and physical leaveners, thickeners, liquids, and additives.</p> <p>c. Compare and contrast organic versus chemical leaveners.</p> <p>d. Describe the fermentation and proofing process for using leaveners. Describe the function of salt, spices, and other flavoring.</p> <p>e. Evaluate the qualities and properties of food items and ingredients used for baked goods, pastries, and desserts.</p>	B6.5 B7.4	1 2 5 11	1 2 5 11	LS 9-10 11-12.6 WS 11-12.7	
10. Recipes and Formulas	CTE - PS	CRP	CTE - AS	CCSS	ISTE
<p>a. Demonstrate knowledge of basic bakery recipe/formulas and demonstrate common methods of production.</p> <p>b. Discuss recipe formula yield and correctly adjust formulas to increase or decrease yield.</p> <p>c. Demonstrate how to read/follow the written commercial and noncommercial recipes.</p> <p>d. Compare and contrast convenience products vs. scratch products with regard to nutrition, costing, availability, and convenience.</p> <p>e. Describe unit pricing; explain how to cost a product and calculate a profit.</p> <p>f. Describe the importance of a food preparation plan using forecasting and cross-utilization of products to maximize profit and eliminate waste.</p> <p>g. Apply the principle of <i>mise en place</i>, including the placement and order of the use of ingredients, equipment, tools and supplies unique to baking and pastry production.</p>	B6.2 B6.5 B7.6 B11.0 B11.3	1 2 5 11	1 2 5 11	LS 9-10 11-12.6 WS 11-12.7	
11. Breads and Rolls	CTE - PS	CRP	CTE - AS	CCSS	ISTE
<p>a. Demonstrate knowledge of basic breads and skill in common bread and roll production methods.</p> <p>b. Describe the types of breads and rolls. Describe and demonstrate the four methods for preparing quick breads.</p> <p>c. Compare and contrast lean dough and rich dough.</p> <p>d. Describe the properties of yeast products. Demonstrate mixing, proofing, kneading, rounding, portioning and the shaping of yeast products.</p> <p>e. Discuss proper baking, cooling, and storage techniques.</p> <p>f. Compare and contrast the properties and production stages of yeast and quick breads, including sponge, starters, and sourdough.</p> <p>g. Demonstrate essential bread production skills, e.g., scaling, mixing and kneading, fermentation, punching down, portioning, rounding, shaping, and proofing.</p> <p>h. Explain proper storage and packaging techniques used for various types of breads and rolls.</p>	B7.1 B7.5	1 2 5 11	1 2 5 11	LS 9-10 11-12.6 WS 11-12.7	

12. Cakes	CTE - PS	CRP	CTE - AS	CCSS	ISTE
<p>a. Demonstrate knowledge of basic cake recipes and skill in common cake production methods.</p> <p>b. Describe various types of cakes and muffins.</p> <p>c. Demonstrate the different production methods for preparing cake batters, e.g., creaming, foaming, straight-dough, and two-stage methods.</p> <p>d. Identify the chemical principles used in cake baking. Explain ‘exothermic’ and ‘endothermic’ reactions in cake baking.</p> <p>e. Describe the physical and chemical properties and the reactions that take place during cake production.</p> <p>f. Identify the characteristics of a well-baked cake and testing for doneness.</p> <p>g. Demonstrate appropriate use of cake molds and/or other assembly methods, including the preparation of pans, equipment, and oven temperature.</p> <p>h. Demonstrate the proper preparation of cakes for decorating, including board preparation/positioning, and crumb coat.</p> <p>i. Describe evaluation methods of a frosted cake.</p> <p>j. Discuss the standards and procedure of string cake products.</p> <p>k. Demonstrate the process for the cutting/portion to minimize waste of a cake product.</p>	<p>B7.3 B7.4</p>	<p><u>1</u> <u>2</u> <u>5</u> <u>11</u></p>	<p><u>1</u> <u>2</u> <u>5</u> <u>11</u></p>	<p>LS 9-10 11-12.6 WS 11-12.7</p>	
13. Pastries	CTE - PS	CRP	CTE - AS	CCSS	ISTE
<p>a. Demonstrate knowledge of basic pastry recipes and skill in common pastry production methods.</p> <p>b. Describe various types of pastry, e.g., pies, pâté à choux, puff pastry, phyllo, and sweet dough.</p> <p>c. Demonstrate pastry production methods, e.g., 3-2-1, rollout, roll-in, filling, baking, and finishing.</p> <p>d. Describe characteristics for production of French pastry, torts, custards, soufflés, crepes, and other classic pastries.</p> <p>e. Explain proper storage and packaging techniques used for various types of pastry products.</p>	<p>B7.1 B7.3</p>	<p><u>1</u> <u>2</u> <u>5</u> <u>11</u></p>	<p><u>1</u> <u>2</u> <u>5</u> <u>11</u></p>	<p>LS 9-10 11-12.6 WS 11-12.7</p>	
14. Filling, Frostings, and Glazes	CTE - PS	CRP	CTE - AS	CCSS	ISTE
<p>a. Demonstrate knowledge of basic frosting and filling recipes and demonstrate skill in common icing production methods.</p> <p>b. Describe various icing or frosting types such as buttercream, foam, fondant, fudge, ganache, glazes, and royal icing.</p> <p>c. Demonstrate production methods including mixing, creaming, and applying finishes.</p> <p>d. Describe and demonstrate how to fill and assemble cake, pastries, and specialty desserts according to the standard recipe.</p> <p>e. Classify coating and siding based on the required recipe specification.</p>	<p>B6.3 B7.3</p>	<p><u>1</u> <u>2</u> <u>5</u> <u>11</u></p>	<p><u>1</u> <u>2</u> <u>5</u> <u>11</u></p>	<p>LS 9-10 11-12.6 WS 11-12.7</p>	

15. Cookies	CTE - PS	CRP	CTE - AS	CCSS	ISTE
<p>a. Demonstrate knowledge of basic cookie recipes and demonstrate skill in common cookie production methods.</p> <p>b. Describe various types of cookies, e.g., bars, cutouts, dropped, bagged, molded, icebox, sheet, and rolled.</p> <p>c. Demonstrate common cookie production methods such as creaming, sifting, baking, and finishing.</p> <p>d. Identify the characteristics of a well-baked cookie and explain how to test for doneness.</p>	B6.3 B7.3	<u>1</u> <u>2</u> <u>5</u> <u>11</u>	<u>1</u> <u>2</u> <u>5</u> <u>11</u>	LS 9-10 11-12.6 WS 11-12.7	
16. Fried and Donut Products	CTE - PS	CRP	CTE - AS	CCSS	ISTE
<p>a. Demonstrate knowledge of basic fried dough and donut recipes and demonstrate skill in common donut production methods.</p> <p>b. Describe various types of fried/donut products, e.g., yeast-raised and cake types.</p> <p>c. Demonstrate common fried/donut production methods, including mixing, proofing, frying, and finishing.</p> <p>d. Describe and implement safety practices critical to a commercial baking environment to include work with specialized equipment and high temperature products.</p>	B6.3 B7.3	<u>1</u> <u>2</u> <u>5</u> <u>11</u>	<u>1</u> <u>2</u> <u>5</u> <u>11</u>	LS 9-10 11-12.6 WS 11-12.7	
17. Specialty Desserts	CTE - PS	CRP	CTE - AS	CCSS	ISTE
<p>a. Demonstrate knowledge of basic specialty dessert recipes and demonstrate skill in common specialty dessert production methods.</p> <p>b. Differentiate between common frozen desserts such as ice cream, gelato, and frozen yogurt and sugar-free ice cream, and cream-free ice cream.</p> <p>c. Discuss the market for cholesterol-free, dairy-free, lactose-free, egg-free, and vegan frozen desserts.</p> <p>d. Explain the assembly of tortes and poached fruit such as Peach Melba.</p> <p>e. Demonstrate common dessert sauces and creams, e.g., crème Anglaise, fruit syrup, caramel sauce, chocolate sauce, sabayon, or zabaglione.</p> <p>f. Discuss the importance and the art of plating and presenting desserts.</p> <p>g. Explain the importance of proper temperature control to ensure optimal quality of frozen desserts.</p>	B6.6 B7.1 B7.3 B8.4	<u>1</u> <u>2</u> <u>5</u> <u>11</u>	<u>1</u> <u>2</u> <u>5</u> <u>11</u>	LS 9-10 11-12.6 WS 11-12.7	
18. Plating and Presenting Desserts	CTE - PS	CRP	CTE - AS	CCSS	ISTE
<p>a. Demonstrate knowledge on portion control and the presentation of desserts.</p> <p>b. Explain the steps in preparing and conducting a dessert trolley and presentation.</p> <p>c. Discuss how colors, shapes, textures, and arrangement of food attribute to the visual enhancement and complement a dessert.</p> <p>d. Discuss plating and basic garnish techniques used to enhance the visual appeal of desserts.</p>	B6.6	<u>1</u> <u>2</u> <u>5</u> <u>10</u> <u>11</u>	<u>1</u> <u>2</u> <u>5</u> <u>11</u>	LS 9-10 11-12.6 WS 11-12.7	

<p>e. Identify, describe, and apply techniques for the production of decorative work used in plating desserts.</p> <p>f. Utilize and describe principles for production of plated desserts, frozen desserts, chocolate, ice creams, mousses, Bavarians, and the application of combinations of multiple items and techniques.</p>					
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Standards Alignment

The curricula have been aligned with the CTE Model Curriculum Standards released in 2013. Each industry sector was updated to meet the increased rigor and relevancy requirements of the Common Core State Standards. The curriculum also includes the new Standards for Career Ready Practices.

Standards for Career Ready Practice

1. *Apply appropriate technical skills and academic knowledge.*
2. *Communicate clearly, effectively, and with reason.*
3. *Develop an education and career plan aligned with personal goals.*
4. *Apply technology to enhance productivity.*
5. *Utilize critical thinking to make sense of problems and persevere in solving them.*
6. *Practice personal health and understand financial literacy.*
7. *Act as a responsible citizen in the workplace and the community.*
8. *Model integrity, ethical leadership, and effective management.*
9. *Work productively in teams while integrating cultural and global competence.*
10. *Demonstrate creativity and innovation.*
11. *Employ valid and reliable research strategies.*
12. *Understand the environmental, social, and economic impacts of decisions.*

CTE Anchor Standards—Common Core English Language Arts Alignment

Anchor Standard 1: Academics

Analyze and apply appropriate academic standards required for successful industry sector pathway completion leading to postsecondary education and employment. Refer to the industry sector alignment matrix for identification of standards. Note: alignment listed within each sector.

Anchor Standard 2: Communications

Language Standard: Acquire and accurately use general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the (career and college) readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression. LS 9-10, 11-12.6

Anchor Standard 3: Career Planning and Management

Speaking and Listening Standard: Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data. SLS 11-12.2

Anchor Standard 4: Technology

Writing Standard: Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments and information.

Anchor Standard 5: Problem Solving and Critical Thinking

Writing Standard: Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem, narrow or broaden the inquiry when appropriate, and synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. WS 11-12.7

Anchor Standard 6: Health and Safety

Reading Standards for Science and Technical Subjects: Determine the meaning of symbols, keywords, and other domain-specific words and phrases as they are used in a specific scientific or technical context. RSTS 9-10, 11-12.4

Anchor Standard 7: Responsibility and Flexibility

Speaking and Listening Standard: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners, building on others' ideas and expressing their own clearly and persuasively. SLS 9-10, 11-12.1

Anchor Standard 8: Ethics and Legal Responsibilities

Speaking and Listening Standard: Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the work. SLS 11-12.1d

Anchor Standard 9: Leadership and Teamwork

Speaking and Listening Standard: Work with peers to promote civil, democratic discussions and decision making; set clear goals and deadlines; and establish individual roles as needed. SLS 11-12.1b

Anchor Standard 10: Technical Knowledge and Skills

Writing Standard: Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information. WS 11-12.6

Anchor Standard 11: Demonstration and Application

Demonstrate and apply the knowledge and skills contained in the industry-sector anchor standards, pathway standards, and performance indicators in the classroom, laboratory, and workplace settings, and the career technical student organization. Note: no alignment evident for this standard. WS 11-12.6

CTE Model Curriculum Standards—Industry Sectors and Pathways

Hospitality, Tourism and Recreation

B. Food Service and Hospitality Pathway

- B3.4 Practice safe and sanitary procedures in all food handling, including food receiving, storage, production, service, and cleanup*
- B5.3 Practice the procedures for maintaining inventories: ordering food, equipment, and supplies; and storing and restocking supplies*
- B6.2 Apply the principle of mise en place, including the placement and order of use of ingredients, equipment, tools, and supplies.*
- B6.3 Prepare food by using the correct terminology, food safety, techniques, and procedures specified in recipes and formulas.*
- B6.5 Evaluate the qualities and properties of food items and ingredients used in food preparation.*
- B6.6 Design plating techniques, including accurate portioning and aesthetic presentation skills.*
- B7.1 Use, maintain, and store the tools, utensils, equipment, and appliances safely and appropriately for preparing, serving, and storing baked goods, pastries, and desserts.*
- B7.3 Produce baked goods, pastries, and desserts by using the correct terminology, food safety, techniques, procedures, and various finishing techniques.*
- B7.4 Evaluate the qualities and properties of food items and ingredients used for baked goods, pastries, and desserts.*
- B7.5 Understand packaging and merchandising techniques to feature seasonal and standard bakery products.*
- B7.6 Develop a plan using forecasting and cross-utilization of products to maximize profit and eliminate waste.*
- B8.4 Understand the roles of management and employees in effectively meeting the needs of culturally, generationally diverse, special needs customers.*
- B11.0 Demonstrate an understanding of the basic processes of costing and cost analysis in food and beverage production and service.*
- B11.3 Utilize the practices of reduce, reuse, and recycle to maximize profits.*

ISTE Standards for Students

1. Empowered Learner- *Students leverage technology to take an active role in choosing, achieving, and demonstrating competency in their learning goals, informed by the learning sciences.*

a) Students articulate and set personal learning goals, develop strategies leveraging technology to achieve them, and reflect on the learning process itself to improve learning outcomes.

b) Students build networks and customize their learning environments in ways that support the learning process.

c) Students use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways

d) Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

2. Digital Citizen- *Students recognize the rights, responsibilities, and opportunities of living, learning, and working in an interconnected digital world, and they act and model in ways that are safe, legal, and ethical.*

a) Students cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.

b) Students engage in positive, safe, legal, and ethical behavior when using technology, including social interactions online or when using networked devices.

c) Students demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.

d) Students manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online.

3. Knowledge Constructor- *Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts, and make meaningful learning experiences for themselves and others.*

a) Students plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.

b) Students evaluate the accuracy, perspective, credibility, and relevance of information, media, data, or other resources.

c) Students curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions.

d) Students build knowledge by actively exploring real-world issues and problems, developing ideas and theories, and pursuing answers and solutions.

4. Innovative Designer- *Students use a variety of technologies within a design process to identify and solve problems creating new, useful, or imaginative solutions.*

a) Students know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts, or solving authentic problems.

b) Students select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.

c) Students develop, test, and refine prototypes as part of a cyclical design process.

d) Students exhibit a tolerance for ambiguity, perseverance, and the capacity to work with open-ended problems.

5. Computational Thinker- *Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.*

a) Students formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models, and algorithmic thinking in exploring and finding solutions.

b) Students collect data or identify relevant data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making.

c) Students break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.

d) Students understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.

6. Creative Communicator- *Students communicate clearly and express themselves creatively for a variety of purposes using platforms, tools, styles, formats, and digital media appropriate for their goals.*

a) Students choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.

b) Students create original works or responsibly repurpose or remix digital resources into new creations.

c) Students communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models, or simulations.

d) Students publish or present content that customizes the message and medium for their intended audiences.

7. Global Collaborator- *Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.*

a) Students use digital tools to connect with learners from a variety of backgrounds and cultures, engaging with them in ways that broaden mutual understanding and learning.

b) Students use collaborative technologies to work with others, including peers, experts, or community members, to examine issues and problems from multiple viewpoints.

c) Students contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.

d) Students explore local and global issues and use collaborative technologies to work with others to investigate solutions.