# Baking and Pastry Arts Career-Technical Assurance Guide Performance Assessment

Office of Career-Technical Education

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Ohio Department of Education & Workforce

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Department of Education & Workforce

# Background

The Career-Technical Assurance Guide (CTAG) for Baking and Pastry Arts was developed in collaboration with a panel of post-secondary faculty during the summer of 2020. The panel created learning outcomes that aligned to secondary course content. As part of the development process, the Ohio Department of Education, Office of Career-Technical Education sought stakeholder feedback on the drafted Baking and Pastry Arts CTAG. A survey was sent to all public post-secondary institutions to garner comments regarding the learning outcomes and endorsement of the CTAG. Survey feedback suggested that a performance assessment should be required. Creation of a performance assessment was also supported by several of the learning outcomes that included:

- Prepare commercial products utilizing sound judgment in bakery equipment operations and demonstrate the ability to comply with all food safety laws, rules and regulations.
- Plan, organize, and perform basic baking and pastry techniques utilizing the concept of mise en place to accomplish required tasks using appropriate ingredients, equipment/smallware's and portion conversions to complete production.
- Describe, produce, and evaluate the quality of six 3" eclairs.
- Prepare, set up and evaluate the elements in the presentation and/or plating of baked goods and desserts common in hospitality food service venues with an emphasis on food safety, allergen awareness and guest satisfaction.

To create a Baking and Pastry Arts Performance Assessment, a panel of post-secondary faculty was again assembled that also included secondary culinary instructors. The panel, in collaboration with Center on Education and Training for Employment (CETE), was tasked with establishing learning outcomes and competencies that would be used in the assessment. The collaboration of secondary and post-secondary instructors ensured that the performance assessment requirements would be aligned to course content delivered in secondary classrooms. Several questions were taken into consideration when developing the performance assessment such as:

- Who would conduct the assessment and what credentials would that assessor need to hold?
- Where would the assessment take place?
- How much time would need allotted to perform the assessment?
- What outcomes must be demonstrated during the assessment?
- What equipment would need to be available during the assessment?
- What training would be necessary for the assessor?
- What content should be included in the rubric and grading scheme?

After these questions were addressed, the panel met with subject matter experts from industry and CETE with oversight by the Department. The Baking and Pastry Arts Performance Assessment was developed during multiple virtual item writing sessions.

In addition, a video was created by the lead faculty on the panel to be used as a tool to assist in training assessors. The video was reviewed and approved by Department staff and secondary instructors to be used as a professional development and training resource. It will be used in conjunction with a checklist and rubric that provides each competency students are required to meet during the performance assessment and recipes provided by the Department.

The Baking and Pastry Arts CTAG Performance Assessment was piloted during the 2021-2022 school year. The pilot year ensured that the established processes and time limits were adequate for students and assessors to complete. Students' scores were held harmless during the pilot year.

Once the pilot year closed, a final survey was sent to participating schools requesting feedback on the performance assessment. The data determined if revisions or modifications were needed for the process prior to field testing in school year 2022-2023.

# Career-Technical Assurance Guide

The following steps must occur for secondary students to access college credit for these courses:

1. Secondary institutions must have pathway approval from the Ohio Department of Education and Workforce. Certificate of Affirmation assurances are now incorporated into the CTE-26 application process. This assures that faculty teaching the course recognize that the course provides an opportunity for articulated credit and will adhere to the Secondary Career-Technical Alignment Initiative (SCTAI) alignment document as part of the course delivery.
    a. Courses in the approved pathway will automatically be generated and appear as approved CTAGs in the Course Equivalency Management System (CEMS).
    b. Institutions with prior pathway approval need not act at this time.
2. Students must pass the corresponding End-of-Course examination, which includes a written assessment and performance assessment with a qualifying score. The qualifying score was determined at the end of the 2021-2022 school year.
3. Eligible students' assessment data will be accessible by Ohio's public colleges and universities in the Higher Education Information System (HEI) by way of Career-Technical Articulation Verification (CTAV). CTAV has replaced the paper Verification Form.

If you have any questions regarding the CTAG, please contact the Department of Higher Education at transfer@highered.ohio.gov.

# Checklist and Rubric

CETE's trained assessment development facilitators worked with nine instructors to generate an assessor checklist and rubric that reflected the required Baking and Pastry Arts Performance Assessment content standards. The checklist and rubric cover the process of creating both the pâte à choux and filling for the eclairs as well as an evaluation of the final pastry. Once the checklist and rubric were drafted, a survey was sent to Ohio secondary and several post-secondary baking and pastry arts instructors to validate the new performance assessment. Specifically, they were asked to rate how well the recipes could differentiate between proficient and non-proficient students, the observability and importance of each checklist and rubric item and overall satisfaction with the assessment. Data from the survey indicated high validity and satisfaction with the checklist and rubric.

Baking and Pastry Performance Assessment Criteria:

- All students must be enrolled in the Baking and Pastry Arts course.
- Students must individually complete the attached menu items.
- There must be two assessors meeting one of the following credentials:
    1. Secondary culinary instructor (can include teacher of record)
    2. American Culinary Federation certified chef
    3. Post-secondary culinary/pastry instructor
    4. Business/industry with a culinary/pastry arts background/degree
- Students will have up to three hours to complete the performance assessment.
- Students must complete the performance assessment and end-of-course test for CTAG credit.

If you have any questions regarding the performance assessment, please contact the Department of Education and Workforce at cte@education.ohio.gov.

# **Appendix A -** Performance Assessment Checklist

| **Student's Name (print):** _____ | **Date:** _____ |
|---|---|
| **Assessor's Name (print):** _____ | |

Directions: For each of the sections below, please circle "Yes" or "No" to indicate whether the student successfully completed each topic area. For each "No" response, please explain your rationale.

Note: comments are required for all items answered "No".

After completing this assessment, enter your results into WebXam as soon as you can. Copy each item's comments in the comment box for the relevant section.

## 1. PREPARATION

| **Steps (All parts of a step must be performed to be marked complete.)** | **Complete** | **Reason for "No"** |
|---|---|---|
| **1.1** The student washes their hands before beginning to prepare food. | **Yes / No** | |
| **1.2** The student is wearing the proper chef uniform (e.g., chef coat/jacket, apron, chef hat, industry pants or commercial uniform pants), including appropriate footwear (i.e., closed-toe, low-heel kitchen shoes made with non-slip soles and non-melting uppers). | **Yes / No** | |
| **1.3** The student cleans, rinses and sanitizes their workstation according to industry standards (e.g., ServSafe guidelines, local laws and regulations). | **Yes / No** | |
| **1.4** The student uses a prep list for the recipe (e.g., ingredients list) and demonstrates mise en place principles in setting up their workspace. | **Yes / No** | |

| | | |
|---|---|---|
| **1.5** The student selects appropriate ingredients based on the provided recipe. | **Yes / No** | |
| **1.6** The student labels and stores ingredients properly, following food safety practices. | **Yes / No** | |
| **1.7** The student selects the correct equipment and cooking method(s) for each component/part of the recipe. | **Yes / No** | |
| **1.8** The student calibrates bi-metallic stemmed thermometers using the ice-water bath method, according to industry standards (e.g., ServSafe guidelines, local laws and regulations). | **Yes / No** | |

## 2. OVERALL COOKING PROCESS

| **Steps (All parts of a step must be performed to be marked complete.)** | **Complete** | **Reason for "No"** |
|---|---|---|
| **2.1** The student prepares pâte à choux dough and pastry cream per the provided recipe. | **Yes / No** | |
| **2.2** The student washes (and re-washes) hands, cleans and sanitizes work surfaces throughout the preparation process and takes corrective actions to maintain food safety. | **Yes / No** | |
| **2.3** The student selects and uses appropriate hand tools, equipment, attachments and techniques (as indicated in the recipe, based on available options) in the preparation of food products | **Yes / No** | |
| **2.4** The student performs appropriate and necessary processing steps to prepare ingredients according to the recipe. | **Yes / No** | |
| **2.5** The student cracks eggs into a smaller container before adding ingredient into pooled container to avoid cross-contamination. | **Yes / No** | |
| **2.6** The student accurately measures ingredients according to the recipe. | **Yes / No** | |

| | | |
|---|---|---|
| **2.7** The student meets industry standards when preparing ingredients (e.g., eggs are free from defects) | **Yes / No** | |
| **2.8** The student washes, rinses and sanitizes equipment when switching tasks according to industry standards (e.g., ServSafe guidelines, local laws and regulations). | **Yes / No** | |
| **2.9** The student adheres to appropriate safety conditions throughout the cooking process (e.g., appropriate flame height, not setting hot pans on flammable surfaces). The student communicates any safety concerns to other students. | **Yes / No** | |
| **2.10** The student practices proper procedures for safely tasting food (e.g., using separate, clean utensils, etc.). | **Yes / No** | |
| **2.11** The student's workstation is kept neat, clean and organized in a safe and sanitary manner. | **Yes / No** | |

## 3. COOKING PROCESS (PÂTE À CHOUX)

| Steps (All parts of a step must be performed to be marked complete.) | Complete | Reason for "No" |
|---|---|---|
| **3.1** The student sets oven temperatures and makes sure oven is pre-heated. | **Yes / No** | |
| **3.2** The student follows provided recipe to prepare and bake the pâte à choux dough. | **Yes / No** | |

## 4. COOKING PROCESS (PASTRY CREAM FILLING AND GANACHE/GLAZE)

| Steps (All parts of a step must be performed to be marked complete.) | Complete | Reason for "No" |
|---|---|---|
| **4.1** The student prepares pastry cream according to the recipe and conducts a sensory evaluation for product quality (e.g., tastes pastry cream, visually confirms appropriate consistency and texture of pastry cream). | **Yes / No** | |
| **4.3** The student uses an ice-water bath to cool the pastry cream to a safe temperature (< 41°F). | **Yes / No** | |
| **4.4** The student prepares a chocolate ganache according to the recipe and conducts a sensory evaluation for product quality (e.g., tastes ganache, visually confirms appropriate consistency and texture of ganache). | **Yes / No** | |
| **4.5** The student uses appropriate piping techniques to insert pastry cream into the eclair. | **Yes / No** | |

## 5. PRESENTATION

| Steps (All parts of a step must be performed to be marked complete.) | Complete | Reason for "No" |
|---|---|---|
| **5.1** An appropriate plate/platter/tray is selected for plating six* eclairs. The plate is clean, presentation is neat (i.e., spaced evenly without stacking).<br>(*NOTE: The number and size of the eclairs will be determined by the final recipe selected.) | **Yes / No** | |
| **5.2** The ganache is consistently applied on each eclair and neatly/cleanly presented. | **Yes / No** | |
| **5.3** The eclairs are consistent in size and appearance. | **Yes / No** | |

## 6. FINAL PRODUCT EVALUATION

| Circle the final rating | Judge the final product using these criteria |
|---|---|
| 0 = missing or incomplete<br><br>1 = non-proficient<br><br>2 = proficient<br><br>3 = advanced | Presentation<br>• visually appealing presentation<br>• high degree of customer salability<br>• professional behavior and appearance exhibited by the student<br>• high degree of knowledge demonstrated by the student<br>Appearance<br>• even coloring of the pastry shell<br>• uniform shape and size for all eclairs<br>• clear separation between glaze/ganache and pastry at the edges<br>• pastry is perfectly straight and free from cracks<br>Texture<br>• the pastry is thin and slightly crunchy<br>• the éclair is puffy (i.e., not flat)<br>• the pastry cream filling is smooth<br>Taste<br>• pleasing, well-blended flavor<br>• the éclair is not overly sweet |
| **Final Comments:** | |

# Appendix B Performance Assessment Recipes

## Menu item: Pâte à choux – Éclair dough

**NUMBER OF PORTIONS: 6**

**YIELD: 3-INCH ECLAIRS**

**INGREDIENTS:**

| Amounts | Items |
|---|---|
| 2 ounces / 56g | Butter, cut into pieces |
| ½ teaspoon / 4.65g | Sugar |
| ¼ teaspoon / 2.35g | Salt |
| ½ cup / 112g | Water |
| ½ cup / 75g | Flour |
| 3-4 count / 196g | Eggs* |

**PROCEDURE**

1. Preheat oven to 350 degrees Fahrenheit (convection). Line half sheet pan with parchment paper.
2. In a small non-reactive saucepan over medium heat, combine butter, sugar, salt and water.
3. Bring to a boil and quickly stir in the flour with a rubber spatula.
4. Continue to stir until a film forms on the bottom of the pan and it pulls away from the sides. It should resemble a panada (paste before the eggs are added).
5. Remove from heat and transfer contents to a bowl to cool slightly for about 3 minutes.
6. *Add 2-4 eggs, one at a time, stirring vigorously to entirely incorporate each egg after each addition. May not need all eggs.
7. Transfer the pâte à choux to a large pastry bag fitted with a plain tip.
8. Pipe 3-inch-long sticks onto the baking sheet.
9. Gently smooth the pointed peaks with a moistened finger, rounding tops to ensure even rising.
10. Bake until puffs rise and are golden brown for about 30 minutes.
11. Let cool on sheets on wire racks.
12. Transfer pastry cream to a pastry bag fitted with a plain tip.
13. Fill the éclair with pastry cream.
14. Dip the top in the prepared ganache and rest on top of the pastry cream.
15. Serve immediately.

# Menu item: Vanilla pastry cream

**NUMBER OF PORTIONS: 8**

**YIELD: 2 ½ CUPS**

**INGREDIENTS:**

| Amounts | Items |
|---|---|
| 1 cup, removing 2 tablespoons and set aside / 224g, 28g set aside | Whole milk |
| ½ cup / 112g | Heavy cream |
| 3 large | Egg yolks |
| ½ cup / 112g | Granulated sugar |
| 2 tablespoons plus 1 ½ teaspoons / 15g and 5g | Cornstarch |
| 1 teaspoon / 5g | Vanilla extract |

**PROCEDURE**

1. In a heavy, medium non-aluminum saucepan bring the milk (minus 2 tablespoons) and cream to a boil.
2. In a heatproof stainless steel or tempered glass mixing bowl, whisk egg yolks, sugar, cornstarch, and 2 tablespoons of reserved milk until there are no lumps.
3. Slowly drizzle the hot milk into the egg yolk mixture, whisking constantly until all the milk has been added. Pour the mixture back into the saucepan and place it over medium high heat, bring to a boil, whisking all the time. The mixture will become thick.
4. Boil and whisk for 1 minute. Do not allow the custard to burn.
5. Remove the mixture from the heat and whisk in the vanilla extract. Pour the custard into a bowl and place a piece of plastic wrap directly onto the custard to prevent a skin from forming.
6. Place on an ice water bath to properly cool the pastry cream to a safe temperature (<41°F), verify with a bi-metallic stemmed thermometer.

## Menu item: Chocolate ganache

**NUMBER OF PORTIONS: 8**

**YIELD: 1 CUP**

**INGREDIENTS:**

| Amounts | Items |
|---|---|
| 4.5 ounces / 126g | Bittersweet chocolate, chopped |
| ½ cup / 112g | Heavy cream |

**PROCEDURE**

1. Place the chocolate into a medium bowl.
2. Heat the cream in a small saucepan over medium heat.
3. Bring to a boil, watching very carefully because if it boils for a few seconds, it will boil out of the pot.
4. When cream has come to a boil, pour over the chopped chocolate, and whisk until smooth.
5. Allow the ganache to cool slightly before dipping the éclair.

# Appendix C - Finished Product