I. INTRODUCTION

A. Fundamentals of baking include dough, quick breads, pies, cakes, cookies, tarts, and doughnuts. Instruction in flours, fillings, and ingredients. Topics include baking terminology, tool and equipment use, formula conversions, functions of ingredients, and the use of proper flours.

B. This course, PSTR 1301, Fundamentals of Baking, is a required course in the Restaurant and Culinary Management Degree, Culinary Arts Certificate of Completion, Restaurant Skill Certificate of Completion and the Baking Certificate of Completion.

C. This course is occupationally related and serves as preparation for jobs in baking, cake decorating, and food preparation.

D. Prerequisite: None

II. LEARNING OUTCOMES

Upon successful completion of this course, PSTR 1301 Fundamentals of Baking, the student will be able to:

A. Explain the importance of weighing baking ingredients. (C3, F3, F4, F11)

B. Demonstrate the use of a bakers scale. (C3, F3, F4, F11)

C. Convert and cost recipes. (C3, F3, F4, F11)

D. Utilize various baking tools and equipment. (C3, F3, F4, F11)

E. Explain the controlling factors in the development of gluten in baked products. (C3, F3, F4, F11)
F. Understand the characteristics and functions of major baking ingredients. (C3, F3, F4, F11)

G. Identify the main types of wheat flour by sight and feel. (C3, F3, F4, F11)

H. List and describe the twelve steps in the production of yeast goods. (C3, F3, F4, F11)

I. Explain the three basic mixing methods used for yeast dough. (C3, F3, F4, F11)

J. Produce bread and dinner rolls, sweet dough products, and Danish pastry. (C3, F3, F4, F11)

K. Prepare baking powder biscuits and also variations of them. (C3, F3, F4, F11)

L. Prepare doughnuts and other deep-fried desserts. (C3, F3, F4, F11)

M. Prepare whipped cream, meringues, custard sauces, and pastry cream variations. (C3, F3, F4, F11)

N. Prepare pie dough and short pastry. (C3, F3, F4, F11)

O. Produce commercially acceptable baked products. (C3, F3, F4, F11)

P. Roll pie dough, line pans, fill, assemble, and bake with a variety of top crusts. (C3, F3, F4, F11)

Q. Perform basic cake mixing methods.

R. Assemble and ice simple layer cakes, sheet cakes, and cupcakes. (C3, F3, F4, F11)

S. Prepare cookie dough by the three basic mixing methods. (C3, F3, F4, F11)

T. Prepare starch-thickened or boiled puddings. (C3, F3, F4, F11)

U. Prepare various traditional fruit desserts. (C3, F3, F4, F11)

III. INSTRUCTIONAL MATERIALS

A. The instructional materials identified for this course are viewable through www.cted.edu/books

B. CTC Handout: Fundamental of Baking, Assignment Standards

C. Additional references may be required that are available in the Central Texas College library

IV. COURSE REQUIREMENTS
A. Reading Assignments: Read text assignments prior to class and be prepared to discuss the text material, answering instructor questions orally with well-organized thoughts and ideas. (F1, F4, F5, F11, C3)

B. Class Attendance: (Refer to CTC Catalog, Page 43, for detailed policy). You are expected to attend each class period, be on time and stay the full class period or are counted absent. You are responsible for all course material missed due to absence. The instructor does not provide class notes for classes missed. (F1, F4)

C. A student must be present for all examinations. No makeup examinations will be given.

1. Students who know in advance they will be absent from an examination due to valid reasons must arrange to take an early examination. Unexpected absences due to illness or extenuating circumstances will require the student to see the instructor about individual make-up work in lieu of the missed examination.

D. Students without excused absences will be given a zero for the examination missed.

E. Equipment: The following equipment is required for this course

1. 1 each, long sleeve classic chef jacket
2. 1 each, black and white check chef pants
3. 1 each, black and white check chef beanie
4. 1 each, bib apron
5. 1 pair black safety shoes (slip resistance)

V. EXAMINATIONS

A. There will be three examinations.

1. Exam 1 (Mid-Term)
2. Exam 2 (Final Exam)
3. National Restaurant Association Baking Certification Test

B. A student must be present for all examinations. No make-up examinations will be given. Students who know in advance that they will be absent from an examination due to valid reasons must arrange to take an early examination. Unexpected absences due to illness or extenuating circumstances will require the student to see the instructor about individual make-up work in lieu of the missed examination.

C. Students without excused absences will be given a zero for the missed examination.

D. The instructor will publish specific examination dates and will give an in-class review concerning the nature and type of test questions to be given.
VI. SEMESTER GRADE COMPUTATIONS

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<tr>
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<th>Points</th>
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<tbody>
<tr>
<td>Exam 1 (Mid-Term)</td>
<td>200</td>
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<tr>
<td>Exam 2 (Final Exam)</td>
<td>200</td>
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<tr>
<td>Quizzes (4 @ 50 pts each)</td>
<td>200</td>
</tr>
<tr>
<td>Lab Exercises</td>
<td>400</td>
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<tr>
<td><strong>Total Points</strong></td>
<td><strong>1000</strong></td>
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B. A student must take the final examination to receive a grade for this course.

VII. NOTES AND ADDITIONAL INSTRUCTIONS FROM COURSE INSTRUCTOR

A. **Course Withdrawal**: It is the student’s responsibility to officially withdraw from a class if circumstances prevent attendance. Any student who desires to, or must, officially withdraw from a course after the first scheduled class meeting must file a Central Texas College Application for Withdrawal (CTC Form 59). The Withdrawal form must be signed by the student.

CTC Form 59 will be accepted at any time prior to Friday, the 12th week of classes during the 16-week fall and spring semesters. The deadline for sessions of other lengths is:

- Friday of 3rd week for 5-week courses
- Friday of 4th week for 6-week courses
- Friday of 6th week for 8-week courses
- Friday of 7th week for 10-week courses
- Friday of 9th week for 12-week courses
- Friday of 12th week for 16-week courses

The equivalent date (75% of the semester) will be used for sessions of other lengths. The specific last day to withdraw is published each semester in the Schedule Bulletin.

A student who officially withdraws will be awarded the grade of "W", provided the student's attendance and academic performance are satisfactory at the time of official withdrawal. Students must file a withdrawal application with the College before they may be considered for withdrawal.

A student may not withdraw from a class for which the instructor has previously issued the student a grade of "F" or "FN" for nonattendance.

B. **Administrative Withdrawal**: An administrative withdrawal may be initiated when the student fails to meet College attendance requirements. The instructor will assign the appropriate grade on CTC Form 59 for submission to the registrar.
C. **Incomplete Grade:** The College catalog states, "An incomplete grade may be given in those cases where the student has completed the majority of the course work but, because of personal illness, death in the immediate family, or military orders, the student is unable to complete the requirements for a course..." Prior approval from the instructor is required before the grade of "I" is recorded. A student who merely fails to show for the final examination will receive a zero for the final and an "F" for the course.

D. **Cellular Phones and Beepers:** Cellular phones and beepers will be turned off while the student is in the classroom or laboratory.

E. **Americans with Disabilities Act (ADA):** Disability Support Services provides services to students who have appropriate documentation of a disability. Students requiring accommodations for class are responsible for contacting the Office of Disability Support Services (DSS) located on the central campus. This service is available to all students, regardless of location. Review the website at [www.ctcd.edu/disability-support](http://www.ctcd.edu/disability-support) for further information. Reasonable accommodations, in accordance with federal and state laws, will be given through the DSS office.

F. Students requiring accommodations for disabilities are responsible for notifying the instructor. Reasonable accommodations will be granted in full compliance with federal and state law and Central Texas College policy.

G. **Instructor Discretion:** The instructor reserves the right of final decision in course requirements.

H. ** Civility:** Individuals are expected to be cognizant of what a constructive educational experience is and respectful of those participating in a learning environment. Failure to do so can result in disciplinary action up to and including expulsion.

I. **Honesty and Integrity:** All students are required and expected to maintain the highest standards of scholastic honesty in the preparation of all course work and during examinations. The following will be considered examples of scholastic dishonesty:

1. **Plagiarism:** The taking of passages from writing of others without giving proper credit to the sources.
2. **Collusion:** Using another’s work as one’s own; or working together with another person in the preparation of work, unless joint preparation is specifically approved in advance by the instructor.
3. **Cheating:** Giving or receiving information on examinations.

Students guilty of scholastic dishonesty will be administratively dropped from the course with a grade of “F” and will be subject to disciplinary action.
VIII COURSE OUTLINE

A. Unit One: Chapters 1, 2, 3, 4 and 5. The Baking Profession; Basic Professional Skills: Bakeshop Math and Sanitation; Baking and Pastry Equipment; Ingredients; Basic Baking Principles.

1. Unit Objectives: Upon successful completion of this unit, the student will be able to:
   a. Describe the major events in the history of baking from prehistoric times to the present.
   b. Name and discuss four attitude characteristics possessed by successful bakers and pastry cooks.
   c. Explain the importance of weighing baking ingredients.
   d. Calculate raw fruit yields based on trimming losses.
   e. Use formulas based on baker’s percentages.
   f. Convert formulas to different yields.
   g. Calculate EP unit costs and formula costs.
   h. Identify the principal pieces of equipment used in baking and pastry making and indicate their uses.
   i. Understand the characteristics and functions of the major baking ingredients.
   j. Identify the main types of wheat flours by site and feel.
   k. Explain the factors that control the development of gluten in baked products.
   l. Explain the changes that take place in a dough or batter as it bakes.

2. Learning Activities:
   a. Classroom lecture/discussion (F1, F4)
   b. Homework and other assignments designated by the instructor (F1,F4)

B. Unit Two: Chapters 6, 7, 8, and 9. Understand Yeast Dough’s; Understanding Artisan Breads; Lean Yeast Dough’s; Rich Yeast Dough’s

1. Unit Objectives: Upon successful completion of this unit, the student will be able to:
   a. List and describe the twelve basic steps in the production of yeast goods.
   b. Explain the three basic mixing methods used for yeast dough’s.
   c. Recognize and correct faults in yeast products.
   d. Prepare yeast pre-ferments
   e. Mix bread dough’s using the technique called autolyse.
   f. Bake artisan breads properly.
g. Prepare lean straight dough’s and dough’s made with a sponge or pre-ferment.

h. Prepare natural starters and yeast starts, and mix sourdoughs using them.

i. Produce simple sweet dough’s and rolled-in yeast dough’s

j. Produce a variety of toppings and filling for rich yeast dough’s.

2. Learning Activities:

   a. Classroom lecture/discussion (F1, F4)

   b. Preparation of baked goods (C3, C14, C19, F1, F4, F9)

   c. Homework and other assignments designated by the instructor (FA4)

C. Unit Three: Chapters 10, 11, 12, 13, and, 14. Quick Breads; Doughnuts, Fritters, Pancakes, and Waffles; Basic Syrups, Creams, and Sauces; Pies; and Pastry Basics.

1. Unit Objectives: Upon successful completion of this unit, the student will be able to:

   a. Prepare baking powder biscuits, muffins, loaf breads and coffee cakes.

   b. Prepare doughnuts and other deep-fried desserts and pastries.

   c. Prepare crepes and crepe desserts.

   d. Cook sugar syrups to various stages of hardness.

   e. Prepare whipped cream, meringues, custard sauces, dessert sauces and pastry cream variations.

   f. Prepare and roll pie dough’s.

   g. Line pie pans, fill, assemble and bake various pie crusts.

   h. Prepare various fruit, custard-type, cream and chiffon fillings.

   i. Prepare puff pastry dough and prepare simple pastries from these dough’s.

   j. Prepare pate a choux, and prepare simple pastries from it.

   k. Handle commercial phyllo dough, and prepare pastries from the dough.

2. Learning Activities:

   a. Classroom lecture/discussion (F1)

   b. Hands on preparation of fillings, pies and dough’s (C3, C14, C19, F1, F4)

   c. Homework and other assignments designated by the instructor (F4)

D. Unit Four: Chapters 15, 16, 17, 18, and 19. Tarts and Special Pastries; Cake Mixing and Baking; Assembling and Decorating Cakes, Specialty Cakes, Gateaux, and Torten; Cookies.

1. Unit Objectives: Upon successful completion of this unit, the student will be able to:

   a. Prepare baked and unbaked tarts and tartlets.

   b. Perform basic cake mixing methods.

   c. Produce high-fat or shortened cakes and foam type cakes.
d. Correct cake failures or defects.
e. Prepare icings and assemble layer cakes.
f. Make a paper decorating come and use a pastry bag to make simple icing decorations.
g. Select from a variety of components to plan cakes that have well-balanced flavors and textures.
h. Assemble petit fours.
i. Understand the causes of crispness, moistness, chewiness, and spread in cookies.
j. Prepare cookie dough’s by using the three basic mixing methods.

2. Learning Activities:

   a. Classroom lecture/discussion (F1)
   b. Hands on preparation of tarts and cakes (C3, C14, C19, F1, F4)
   c. Homework and other assignments designated by the instructor (FA4)

E. Unit Five: Chapters 20, 21, 22, 23. Custards, Puddings, Mousses, and Soufflés; Frozen Desserts; Fruit Desserts; Dessert Presentation.

1. Unit Objectives: Upon successful completion of this unit, the student will be able to:

   a. Prepare various puddings and custards.
   b. Prepare ice creams and sorbets.
   c. Prepare still-frozen desserts.
   d. Select good-quality fresh fruits and prepare them for use in desserts.
   e. Calculate fresh fruit yields based on trimming losses.
   f. Prepare various fruit desserts, including poached fruits and fruit compotes.

2. Learning Activities:

   a. Classroom lecture/discussion (F1)
   b. Hands on preparation of tarts and cakes (C3, C14, C19, F1, F4)
   c. Homework and other assignments designated by the instructor (FA4)

IX FEEDBACK:

1. Instructor: As your instructor I will organize and present the course material in a manner designed to facilitate the learning process. I will evaluate your progress periodically via writing assignments and exams and provide feedback on your performance via exam scores, exam critiques, and critique of your writing assignments, etc. I am also available before and after each class period and during office hours to discuss your performance and answer questions.

2. Student: As the student you are ultimately responsible for your success in this course. It is your responsibility to attend class regularly, prepare for class by reading assigned text material, participate in class discussions, ask questions
when required to improve your understanding, prepare for and complete exams, and complete all other assignments.