2025 Culinary Arts

Program CIP: 12.0500 — Culinary Arts

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The Research and Curriculum Unit (RCU), located in Starkville, as part of Mississippi State University (MSU), was established to foster educational enhancements and innovations. In keeping with the land-grant mission of MSU, the RCU is dedicated to improving the quality of life for Mississippians. The RCU enhances the intellectual and professional development of Mississippi students and educators while applying knowledge and educational research to the lives of the people of the state. The RCU works within the contexts of curriculum development and revision, research, assessment, professional development, and industrial training.

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Standards

Standards and alignment crosswalks are referenced in the appendices. Depending on the curriculum, these crosswalks should identify alignment to the standards mentioned below, as well as possible related academic topics as required in the Subject Area Testing Program in Algebra I, Biology I, English II, and U.S. History from 1877, which could be integrated into the content of the units. Mississippi's CTE Culinary Arts is aligned to the following standards:

National Restaurant Association
National Restaurant Association Education Foundation
ProStart is an industry-supported program that empowers students to achieve successful careers in the restaurant and foodservice sector. *Foundations of Restaurant Management and Culinary Arts,* 2nd Ed. (2018). All rights reserved.
chooserestaurants.org/Educators/Curriculum

ServSafe
ServSafe is the restaurant industry's leading association and premier provider of educational resources, materials, and programs. *ServSafe Food Handler*, 6th Ed. (2016). *ServSafe Manager*, 7th Ed. (2017).
servsafe.com/access/ss/catalog/productlist/22
servsafe.com/servsafe-manager/buy-manager-products

College- and Career-Ready Standards
College- and career-ready standards emphasize critical thinking, teamwork, and problem-solving skills. Students will learn the skills and abilities demanded by the workforce of today and the future. Mississippi adopted *Mississippi College and Career Ready Standards (MCCRS)* to provide a consistent, clear understanding of what students are expected to learn and so teachers and parents know what they need to do to help them.
mdek12.org/oae/college-and-career-readiness-standards

International Society for Technology in Education Standards (ISTE)
Reprinted with permission from *ISTE Standards for Students* (2016). All rights reserved. Permission does not constitute an endorsement by ISTE.
iste.org

Framework for 21st Century Learning
In defining 21st-century learning, the Partnership for 21st Century Skills has embraced key themes and skill areas that represent the essential knowledge for the 21st century: global awareness; financial, economic, business and entrepreneurial literacy; civic literacy; health literacy; environmental literacy; learning and innovation skills; information, media, and technology skills; and life and career skills.
battelleforkids.org/networks/p21/frameworks-resources

Preface

Secondary CTE programs in Mississippi face many challenges resulting from sweeping educational reforms at the national and state levels. Schools and teachers are increasingly being held accountable for providing applied learning activities to every student in the classroom. This accountability is measured through increased requirements for mastery and attainment of competency as documented through both formative and summative assessments. This document provides information, tools, and solutions that will aid students, teachers, and schools in creating and implementing applied, interactive, and innovative lessons. Through best practices, alignment with national standards and certifications, community partnerships, and a hands-on, student-centered concept, educators will be able to truly engage students in meaningful and collaborative learning opportunities.

The courses in this document reflect the statutory requirements as found in Section 37-3-49, *Mississippi Code of 1972*, as amended (Section 37-3-46). In addition, this curriculum reflects guidelines imposed by federal and state mandates (Laws, 1988, Ch. 487, §14; Laws, 1991, Ch. 423, §1; Laws, 1992, Ch. 519, §4 eff. from and after July 1, 1992; Strengthening Career and Technical Education for the 21st Century Act, 2019 [Perkins V]; and Every Student Succeeds Act, 2015).

Mississippi Teacher Professional Resources

The following are resources for Mississippi teachers:

Curriculum, Assessment, Professional Learning
: Program resources can be found at the RCU's website, rcu.msstate.edu.

Learning Management System: An Online Resource
: Learning management system information can be found at the RCU's website, under Professional Learning.

Should you need additional instructions, contact the RCU at 662.325.2510 or helpdesk@rcu.msstate.edu.

Executive Summary

Pathway Description
Culinary Arts is a pathway in the Hospitality and Events Career Cluster. This program is designed for students who wish to pursue a career or higher education in the foodservice industry. Through this program, students will learn safety and sanitation in the workplace, basic culinary skills and knowledge, and basic management and financial operations for various parts of the food service industry.

College, Career, and Certifications
This program is aligned with postsecondary culinary arts programs, the latest industry needs, expectations, and standards. At the completion of this program, students will have the opportunity to earn both the ServSafe Food Handler and ServSafe Manager certifications at district discretion. Also, districts are encouraged to contact Mississippi's postsecondary culinary arts programs to see what sort of articulation agreement could be created.

Grade Level and Class Size Recommendations
It is recommended that students enter this program as a sophomore. Exceptions to this are district-level decisions based on class size, enrollment numbers, student maturity, and CTE delivery method. A maximum of 25 students is recommended for classroom-based courses, while a maximum of 15 students is recommended for lab-based courses.

Student Prerequisites
For students to experience success in the program, the following student prerequisites are suggested:

1. C or higher in English (the previous year)
2. C or higher in high school-level math (last course taken or the instructor can specify the level of math instruction needed)
3. Instructor approval and Test of Adult Basic Education (TABE) reading score (eighth grade or higher)

or

1. TABE reading and math score (eighth grade or higher)
2. Instructor approval

or

1. Instructor approval

Assessment
The latest assessment blueprint for the curriculum can be found at rcu.msstate.edu/curriculum.

Applied Academic Credit
The latest academic credit information can be found at mdek12.org/ese/approved-course-for-the-secondary-schools.

Teacher Licensure
The latest teacher licensure information can be found at

mdek12.org/oel/apply-for-an-educator-license.

Professional Learning
If you have specific questions about the content of any training sessions provided, please contact the RCU at 662.325.2510 or helpdesk@rcu.msstate.edu.

Course Outlines

Option 1—Four 1-Carnegie Unit Courses

This curriculum consists of four 1-credit courses that should be completed in the following sequence:

1. **Orientation to Culinary Arts—Course Code: 996002**
2. **Theory and Application of Culinary Arts I—Course Code: 996004**
3. **Theory and Application of Culinary Arts II—Course Code: 996005**
4. **Advanced Studies in Culinary Arts—Course Code: 996006**

Course Description: Orientation to Culinary Arts
This course identifies the foundational skills necessary for students to be successful in the foodservice industry. Content includes the history and overview of the industry, safety and sanitation, standardized recipes, and culinary math used in the foodservice industry.

Course Description: Theory and Application of Culinary Arts I
This course examines additional fundamentals of the foodservice industry, including an exploration of standard kitchen equipment and various food preparation techniques. The content also includes insights into the basics of the bake shop.

Course Description: Theory and Application of Culinary Arts II
This course begins with examining industry standards material, followed by basic nutrition and beginner-level skills related to food management and food safety. Students who adequately master this course content will have an expanded understanding and foundation of the foodservice industry standards and expectations.

Course Description: Advanced Studies in Culinary Arts
This course explores additional food preparation practices, including more complex preparation techniques for baked goods. Content also includes a detailed overview and hands-on practice of basic culinary business skills to prepare students for successful entry into the field.

Orientation to Culinary Arts—Course Code: 996002

Unit	Unit Title	Hours
1	Orientation	15
2	Overview of the Foodservice and Hospitality Industry	15
3	Food Safety Basics	40
4	Safety in the Workplace	20
5	Utilizing Standardized Recipes and Culinary Math	50
Total		**140**

Theory and Application of Culinary Arts I—Course Code: 996004

Unit	Unit Title	Hours
6	Equipment	40
7	Techniques	60
8	Bake Shop Basics	40
Total		**140**

Theory and Application of Culinary Arts II—Course Code: 996005

Unit	Unit Title	Hours
9	Orientation to Advanced Culinary Arts	10
10	Advanced Food Safety	45
11	Food Safety in the Flow of Food	50
12	Food Safety Management Systems	15
13	Food Safety Regulations, Standards, and Training	20
Total		**140**

Advanced Studies in Culinary Arts—Course Code: 996006

Unit	Unit Title	Hours
14	Culinary Business Principles	40
15	Advanced Kitchen Techniques (Meat, Seafood, and Poultry)	60
16	Advanced Baking	40
Total		**140**

Option 2—Two 2-Carnegie Unit Courses

This curriculum consists of two 2-credit courses, which should be completed in the following sequence:

1. **Culinary Arts I—Course Code: 996000**
2. **Culinary Arts II—Course Code: 996001**

Course Description: Culinary Arts I
This course identifies the foundational skills necessary in the foodservice industry. The first portion of the content includes the history and overview of the industry, safety and sanitation, standardized recipes, culinary math, equipment, and popular techniques used in the foodservice industry. After this, preparation techniques for various foods are covered, along with the information needed to properly do these skills safely and efficiently. This course concludes with basic communication and customer service skills, management essentials, and a career readiness section to prepare students for their next step in life. Students who adequately master the competencies in this course will possess extensive foundational knowledge and skills in the foodservice industry standards and expectations.

Course Description: Culinary Arts II
This course begins with examining industry standards material, followed by exploring basic nutrition and beginner-level skills related to food management and food safety. This course also explores additional food preparation practices, including more complex preparation techniques for baked goods. Students will receive a detailed overview and hands-on practice of basic culinary business skills to prepare students for successful entry into the foodservice field.

Culinary Arts I—Course Code: 996000

Unit	Unit Title	Hours
1	Orientation	15
2	Overview of the Foodservice and Hospitality Industry	15
3	Food Safety Basics	40
4	Safety in the Workplace	20
5	Utilizing Standardized Recipes and Culinary Math	50
6	Equipment	40
7	Techniques	60
8	Bake Shop Basics	40
Total		**280**

Culinary Arts II—Course Code: 996001

Unit	Unit Title	Hours
9	Orientation to Advanced Culinary Arts	10
10	Advanced Food Safety	45
11	Food Safety in the Flow of Food	50
12	Food Safety Management Systems	15
13	Food Safety Regulations, Standards, and Training	20
14	Culinary Business Principles	40
15	Advanced Kitchen Techniques (Meat, Seafood, and Poultry)	60
16	Advanced Baking	40
Total		**280**

Career Pathway Outlook

Overview

Culinary Arts is an educational pathway in the Hospitality and Events Career Cluster that allows students to discover various career opportunities related to preparing, cooking, and presenting food. Culinary arts-related careers require knowledge of proper culinary techniques, safe food handling practices, and good communication skills. These career fields include bakers, chefs, head cooks, supervisors, food preparation workers, food service managers, and servers. Culinary professionals are responsible for training staff, managing operations, ensuring customer satisfaction, and maintaining health and safety standards. These professionals also handle financial tasks such as budgeting and payroll. Advanced positions involve menu development, marketing, and business management responsibilities. Foodservice managers are culinary professionals who maintain accurate business and banking records, oversee payroll expenses, and manage all employee records. They complete licensing, taxes, wages, insurance, and even unemployment compensation paperwork. Culinary professionals use various cooking equipment, including step-in coolers, high-quality knives, meat slicers, and grinders. Chefs and head cooks may work in restaurants, hotels, and other foodservice establishments. Their core responsibilities include ensuring sanitation and quality standards, managing food production and staff, menu planning, and administrative tasks. Chefs may use social media platforms to promote business by advertising new menu items or addressing notable patrons. They may develop recipes, determine how to present dishes and ensure the quality of meals throughout the business day. They also use scheduling and purchasing software in their administrative tasks. Some self-employed culinary professionals run their own restaurants or catering businesses. When outside of the kitchen, self-employed chefs often spend many hours managing all aspects of the business to ensure that bills and salaries are paid and that the business remains profitable.

Most careers in culinary arts require a high school diploma and prior work experience. However, careers with the highest earning potential—executive chefs, research chefs, head cooks, chefs de cuisine, sous chefs, food production managers, and food scientists—may require postsecondary degrees. Some culinary arts professionals may receive additional training at community colleges, technical schools, culinary schools, or 4-year colleges.

Needs of the Future Workforce

According to the U.S. Bureau of Labor Statistics, employment of chefs and head cooks is projected to grow 5 percent through 2032, which is faster than the average for all occupations. Nationally, projected each year over the decade, there are about 22,000 job openings for chefs and head cooks, 39,600 openings for foodservice managers, and 3,000 openings for agricultural and food scientists. The median annual wage for chefs and head cooks was $56,520 in May 2022. Comparatively, foodservice managers' median annual wage was $63,310, while agricultural and food scientists accounted for $74,940, in May 2022. Restaurants are the top area of employment for foodservice managers amounting to 49%, while self-employed foodservice managers accounted for 33% overall. The top employer for chefs and head cooks were restaurants accounting for 51% overall, while 11% and 9% were employed in special food services and traveler accommodations, respectively. The data given in Table 1.1 below was made available by the Mississippi Department of Employment Security and the U.S. Bureau of Labor Statistics, Division of Occupational Employment and Wage Statistics.

Table 1.1: Current and Projected Occupation Report

Description	Jobs, 2020	Projected Jobs, 2030	Change (Number)	Change (Percent)	Average Hourly Earnings, 2024
Bakers	830	1020	190	22.9%	$12.69
Chefs and Head Cooks	320	390	70	21.9%	$19.39
Cooks, Restaurant	8,650	12,810	4,160	48.1%	$12.74
First-Line Supervisors of Food Preparation and Serving Workers	9,930	13,070	3,140	31.6%	$15.57
Food Batchmakers	540	690	150	27.8%	$15.25
Food Cooking Machine Operators and Tenders	130	160	30	23.1%	$14.24
Food Preparation Workers	8,560	10,580	2,020	23.6%	$11.54
Food Processing Workers, All Other	320	390	70	21.9%	$16.77
Food Science Technicians	210	240	30	14.3%	$24.29
Foodservice Managers	2,820	3,500	680	24.1%	$25.24
Waiters and Waitresses	15,480	19,980	4,500	29.1	$10.31

Sources: Mississippi Department of Employment Security, mdes.ms.gov (2023); U.S. Bureau of Labor Statistics, Division of Occupational Employment and Wage Statistics, bls.gov (2024).

Perkins V Requirements and Academic Infusion

The Culinary Arts curriculum meets Perkins V requirements of introducing students to and preparing them for high-skill, high-wage occupations within the hospitality and events field. It also offers students a program of study, including secondary, postsecondary, and institutions of higher learning courses, that will further prepare them for arts, a/v technology, and communications-related careers. Additionally, this curriculum is integrated with academic college- and career-readiness standards. Lastly, it focuses on ongoing and meaningful professional development for teachers as well as relationships with industry.

Transition to Postsecondary Education

The latest articulation information for secondary to postsecondary can be found at the Mississippi Community College Board website, mccb.edu.

Best Practices

Innovative Instructional Technologies

Classrooms should be equipped with tools that will teach today's digital learners through applicable and modern practices. The culinary arts educator's goal should be to include teaching strategies that incorporate current technology. To make use of the latest online communication tools—wikis, blogs, podcasts, and social media platforms, for example—the classroom teacher is encouraged to use a learning management system that introduces students to education in an online environment and places more of the responsibility of learning on the student.

Differentiated Instruction

Students learn in a variety of ways, and numerous factors—students' background, emotional health, and circumstances, for example—create unique learners. By providing various teaching and assessment strategies, students with various learning preferences can have more opportunities to succeed.

CTE Student Organizations

Teachers should investigate opportunities to sponsor a student organization. There are several here in Mississippi that will foster the types of learning expected from the Culinary Arts curriculum. FCCLA and SkillsUSA are examples of student organizations with many outlets for culinary arts. Student organizations provide participants and members with growth opportunities and competitive events. They also open the doors to the world of culinary careers and scholarship opportunities.

Cooperative Learning

Cooperative learning can help students understand topics when independent learning cannot. Therefore, you will see several opportunities in the Culinary Arts curriculum for group work. To function in today's workforce, students need to be able to work collaboratively with others and solve problems without excessive conflict. The Culinary Arts curriculum provides opportunities for students to work together and help each other complete complex tasks. There are many field experiences within the Culinary Arts curriculum that will allow and encourage collaboration with professionals currently in the culinary field.

Professional Organizations

American Association of Family and Consumer Sciences (AAFCS)
aafcs.org/home

American Culinary Federation (ACF)
acfchefs.org

Association for Career and Technical Education (ACTE)
acteonline.org

Family, Career, and Community Leaders of America (FCCLA)
fcclainc.org

Mississippi Association for Career and Technical Education (MSACTE)
mississippiacte.com

National Restaurant Association Educational Foundation (NRAEF)
chooserestaurants.org

SkillsUSA Inc.
skillsusa.org

Using This Document

Competencies and Suggested Objectives
A competency represents a general concept or performance that students are expected to master as a requirement for satisfactorily completing a unit. Students will be expected to receive instruction on all competencies. The suggested objectives represent the enabling and supporting knowledge and performances that will indicate mastery of the competency at the course level.

Teacher Resources
All teachers should request to be added to the Canvas Resource Guide for their course. For questions or to be added to the guide, send a Help Desk ticket to the RCU by emailing helpdesk@rcu.msstate.edu.

Perkins V Quality Indicators and Enrichment Material
Some of the units may include an enrichment section at the end. This material will greatly enhance the learning experiences of students. If the culinary arts program is using a national certification, work-based learning, or another measure of accountability that aligns with Perkins V as a quality indicator, this material could be assessed on that quality indicator. It is the responsibility of the teacher to ensure all competencies for the selected quality indicator are covered throughout the year.

Unit 1: Orientation

Competencies and Suggested Objectives
1. Identify house and program policies and procedures and compare/contrast them with industry policies and procedures. DOK1 a. Discuss the school/district handbook and all safety procedures for classroom and building levels. b. Preview local program and building/center policies and procedures, including dress code, attendance, acceptable use of technology (including personal devices in the school and workplace), academic requirements, discipline, lab rules and regulations, and transportation regulations. c. Preview course objectives and the industry standards and discuss the importance of students knowing the content of the course and how it will be delivered.
2. Examine opportunities provided by student organizations, including SkillsUSA and Family, Career, and Community Leaders of America (FCCLA). DOK2 a. Discuss leadership and personal development in accordance with student organization guidelines and provide the opportunity for all students to participate in leadership roles and/or develop as students. b. Work as a team to brainstorm ideas for a community service project according to student organization guidelines in which the knowledge and skills learned throughout the course can be used to improve the lives of others. c. Explore career and technical student organizations (CTSO) competitive events.
3. Apply college and career readiness skills. DOK4 a. Exhibit excellent written and verbal communication skills. b. Assess personal skills, abilities, aptitudes, strengths, and weaknesses as they relate to college and career exploration and development.

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.
Note: This unit will be ongoing throughout the year. Time allotted for this unit will be distributed over the entire year.

Unit 2: Overview of the Foodservice and Hospitality Industry

Competencies and Suggested Objectives
1. Identify career opportunities in the culinary and hospitality industry. DOK1 a. Identify career opportunities in the culinary industry, including but not limited to communication writers, food stylists, marketers, research and development, food science, sales, dietitians, food production, food processing, accounting, entrepreneurs, trainers, and grocery store and deli managers. b. Differentiate between commercial and noncommercial restaurant industries.
2. Identify the attributes and duties of a culinary professional. DOK1 a. List the attributes of a professional culinarian, including work ethic, knowledge, skill, flavor, aroma, taste, judgment, dedication, pride, respect, personal responsibility, and education. b. Identify the positions and responsibilities of the kitchen (back-of-the-house) and dining room (front-of-the-house) brigade systems. c. Discuss organizational goals and why they should be specific, measurable, achievable, relevant, and time-bound (SMART).
3. Examine the importance of service, positive dining experience, service styles, and proper setup in the foodservice industry. DOK2 a. Identify the characteristics of good service, including first impressions and anticipating customers' special needs. b. Identify and discuss greeting, taking guests' orders, suggestive selling techniques, and conflict resolution with customer complaints. c. Demonstrate setting, serving, and clearing items properly for American table service.

Enrichment
1. Assess personal skills, abilities, aptitudes, strengths, and weaknesses as they relate to career exploration and development. Use a validated career interest survey (e.g., Choices, CareerOneStop's Self-Assessment Survey, etc.) to develop a well-organized interest inventory.

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Note: This unit will be ongoing throughout the year. Time allotted for this unit will be distributed over the entire year.

Unit 3: Food Safety Basics

Competencies and Suggested Objectives
1. Examine the importance of food safety. DOK2 a. Define foodborne illness and foodborne illness outbreak. b. Identify and define biological, chemical, and physical hazards that can contaminate food. c. Determine personal behaviors that can contaminate food. • Poor personal hygiene • Cross-contamination • Time-temperature abuse • Poor cleaning and sanitizing
2. Describe the importance of good personal hygiene. DOK1 a. Demonstrate how, when, and where to properly wash hands. b. Identify other hand care guidelines such as nail care, wound care, glove usage, and allowed jewelry. c. Describe the appropriate work attire and personal grooming for the foodservice industry. d. List the reasons why an employee would be prevented from working with food or in food operations. • Fever, vomiting, diarrhea, jaundice, etc.
3. Examine the importance of knowing the Big 6 Pathogens. DOK2 a. Identify the Big 6 Pathogens as the most common foodborne illness. • Norovirus • Hepatitis A • Salmonella Typhi • Non-typhoidal Salmonella • E. coli • Shigella
4. Identify the proper methods for controlling time and temperature for food safety. DOK1 a. Identify foods that need time and temperature control for safety (TCS foods). b. Identify and discuss the temperature danger zone. c. Demonstrate the proper use and care of thermometers, including calibration. d. Outline the proper procedures for each stage of the Flow of Food. • Receiving, storing, thawing, prepping, cooking (minimal internal temperature), holding, cooling, reheating, and serving food, including the proper tools and equipment used to perform these tasks e. Identify populations at higher risk for foodborne illness. • Elderly people • Preschool-age children • People with compromised immune systems
5. Examine and apply the proper methods for preventing cross-contamination. DOK4

a. Discuss the prevention of cross-contamination when receiving, storing, prepping, and serving food, as well as in self-service areas.
b. Identify and demonstrate the proper storage of utensils, equipment, chemicals, and cleaning supplies.
c. Discuss the proper procedures for when cross-contamination occurs.
d. List the Big 9 common food allergens.
    - Peanuts
    - Tree nuts
    - Eggs
    - Dairy
    - Shellfish
    - Fish
    - Wheat
    - Soy
    - Sesame
e. Discuss the proper procedures for preparing, cooking, and serving food to prevent cross-contact.
f. Discuss the proper procedures for when cross-contact occurs.

6. Apply proper cleaning and sanitizing techniques. DOK2
    a. Differentiate between cleaning and sanitizing.
    b. Identify and demonstrate the proper procedures for cleaning and sanitizing surfaces, tools, and equipment, including washing, rinsing, sanitizing, and air-drying.
    c. Conduct the proper procedure to ensure the effectiveness of sanitizers.
    d. Discuss and demonstrate the proper setup, use, and maintenance of a three-compartment sink and dishwasher.
    e. Discuss the proper procedure for handling garbage.
    f. Identify signs of pest presence in the workplace, including droppings, nests, and damage to products, packaging, and the facility.

Enrichment

1. List the conditions under which bacteria can multiply rapidly. Use the letters FAT TOM (food, acidity, temperature, time, oxygen, and moisture).
2. Introduce the Hazard Analysis Critical Control Points (HACCP) plan process and allow students to create their own.
3. Discuss the importance of identifying high-risk populations.

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Note: This unit will be ongoing throughout the year. Time allotted for this unit will be distributed over the entire year.

Unit 4: Safety in the Workplace

Competencies and Suggested Objectives
1. Examine the importance of workplace safety to customers and employees. DOK2 a. Discuss the legal responsibility of the Occupational Safety and Health Administration (OSHA) and its importance in the safety and protection of employees. b. Describe the Hazard Communication Standard (HCS) requirements for employers. c. Identify and utilize safety data sheets (SDS). d. Evaluate procedures to implement emergency plans in the foodservice industry.
2. Apply safe work habits to prevent injuries. DOK3 a. Demonstrate ways to use personal protective equipment (PPE) to prevent injuries. b. Classify the types of fires (A, B, C, and K) and determine the proper extinguisher application. c. Demonstrate the procedures to extinguish a fire - pull, aim, squeeze, sweep (PASS). d. Describe hazards that contribute to injury due to slips, trips, or falls and the procedures for cleaning up spills. e. Explore the proper use of ladders, proper lifting and carrying procedures to avoid injury, and the correct and safe use of knives, including handling, walking, passing, washing, and storing.
3. Demonstrate proper emergency techniques and procedures utilized in the foodservice industry. DOK2 a. Demonstrate basic first-aid procedures for choking, cuts, burns, sprains, strains, and allergic reactions. b. Describe the importance of high-quality cardiopulmonary resuscitation (CPR) and its impact on survival. c. Describe the techniques for relief of foreign-body airway obstruction for an adult, child, and infant.

Enrichment
1. Contact the local fire department to conduct fire extinguisher demonstrations and training. 2. Conduct basic first aid and CPR training and certification.

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.

Note: This unit will be ongoing throughout the year. Time allotted for this unit will be distributed over the entire year.

Unit 5: Utilizing Standardized Recipes and Culinary Math

Competencies and Suggested Objectives
1. Examine standardized recipes and why restaurants use them. DOK2 a. Identify the components of a standardized recipe. • Name/title • Yield • Ingredients (in order of use) • Portion size • Directions (including temperature and time) b. Explain why standardized recipes are used throughout the foodservice industry. c. Convert a recipe to a standardized recipe.
2. Define and demonstrate mise en place. DOK2
3. Apply basic math concepts to food preparation skills. DOK2 a. Identify standard measuring abbreviations. b. List the common equivalents of weights and measures, including the following: • 3 tsp = 1 tbsp • 16 tbsp = 1 c • 8 oz = 1 c • 16 oz = 1 lb • All gallon equivalents c. Differentiate between weight and volume. d. Demonstrate the proper use of the measuring devices for liquid, dry, and weighed ingredients, including measuring cups, measuring spoons, and scales. e. Convert a standardized recipe to smaller and greater quantities using conversion factors. Define the following terms: • Doubling • Tripling • Quadrupling • Half • Third • Fourth f. Explain terms such as yield, waste, as purchased (AP), edible portion (EP), recipe cost, food cost, portion cost, labor cost, and overhead.

Enrichment
1. Explore the standard metric units of measurement used in the kitchen.

Note: Safety is to be taught as an ongoing part of the program. Students are required to complete a written safety test with 100% accuracy before entering the shop for lab

simulations and projects. This test should be documented in each student's file.
Note: This unit will be ongoing throughout the year. Time allotted for this unit will be distributed over the entire year.

Unit 6: Equipment

Competencies and Suggested Objectives
1. Demonstrate the use and maintenance of various knives used in the kitchen. DOK2 a. Identify the different parts of a knife, including the blade, cutting edge, spine, tip, heel bolster, tang, handle, rivets, scales, and butt. b. Discuss and demonstrate the particular purpose of the knives below. • Boning • Chef • Paring • Serrated c. Discuss the maintenance of knives, including sharpening and honing. d. Demonstrate basic knife cuts, including mince, dice, and julienne.
2. Identify the use and maintenance of various small equipment used in the kitchen. DOK1 a. Identify and discuss using and maintaining hand tools and small equipment. • Cheesecloth • China cap • Colander • Ladle • Mandolin • Spatula (offset and rubber) • Sifter • Skimmer • Tongs • Wire whip • Zester b. Identify and discuss the use and maintenance of pots and pans. • Bain-marie • Cast iron • Chafing dishes • Double boiler • Hotel pan • Saucepan • Sauté pan • Sheet pan • Stockpot
3. Identify the use and maintenance of various large food preparation equipment used in the kitchen. DOK1 a. Identify and discuss the use and maintenance of powered food preparation equipment, including a stand and handheld mixer and attachments, a food processor, and a blender. b. Identify and discuss the use and maintenance of the large food preparation equipment used to cook food. • Conventional oven

- Convection oven
- Deep-fat fryer
- Griddle
- Grill
- Microwave oven
- Range

c. Demonstrate maintenance (deep cleaning) of at least one major piece of equipment.

Enrichment

1. Examine additional industrial equipment, including tilt skillet, combi-oven, steam-jacketed kettle/steamer, espresso machine, and hot-holding equipment.

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Note: This unit will be ongoing throughout the year. Time allotted for this unit will be distributed over the entire year.

Unit 7: Techniques

Competencies and Suggested Objectives
1. Define and provide examples of various food preparation techniques. DOK1 a. Define and give examples of dry-heat cooking methods. • Baking • Broiling • Deep-frying • Grilling • Pan-frying • Roasting • Sautéing • Stir-frying b. Define and give examples of moist-heat cooking methods. • Blanching • Boiling • Poaching • Simmering • Steaming c. Define and give examples of combination cooking methods, including braising and stewing. d. Demonstrate one cooking technique for each of the following: • Dry-heat • Moist-heat • Combination
2. Define and provide examples of other cooking methods, including microwaving and sous vide. DOK1
3. Describe and demonstrate the storage and preparation of potatoes. DOK2 a. Discuss the methods to select, receive, and store potatoes. b. Identify, describe, and demonstrate the best cooking method for each of the following potatoes: • Russet (Idaho) potato • Chef potato • New potato • Sweet potato
4. Describe and demonstrate the storage and preparation of legumes and grains. DOK2 a. Discuss the methods to select, receive, and store legumes and grains. b. Demonstrate pilaf or risotto preparation.
5. Describe and demonstrate the storage and preparation of pasta and dumplings. DOK2 a. Discuss how to select, receive, and store pasta and dumplings. b. Demonstrate the proper procedure for preparing a basic pasta (including the resting stage) and cooking it al dente. c. Identify gnocchi, fettuccini, penne, orzo, fusilli, and spaetzle.

6. Identify and prepare sauces. DOK2 d. Describe common thickeners for sauces, including roux and slurry.

Enrichment
1. Examine the five mother sauces.

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Note: This unit will be ongoing throughout the year. Time allotted for this unit will be distributed over the entire year.

Unit 8: Bake Shop Basics

Competencies and Suggested Objectives
1. Describe bake shop basics. DOK1 a. List the common categories of baking ingredients and examples of each. • Strengtheners: flour and eggs • Fats/shortenings: butter and oils • Sweeteners: sugars, syrups • Flavorings: extracts and spices • Leaveners: baking powder (chemical), baking soda (chemical), yeast (organic), and steam (physical) • Thickeners: cornstarch, flour, and eggs • Liquids: water, milk, cream, eggs, honey, molasses, and butter • Additives: food coloring b. Differentiate between baking formulas and standardized recipes. c. Identify other essential bakery terms: • Knead • Gluten • Proof • Rest • Bloom
2. Identify and prepare various quick breads and cookies. DOK2 a. Define and give examples of quick breads, including muffins, biscuits, cookies, and scones. b. Demonstrate the three mixing methods for preparing quick breads: creaming, biscuit, and muffin.
3. Describe cake decorating essentials. DOK1 a. Define and give examples of equipment: • Piping bag • Piping tips • Cake board • Turntable • Offset spatula • Bowl scraper b. Define different types of icings: • Buttercream • Royal icing • Ganache • Whipped cream

Enrichment
1. Demonstrate cake decorating techniques based on student organization guidelines and competitions.

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Note: This unit will be ongoing throughout the year. Time allotted for this unit will be distributed over the entire year.

Unit 9: Orientation to Advanced Culinary Arts

Competencies and Suggested Objectives
1. Compare and contrast house and program policies and procedures with industry policies and procedures. DOK3 a. Discuss the school/district handbook and all safety procedures for classroom and building levels. b. Preview local program and building/center policies and procedures, including dress code, attendance, acceptable use of technology (including personal devices in the school and workplace), academic requirements, discipline, lab rules and regulations, and transportation regulations. c. Preview course objectives and the industry standards and discuss the importance of students knowing the content of the course and how it will be delivered.
2. Examine opportunities provided by student organizations, including SkillsUSA and FCCLA. DOK2 a. Discuss leadership and personal development following student organization guidelines and provide the opportunity for all students to participate in leadership roles and/or develop as students. b. Work as a team to brainstorm ideas for a community service project according to student organization guidelines in which the knowledge and skills learned throughout the course can be used to improve the lives of others. c. Explore CTSO competitive events.
3. Identify career opportunities in the culinary and hospitality industry. DOK1 a. Identify career opportunities in the culinary industry, including but not limited to communication writers, food stylists, marketers, research and development, food science, sales, dietitians, food production, food processing, accounting, entrepreneurs, trainers, and grocery store and deli managers. b. Research and develop a brief presentation on a specific career using online resources.
4. Utilize career resources to create a comprehensive class/career portfolio. DOK4 a. Identify and demonstrate proper file storage, sharing, and maintenance techniques. b. Research and initiate a student career information ePortfolio including the basic elements below. • Title page • Table of contents (pages numbered or hyperlinked to content) • Introduction/purpose (documenting mastery of each course project) • Valid professional email address • Résumé and cover letter c. Add designated portfolio assignments (ongoing).

Enrichment
1. Conduct practice interviews or answer a list of possible interview questions.

Note: Safety is to be taught as an ongoing part of the program. Students are required to

complete a written safety test with 100% accuracy before entering the shop for lab simulations and projects. This test should be documented in each student's file.
Note: This unit will be ongoing throughout the year. Time allotted for this unit will be distributed over the entire year.

Unit 10: Advanced Food Safety

Competencies and Suggested Objectives

1. Explain foodborne illness and the best practices in providing safe food. DOK2
   a. Define foodborne illness and what is considered an outbreak.
   b. Identify and explain the various challenges to food safety faced by the foodservice industry.
      - Time
      - Language and culture
      - Literacy and education
      - Pathogens
      - Unapproved suppliers
      - High-risk customers
      - Staff turnover
   c. Discuss the costs of a foodborne illness to both the operation and the victims.
   d. List the three categories of contaminants and give examples of each:
      - Biological (E. coli, Hepatitis A, Norovirus, etc.)
      - Chemical (pesticides, food additives, veterinary drugs, etc.)
      - Physical (plastic pieces, wood splinters, hair, etc.)
   e. Discuss the five most common ways that food can become unsafe.
      - Cross-contamination
      - Improper cooking temperature
      - Inadequate storage
      - Poor personal hygiene
      - Unsafe water and raw materials
   f. Discuss the four main practices related to foodborne illness.
      - Prevention
      - Detection
      - Response
      - Education and training
   g. Review Time and Temperature Control for Safety (TCS) foods and identify common TCS and ready-to-eat foods.
   h. Identify populations at high risk for foodborne illness.
2. Examine the various forms of contamination and demonstrate how to prevent and respond to contaminated food. DOK3
   a. Examine how contamination occurs, including the fecal-oral route and other common methods of contamination.
   b. Discuss biological contamination and the "Big Six" pathogens, according to the Food and Drug Administration (FDA).
   c. Identify the symptoms of foodborne illness and the variation of onset times.
   d. Identify the basic characteristics of bacteria that cause foodborne illness, including the six conditions necessary for it to grow (Food, Acidity, Time Temperature, Oxygen, and Moisture: FAT TOM) and how to control for these.

e. Describe the source, the food linked with the bacteria, and prevention methods for the major bacteria below:
    - Salmonella Typhi
    - Nontyphoidal Salmonella (NTS)
    - Shigella spp.
    - Shiga toxin-producing E. coli (STEC)

f. Identify the basic characteristics of viruses that cause foodborne illness.

g. Describe the source, the food linked with the virus, and prevention methods for the major viruses below:
    - Hepatitis A
    - Norovirus

h. Describe the locations, sources, and prevention methods common to parasites.

i. Discuss the origins, symptoms, and prevention of biological toxins or poisons.

3. Describe the sources, symptoms, and prevention of chemical and physical contaminants. DOK2

a. Explain the deliberate contamination of food and develop/analyze the food defense system in place in your kitchen or cafeteria using the A.L.E.R.T. tool designed by the FDA.
    - Document information
    - Identify staff
    - Cooperate with authorities
    - Review procedures

b. Identify the top nine allergens and discuss the various food sources for each.

c. Identify the common symptoms of an allergic reaction and how to respond if one occurs.

d. Explain how to prevent allergic reactions by using food labels, properly training your service and kitchen staff, and avoiding cross-contact in all situations.

4. Determine the best practices for being a safe food handler and exhibit these throughout the year. DOK2

a. Explain and give examples of how to manage a personal hygiene program and how food handlers can contaminate food, including the situations and actions that lead to contamination.

b. Describe and demonstrate proper handwashing and hand-care practices.

c. Discuss the importance of single-use gloves and how to properly choose, use, and change single-use gloves on the job.

d. Demonstrate proper personal hygiene practices, including personal cleanliness, following proper work attire guidelines, and eating, drinking, smoking, or chewing gum or tobacco.

e. Discuss policies for reporting health issues and how to watch for and handle medical conditions among the staff.

5. Demonstrate the proper procedures for cleaning and sanitizing. DOK3

a. Discuss safe and appropriate cleaners and sanitizers, including how to ensure the effectiveness of a sanitizer.

b. Identify the general guidelines for the effective use of chlorine, iodine, and “quats.”

c. Explain how and when to clean and sanitize surfaces and equipment.

d. Demonstrate the proper procedure for dishwashing by machine and manually in a three-compartment sink.
e. Demonstrate how to properly store tableware and equipment.
f. Demonstrate the proper procedure for using wiping clothes, cleaning the premises, cleaning up after people who get sick, and using and storing cleaning tools and supplies.
g. Acting as a manager, develop a cleaning plan for your kitchen or school cafeteria.

Enrichment
1. Acting as a manager, students can brainstorm ideas on how to best implement training and monitoring procedures for kitchen staff.

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Note: This unit will be ongoing throughout the year. Time allotted for this unit will be distributed over the entire year.

Unit 11: Food Safety in the Flow of Food

Competencies and Suggested Objectives
1. Identify types of contaminants and methods of prevention and explain ways to prevent time-temperature abuse. DOK2 a. Explain the "flow of food." b. Identify common hazards throughout the "flow of food," including cross-contamination and time-temperature control/abuse. c. Discuss and demonstrate guidelines for preventing cross-contamination and time-temperature abuse.
2. Explain the "flow of food" regarding proper purchasing and receiving food processes. DOK2 a. Review and demonstrate general purchasing principles, such as using approved, reputable suppliers and handling deliveries properly. b. Discuss and demonstrate the proper methods for receiving and inspecting food.
3. Identify ways of preventing cross-contamination and time-temperature abuse when storing food. DOK2 a. Properly label and date mark food. b. Describe how to prevent cross-contamination during storage. c. Explain how to rotate food using the first-in, first-out (FIFO) method.
4. Describe and demonstrate safe and appropriate methods for preparing and cooking food. DOK2 a. Explain the methods and guidelines for thawing various types of foods. b. Demonstrate the proper procedure for cooking various foods to the correct internal temperature and how to check for this. c. Describe the requirements when cooking TCS food in a microwave and when partially cooking. d. State the correct food preparation methods to prevent cross-contamination and time-temperature abuse. e. State the minimum internal cooking temperatures for TCS food.
5. Analyze the processes of safely holding, cooling, and reheating food. DOK4 a. Identify ways to prevent time-temperature abuse when holding and transporting food. b. Discuss the guidelines for holding food, including cold and hot food and food without temperature control. c. State methods and time-temperature requirements for cooling and reheating TCS food.
6. Describe the fundamentals of safely serving food. DOK1 a. Identify and demonstrate the guidelines for the FOH and BOH staff when serving food. b. Describe how to handle utensils and equipment to prevent cross-contact when serving food. c. Discuss the proper guidelines for serving food in self-service areas, off-site locations, and vending machines.

Enrichment
1. Students can demonstrate proper food handling practices (i.e. making salads, dressings, dips, sandwiches, pizza, etc.).

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Note: This unit will be ongoing throughout the year. Time allotted for this unit will be distributed over the entire year.

Unit 12: Food Safety Management Systems

Competencies and Suggested Objectives
1. Explain what food safety management systems are and why they are important. DOK2 a. List the food safety programs that must be in place for safety management systems to be effective.
2. Describe food safety management systems and how they can be applied. DOK2 a. Define what a food safety management system is and give examples of the programs each operation needs to have. b. Discuss active managerial control and explain the steps necessary for implementation. c. Discuss how the FDA intervenes in public health with specific recommendations for protecting against foodborne illnesses. d. Discuss safe facility management and pest control within the foodservice industry.
3. Define active managerial control. DOK1 a. Identify how managerial control can be achieved. b. List the five steps for implementing managerial control.
4. Describe the basis for an effective Hazard Analysis Critical Control Point (HACCP) plan. DOK2 a. Summarize the seven HACCP principles.
5. Describe the different crises in foodservice establishments including foodborne illness outbreaks and imminent health hazards. DOK2 a. Identify how to prepare for a crisis. b. Describe how to respond to a crisis. c. Explain how to recover from a crisis.

Enrichment
1. Conduct a basic HACCP plan.

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Note: This unit will be ongoing throughout the year. Time allotted for this unit will be distributed over the entire year.

Unit 13: Food Safety Regulations, Standards, and Training

Competencies and Suggested Objectives
1. Identify government agencies responsible for preventing foodborne illness. DOK1 a. Summarize the roles of federal, state, and local regulatory agencies as related to food safety. b. Summarize the FDA's public health interventions for controlling the common risk factors for foodborne illness.
2. Examine the importance of regulatory inspections and self-inspections. DOK2 a. Demonstrate the key components of an inspection.
3. Identify corrective actions to take when/if a regulation violation occurs. DOK1 a. Describe self-inspections and create an inspection document.
4. Describe how to train staff and ways to implement the training. DOK2 a. Discuss the importance of initial and ongoing food safety training. b. List critical food safety knowledge needed by food handlers. c. Explain the requirements for maintaining food safety training records. d. Discuss the importance of monitoring staff members after training them in food safety. e. Identify the need to retrain staff on food safety.

Enrichment
1. Refer to National Restaurant Association scenarios in the teacher resource document.
2. Contact a Mississippi Department of Health Inspector as a guest speaker.

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Note: This unit will be ongoing throughout the year. Time allotted for this unit will be distributed over the entire year.

Unit 14: Culinary Business Principles

Competencies and Suggested Objectives
1. Examine the purchasing process. DOK2 a. Explain the importance of dealing with ethical suppliers, including approved suppliers, kickbacks, and the bid and quote processes. b. Identify factors that affect food costs when purchasing: • Growing season • Quantity (bulk) • Market form (fresh, frozen, canned, dried) • Location (transportation costs)
2. Describe how to control food costs. DOK2 a. List the types of costs in foodservice including food costs, beverage costs, labor costs, and overhead costs. b. Define the terms below related to food costs. • Revenue • Profit • Loss • Invoices c. Explain how portion control directly affects food costs, and give examples of portion control devices (e.g., scoops, ladles, and portion scales). d. Calculate recipe cost, including total cost and cost per serving. e. Calculate Edible-portion (EP) and As-purchased (AP) portion amounts.
3. Examine the components and types of healthy menus. DOK2 a. Define the various types of menus. • Á la carte • Cyclical • Fixed

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Note: This unit will be ongoing throughout the year. Time allotted for this unit will be distributed over the entire year.

Unit 15: Advanced Kitchen Techniques (Meat, Seafood, and Poultry)

Competencies and Suggested Objectives
1. Demonstrate knife proficiency in the kitchen. DOK1 a. Identify and demonstrate common cuts and usage in the kitchen, including the following: • Julienne cuts • Large cuts • Mincing • Brunoise • Large dice • Small dice • Chiffonade
2. Identify quality meat products and demonstrate the proper procedures for preparing meat. DOK2 a. Identify the grading systems for meat (prime, choice, and select). b. Define marbling and discuss how it affects the grade of meat. c. Identify the following meats: beef, veal, lamb, pork, game meat, and offal. d. Differentiate between primal and retail cuts. e. Discuss how aging and fabrication (e.g., butterflying) affect cost. f. Differentiate between marinating and using dry rubs. g. Properly prepare a meat of your choice.
3. Identify a quality poultry product and demonstrate the proper procedures for preparing poultry. DOK2 a. List types of poultry (chicken, turkey, duck, goose, pigeon, quail, and dove). b. Differentiate between white and dark meat. c. Define trussing and fabricating. d. Properly prepare a poultry product of your choice.
4. Identify a quality seafood product and demonstrate the proper procedures for preparing seafood. DOK2 a. Differentiate between the two categories of seafood (finfish and shellfish). b. Differentiate between flat fish and round fish, giving examples of each: • Flat fish (halibut, flounder) • Round fish (grouper, bass) c. Define and give examples of shellfish. • Crustaceans (shrimp, lobster, crab, crawfish) • Mollusks (clams, oysters, mussels) • Cephalopods (squid, octopus) d. Identify the market forms of fin fish. e. Properly prepare a seafood product of your choice.

5. Identify and prepare stocks. DOK2
   a. Identify the four essential parts of stock and the proper ingredients for each.
      - Major flavor ingredients, such as meat and bones
      - Liquid, most often water
      - Mirepoix
      - Aromatics
   b. Identify the three ways to prepare bones for stock: blanching, browning, and sweating.
   c. Properly prepare a stock of your choice.

Enrichment

1. Demonstrate the butterflying technique.
2. Demonstrate filleting a fish.
   a. Discuss proper fish storage.
3. Identify and prepare soups.
4. Identify and prepare sauces.
5. Demonstrate cutting techniques with other food groups (i.e., fruits, vegetables, etc.).

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Note: This unit will be ongoing throughout the year. Time allotted for this unit will be distributed over the entire year.

Unit 16: Advanced Baking

Competencies and Suggested Objectives
1. Describe the types of flours and yeasts used in baking and pastry. DOK2 a. Review common baking ingredients. b. Compare and contrast the variety of flours and uses for each. c. Discuss the different types of yeasts used in baking. • Dry yeast • Active & Instant • Compressed yeast (fresh)
2. Describe working with yeast breads. DOK2 a. Identify the types of yeast bread dough. • Lean • Rich • Sour dough b. Properly prepare a yeast dough product.
3. Describe the characteristics of cakes. DOK2 a. Explore the preparation techniques of cake batters. • Blending method • Creaming method • Two-stage method (muffin method) • Foaming method b. Identify the three basic purposes for icing: • Improving and keeping quality • Flavor and richness • Appearance c. Discuss methods for preparing cake icings. • American Buttercream • Royal Icing d. Discuss the differences in fillings for cakes. • Crème Anglaise • Crème Pâtissière • Fruit e. Prepare a cake using one of the following finishing techniques: • Layered • Filled • Glazed • Iced/Frosted/Decorated

4. Examine the methods of making pie dough. DOK2
    a. Demonstrate one of the following dough types:
        - Short Dough (tart crust, shortbread)
            - A high percentage of fat produces a tender and crumbly crust.
        - Flaky Dough (traditional pie crust)
            - Cut in doughs using a solid fat, leaves flakes of visible fat.
        - Pâte á Choux (eclairs, cream puff)
            - Cooked batter that expands when baked.: liquid, fat, flour, and eggs.
        - Laminate Dough (Danish, puff pastry, croissant)
            - Layers of fat folded and rolled into dough.
    b. Explain the purpose of baking blind.
    c. Properly prepare a pie using the 3-2-1 method.

Enrichment

1. Apply advanced cake decorating techniques.
2. Examine various forms of lattice/pie art.
3. Explore Swiss Meringue Buttercream and Italian Meringue Buttercream.

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Student Competency Profile

Student's Name: _____

This record is intended to serve as a method of noting student achievement of the competencies in each unit. It can be duplicated for each student, and it can serve as a cumulative record of competencies achieved in the course.

In the blank before each competency, place the date on which the student mastered the competency.

Unit 1: Orientation		
	1.	Identify house and program policies and procedures and compare/contrast them with industry policies and procedures.
	2.	Examine opportunities provided by student organizations, including SkillsUSA and Family, Career and Community Leaders of America (FCCLA).
	3.	Apply college and career readiness skills.
Unit 2: Overview of the Foodservice and Hospitality Industry		
	1.	Identify career opportunities in the culinary and hospitality industry.
	2.	Identify the attributes and duties of a culinary professional.
	3.	Examine the importance of service, positive dining experience, service styles, and proper setup in the food service industry.
Unit 3: Food Safety Basics		
	1.	Examine the importance of food safety.
	2.	Describe the importance of good personal hygiene.
	3.	Examine the importance of knowing the Big 6 Pathogens.
	4.	Identify the proper methods for controlling time and temperature for food safety.
	5.	Examine and apply the proper methods for preventing cross-contamination.
	6.	Apply proper cleaning and sanitizing techniques.
Unit 4: Safety in the Workplace		
	1.	Examine the importance of workplace safety to customers and employees.
	2.	Apply safe work habits to prevent injuries.
	3.	Demonstrate proper emergency techniques and procedures utilized in the foodservice industry.
Unit 5: Utilizing Standardized Recipes and Culinary Math		
	1.	Examine standardized recipes and why restaurants use them.
	2.	Define and demonstrate mise en place.
	3.	Apply basic math concepts to food preparation skills.
Unit 6: Equipment		

	1.	Demonstrate the use and maintenance of various knives used in the kitchen.
	2.	Identify the use and maintenance of various small equipment used in the kitchen.
	3.	Identify the use and maintenance of various large food preparation equipment used in the kitchen.
Unit 7: Techniques		
	1.	Define and provide examples of various food preparation techniques.
	2.	Define and provide examples of other cooking methods, including microwaving and sous vide.
	3.	Describe and demonstrate the storage and preparation of potatoes.
	4.	Describe and demonstrate the storage and preparation of legumes and grains.
	5.	Describe and demonstrate the storage and preparation of pasta and dumplings.
	6.	Identify and prepare sauces.
Unit 8: Bake Shop Basics		
	1.	Describe bakeshop basics.
	2.	Identify and prepare various quick breads and cookies.
	3.	Describe cake decorating essentials.
Unit 9: Orientation to Advanced Culinary Arts		
	1.	Compare and contrast house and program policies and procedures with industry policies and procedures.
	2.	Examine opportunities provided by student organizations, including SkillsUSA and FCCLA.
	3.	Identify career opportunities in the culinary and hospitality industry.
	4.	Utilize career resources to create a comprehensive class/career portfolio.
Unit 10: Advanced Food Safety		
	1.	Explain foodborne illness and the best practices in providing safe food.
	2.	Examine the various forms of contamination and demonstrate how to prevent and respond to contaminated food.
	3.	Describe the sources, symptoms, and prevention of chemical and physical contaminants.
	4.	Determine the best practices for being a safe food handler and exhibit these throughout the year.
	5.	Demonstrate the proper procedures for cleaning and sanitizing.
Unit 11: Food Safety in the Flow of Food		
	1.	Identify types of contaminants and methods of prevention and explain ways to prevent time-temperature abuse.
	2.	Explain the “flow of food” regarding proper processes for purchasing and receiving food.
	3.	Identify ways of preventing cross-contamination and time-temperature abuse when storing food.

	4.	Describe and demonstrate safe and appropriate methods for preparing and cooking food.
	5.	Analyze the processes of safely holding, cooling, and reheating food.
	6.	Describe the fundamentals of safely serving food.
Unit 12: Food Safety Management Systems		
	1.	Explain what food safety management systems are and why they are important.
	2.	Describe food safety management systems and how they can be applied.
	3.	Define active managerial control.
	4.	Describe the basis for an effective Hazard Analysis Critical Control Point (HACCP) plan.
	5.	Describe the different crises in foodservice establishments, including foodborne illness outbreaks and imminent health hazards.
Unit 13: Food Safety Regulations, Standards, and Training		
	1.	Identify government agencies responsible for preventing foodborne illness.
	2.	Examine the importance of regulatory inspections and self-inspections.
	3.	Identify corrective actions to take when/if a regulation violation occurs.
	4.	Describe how to train staff and ways to implement the training.
Unit 14: Culinary Business Principles		
	1.	Examine the purchasing process.
	2.	Describe how to control food costs.
	3.	Define the various types of menus.
Unit 15: Advanced Kitchen Techniques (Meat, Seafood, and Poultry)		
	1.	Demonstrate knife proficiency in the kitchen.
	2.	Identify quality meat products and demonstrate the proper procedures for preparing meat.
	3.	Identify a quality poultry product and demonstrate the proper procedures for preparing poultry.
	4.	Identify a quality seafood product and demonstrate the proper procedures for preparing seafood.
	5.	Identify and prepare stocks.
Unit 16: Advanced Baking		
	1.	Describe the types of flours and yeasts used in baking and pastry.
	2.	Describe working with yeast breads.
	3.	Describe the characteristics of cakes.
	4.	Examine the methods of making pie dough.

Appendix A: Industry Standards

	Units	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Standards																	
CS1		X		X	X						X			X		X	
CS2		X	X								X			X		X	
CS3		X	X	X													
CS4		X		X													
CS5																	
CS6		X	X		X	X	X	X	X	X	X	X	X			X	X
CS7		X			X	X	X	X	X	X	X	X	X	X	X	X	
CS8		X			X						X	X				X	X
CS9		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CS10			X		X	X	X	X	X	X	X	X	X		X	X	X
CS11					X	X	X	X	X	X	X	X	X		X	X	X
CS12		X		X													
CS13		X			X	X	X	X	X	X	X	X	X	X	X	X	X
CS14		X		X							X				X	X	
CS15			X		X		X	X	X	X	X	X	X			X	X
CS16		X	X	X							X			X		X	

CSS1-21st Century Themes

CS1 Global Awareness

1. Using 21st century skills to understand and address global issues
2. Learning from and working collaboratively with individuals representing diverse cultures, religions, and lifestyles in a spirit of mutual respect and open dialogue in personal, work, and community contexts
3. Understanding other nations and cultures, including the use of non-English languages

CS2 Financial, Economic, Business, and Entrepreneurial Literacy

1. Knowing how to make appropriate personal economic choices
2. Understanding the role of the economy in society
3. Using entrepreneurial skills to enhance workplace productivity and career options

CS3 Civic Literacy

1. Participating effectively in civic life through knowing how to stay informed and understanding governmental processes
2. Exercising the rights and obligations of citizenship at local, state, national, and global levels
3. Understanding the local and global implications of civic decisions

CS4 Health Literacy

1. Obtaining, interpreting, and understanding basic health information and services and using such information and services in ways that enhance health
2. Understanding preventive physical and mental health measures, including proper diet, nutrition, exercise, risk avoidance, and stress reduction
3. Using available information to make appropriate health-related decisions
4. Establishing and monitoring personal and family health goals
5. Understanding national and international public health and safety issues

CS5 Environmental Literacy

1. Demonstrating knowledge and understanding of the environment and the circumstances and conditions affecting it, particularly as relates to air, climate, land, food, energy, water, and ecosystems
2. Demonstrating knowledge and understanding of society's impact on the natural world (e.g., population growth, population development, resource consumption rate, etc.)
3. Investigating and analyzing environmental issues and make accurate conclusions about effective solutions
4. Taking individual and collective action toward addressing environmental challenges (e.g., participating in global actions, designing solutions that inspire action on environmental issues)

CSS2-Learning and Innovation Skills

CS6 Creativity and Innovation

1. Think creatively
2. Work creatively with others
3. Implement innovations

CS7 Critical Thinking and Problem Solving

1. Reason effectively
2. Use systems thinking
3. Make judgments and decisions
4. Solve problems

CS8 Communication and Collaboration

1. Communicate clearly
2. Collaborate with others

CSS3-Information, Media and Technology Skills

CS9 Information Literacy

1. Access and evaluate information
2. Use and manage information

CS10 Media Literacy

1. Analyze media
2. Create media products

CS11 ICT Literacy

1. Apply technology effectively

CSS4-Life and Career Skills

CS12 Flexibility and Adaptability

1. Adapt to change
2. Be flexible

CS13 Initiative and Self-Direction

1. Manage goals and time
2. Work independently
3. Be self-directed learners

CS14 Social and Cross-Cultural Skills

1. Interact effectively with others
2. Work effectively in diverse teams

CS15 Productivity and Accountability

1. Manage projects
2. Produce results

CS16 Leadership and Responsibility

1. Guide and lead others
2. Be responsible to others

Appendix B: ProStart-FRMCA Alignment

	Units	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
(Lvl.Ch)																	
PS1-1		X	X							X							
PS1-2		X								X							
PS1-3		X								X				X			
PS1-4			X							X							
PS1-5										X							
PS1-6				X							X		X	X			
PS1-7				X							X						
PS1-8				X								X					
PS1-9					X								X				
PS1-10					X								X				
PS1-11							X										
PS1-12							X										
PS1-13			X				X									X	
PS1-14						X											
PS1-15												X					
PS1-16												X					
PS1-17								X								X	
PS1-18								X									
PS1-19									X								
PS1-20			X														
PS1-21			X														
PS1-22													X				
PS2-1															X		
PS2-2															X		
PS2-3				X													
PS2-4																	
PS2-5																X	
PS2-6																X	
PS2-7								X									
PS2-8															X		
PS2-9															X		
PS2-10															X		
PS2-11															X		
PS2-12			X														
PS2-13															X		
PS2-14													X		X		
PS2-15													X		X		
PS2-16																X	
PS2-17																X	
PS2-18																X	
PS2-19																	X
PS2-20																	X
PS2-21																	X
PS2-22																	

ProStart—Foundations of Restaurant Management and Culinary Arts (FRMCA)—2nd Ed.
Level One

1.1 Welcome to the Industry
1.2 Career Opportunities
1.3 Professional Expectations
1.4 Communication Skills
1.5 Beginning Your Career
1.6 Introduction to Food Safety
1.7 Hygiene and Cleanliness
1.8 The Safe Flow of Food
1.9 Risk Management
1.10 Workplace Safety Procedures
1.11 Foodservice Equipment
1.12 Knives and Smallwares
1.13 Kitchen Basics
1.14 Culinary Math
1.15 Salads, Dressings, and Dips
1.16 Sandwiches and Pizza
1.17 Stocks, Soups, and Sauces
1.18 Cooking Methods
1.19 Introduction to Baking
1.20 Principles of Great Service
1.21 Front-of-the-House Basics
1.22 Introduction to Management

Level Two

2.1 Introduction to Marketing
2.2 Menu Management
2.3 Eggs and Dairy Products
2.4 Breakfast and Cookery
2.5 Fruits
2.6 Vegetables
2.7 Potatoes, Grains, and Pasta
2.8 Introduction to Cost Control
2.9 Food Costing
2.10 Labor Costing
2.11 Purchasing
2.12 Building Successful Teams
2.13 Sustainability
2.14 Introduction to Nutrition
2.15 Components of Healthful Menus
2.16 Meat
2.17 Poultry
2.18 Seafood
2.19 Yeast Breads
2.20 Cakes and Pies
2.21 Desserts
2.22 Plating and Garnishing

Appendix C: Academic Standards Alignment

	Units	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ELA Standards																	
L.10.1		X															
RI.10.2													X	X			
SL.10.1		X															
W.10.4		X															
W.10.6										X							
W.10.7			X							X							
Math Standards																	
A-CED.1															X		
A-CED.2															X		
A-SSE.1						X									X		
A-SSE.3						X											
N-Q.1						X											
N-Q.2												X					
N-Q.3						X						X					X
Science Standards																	
CHE.1						X											
FSL.3A						X											
HAP.3					X						X						
HAP.5					X												
HAP.11				X							X						
MAQ.7																X	
PHS.3									X								
PHS.4				X				X									
PHS.8								X									
ZOO.3																X	
ZOO.5																X	
ZOO.7																X	

Mississippi College- and Career-Readiness Standards (MS CCRS) for English Language Arts

English II

Language: Conventions of Standard English

L.10.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

Reading Informational Text: Key Ideas and Details

RI.10.2 Determine the central idea(s) of a text and analyze in detail the development over the course of the text, including how details of a text interact and build on one another to shape and refine the central idea(s); provide an accurate summary of the text based upon this analysis.

Speaking and Listening: Comprehension and Collaboration

SL.10.1 Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.

Writing: Production and Distribution of Writing

W.10.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

W.10.6 Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.

Writing: Research to Build and Present Knowledge

W.10.7 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; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

Mississippi College- and Career-Readiness Standards (MS CCRS) for Mathematics

Algebra I

Creating Equations

A-CED.1 Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.

A-CED.2 Create equations in two variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.

Seeing Structure in Expressions

A-SSE.1 Interpret expressions that represent a quantity in terms of its context.

A-SSE.3 Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.

Quantities

N-Q.1 Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.

N-Q.2 Define appropriate quantities for the purpose of descriptive modeling.

N-Q.3 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

Mississippi College- and Career-Readiness Standards (MS CCRS) for Science

Chemistry

Mathematical and Computational Analysis

CHEM.1.2 Design and conduct experiments using appropriate measurements, significant figures, and graphical analysis to analyze data.

Foundations of Science Literacy

Nature of Science

FSL.3A.4 Use mathematical and computational thinking to (1) use and manipulate appropriate metric units, (2) express relationships between variables for investigations, and (3) compare or combine data from two or more simple data presentations (e.g., order or sum data from a table, categorize data from a table using a scale from another table).

Human Anatomy and Physiology

Integumentary System

HAP.3.3 Research and analyze the causes and effects of various pathological conditions (e.g., burns, skin cancer, bacterial/viral infections, and chemical dermatitis).

Muscular System

HAP.5.7 Research and analyze the causes and effects of various pathological conditions, (e.g., fibromyalgia, muscular dystrophy, cerebral palsy, muscle cramps/strains, and tendonitis).

Lymphatic System

HAP. 11 Students will investigate the structures and functions of the lymphatic system, including the cause and effect of diseases and disorders.

Marine and Aquatic Science I

Vertebrate Consumers

MAQ.7 Students will investigate the characteristics of aquatic invertebrates.

Physical Science

Periodic Table

PHS.3.4 Use naming conventions to name common acids and common compounds used in classroom labs (e.g., sodium bicarbonate (baking soda), NaHCO3; hydrochloric acid, HCl; sulfuric acid, H2SO4; acetic acid (vinegar), HC2H3O2; and nitric acid, HNO3).

The Law of Conservation of Matter and Energy

PHS.4.1 Design and conduct experiments to investigate physical and chemical changes of various household products (e.g., rusting, sour milk, crushing, grinding, tearing, boiling, and freezing) and reactions of common chemicals that produce color changes or gases.

PHS.4.2 Design and conduct investigations to produce evidence that mass is conserved in chemical reactions (e.g., vinegar and baking soda in a Ziploc© bag).

Thermal Energy

PHS.8 Students will demonstrate an understanding of temperature scales, heat, and thermal energy transfer.

PHS.8.1 Compare and contrast temperature scales by converting between Celsius, Fahrenheit, and Kelvin.

PHS.8.2 Apply particle theory to phase change and analyze freezing point, melting point, boiling point, vaporization, and condensation of different substances.

PHS.8.4 Enrichment: Use an engineering design process to construct a simulation of heat energy transfer between systems. Calculate the calories/joules of energy generated by burning food products. Communicate conclusions based on evidence from the simulation.

Zoology I

Phylum Mollusca

ZOO.3 Students will understand the structure and function of phylum Mollusca, and how they adapt to their environments.

Phylum Arthropoda

ZOO.5.4 Identify organisms and characteristics of chelicerates, crustaceans, and insects.

Zoology II

Phylum Chordata, Classes Chondrichthyes and Osteichthyes

ZOO.7.7 Dissect representative taxa and compare their internal and external anatomy and complexity.