

Culinary Arts 2

COURSE OUTLINE - UC

DESCRIPTION:

Culinary Arts 2 is the capstone course in the Food Science and Nutrition pathway. It provides students advanced practical culinary skills while continuing to emphasize safety, sanitation, and proper use of equipment in the kitchen throughout the course. Students will use collaboration, speaking, analytical, math, reading and science skills to evaluate recipes and various culinary techniques when preparing modern, traditional, and global cuisines for themed campus events and menus that feature baked goods, breakfast foods, proteins, sauces, local farm fresh dishes among others. In addition, students will develop catering, menu planning, and business marketing skills for big and small events. Activities in this course include career exploration, online portfolios of food creations with journal reflections, as well as hands-on experience and work-based learning that connect students to industry and the local community.

INFORMATION:

PRE-REQUISITE:	Culinary Arts 1
LENGTH:	One Year
SECTOR:	Hospitality, Tourism, and Recreation
PATHWAY:	Food Science and Nutrition
ARTICULATED:	Yes
UC A-G APPROVAL:	Yes: College-Preparatory Elective (G) / Interdisciplinary

O*NET SOC CODES:

29-2051.00	Dietetic Technicians
35-1011.00	Chefs and Head Cooks
35-1012.00	First-Line Supervisors of Food Preparation and Serving Workers
35-2012.00	Cooks, Institution and Cafeteria
35-2013.00	Cooks, Private Household
35-2021.00	Food Preparation Workers

Orientation
<ul style="list-style-type: none"> A. Introduce the course and facilities. B. Discuss the syllabus and major objectives. C. Explain applicable classroom management procedures, and any operational guidelines. D. Review instructor/student expectations. E. Explain attendance requirements and procedures. F. Review grading and student evaluation procedures. G. Discuss the work-based learning aspect of the program, if applicable. H. Discuss the “next steps” related to additional education, training, and employment. I. Review classroom safety, emergency and disaster procedures.
1. Communication Skills
<ul style="list-style-type: none"> A. Demonstrate positive verbal communication skills using appropriate vocabulary, demeanor, and vocal tone in the classroom and/or worksite. B. Read and interpret written information and directions. C. Practice various forms of written communication appropriate to the occupation. D. Practice positive body language skills. E. Practice professional verbal skills for resolving a conflict. F. Demonstrate active listening skills including techniques for checking for understanding, and for obtaining clarification of directions.
2. Interpersonal Skills
<ul style="list-style-type: none"> A. Demonstrate positive teamwork skills by contributing to a group effort. B. Practice the importance of diversity awareness and sensitivity in the workplace. C. Define sexual harassment in the workplace and identify the employee’s role and responsibility. D. Practice participation skills. E. Identify different personality types and demonstrate flexibility and adaptability working with diverse individuals. F. Practice business and social etiquette skills appropriate to the occupation. G. Evaluate and discuss the role of business and personal ethics in decision making based on various job-related scenarios. H. Demonstrate the use of time management skills.

3. Employability Skills

- A. Demonstrate appropriate attendance and punctuality practices for the classroom (and worksite, if applicable).
- B. Prepare a resume, cover letter, and job application.
- C. Demonstrate interviewing techniques in seeking employment, using appropriate tone, body language and professional dress and grooming standards.
- D. Identify strategies for employment retention.
- E. Identify and analyze sources of job information, including electronic sources and the impact of social networking on employability.
- F. Identify the need for continuing education, professional development, and professional growth in chosen field.
- G. Identify appropriate procedures for leaving a job.
- H. Review company policies and current trends in employee compatibility screening, drug screening, and background checks.

4. Leadership

- A. Define leadership and identify the responsibilities, competencies, and behaviors of successful leaders.
- B. Work with peers to promote divergent and creative perspectives.
- C. Demonstrate how to organize and structure work, individually and in teams, for effective performance and the attainment of goals.
- D. Explain multiple approaches to conflict resolution and their appropriateness for a variety of situations in the workplace.
- E. Employ ethical behaviors and actions that positively influence others.
- F. Analyze the short-term and long-term effects a leader's actions and attitudes can have on productivity, morale, and organizational culture.

5. Personal and Occupational Safety

- A. Demonstrate procedures to be followed in case of emergencies.
- B. Describe and discuss the procedure for reporting a work-related hazard or injury (worker's comp), including ways to report a potential safety hazard to a supervisor.
- C. Identify and discuss cyber ethics, cyber safety, and cyber security.
- D. Apply personal safety practices to and from the job.
- E. Recognize the effects of substance abuse in the workplace.
- F. Explain the importance of CAL-OSHA in the industry.
- G. Define and discuss ergonomics in relationship to a working environment.
- H. Discuss the electrical hazards of working with electronic equipment.

6. Food Safety and Sanitation
<ul style="list-style-type: none"> A. Research local, state and federal food regulations. B. Demonstrate knowledge of sanitation standards. C. Examine organisms that cause food spoilage, contamination and the conditions for growth. D. Evaluate various types of food borne illnesses. E. Apply sanitary food handling practices during and after food preparation and service throughout the course. F. Employ proper techniques for storage and preparation of food. G. Demonstrate safe and sanitary working conditions in a kitchen. H. Describe purpose and requirements for ServSafe® Food Protection Managers Exam. * <p>*Students desiring the Manager Certification will need to take a proctored, online exam from ServSafe® and pass with 75% or higher.</p>
7. Kitchen Facilities and Equipment
<ul style="list-style-type: none"> A. Demonstrate proper use, care and storage of equipment, appliances and tools in the kitchen. B. Evaluate and select ingredients, tools and equipment that correspond to the production of food. C. Demonstrate the safe use and care of kitchen surfaces and facilities. D. Evaluate lab report forms for peer and teacher observation and self-assessment. E. Analyze and the work triangle concept. F. Review proper knife selection and safety during food preparation. G. Assess the safety hazards and accidents commonly occurring in the kitchen. H. Implement safety procedures during use of facilities and kitchen equipment. I. Practice first aid and fire safety in the kitchen.
8. Breakfast Foods and Cookery
<ul style="list-style-type: none"> A. Practice storing, preparing, and serving eggs, milk and other dairy products. B. Demonstrate cooking traditional breakfast foods such as pancakes and muffins. C. Cook a variety of breakfast sandwiches. D. Prepare hot breakfast beverages. E. Create sauces which complement traditional breakfast foods. F. Identify differences between a breakfast menu and brunch menu.
9. Food Costs and Measurements

- A. Continue practicing culinary math skills through recipe conversions and measurements.
- B. Prepare multiple food quantities utilizing recipe conversions.
- C. Demonstrate food receiving and storing practices.
- D. Analyze food costs for individual, restaurant and large banquet meals
- E. Prepare a monthly food budget for personal cooking.
- F. Differentiate the costs between individual and bulk food purchases.
- G. Identify the types of costs incurred by foodservice business and give examples of each.
- H. Explain the purpose of invoices as well as profit and loss reports in the foodservice industry.

10. Nutrition and Health

- A. Examine nutritional principles utilizing federal nutrition standards and guidelines.
- B. Prepare a recipe utilizing the healthy plate compositions.
- C. Plan nutritional food purchases based on nutritional concepts.
- D. Examine the difference between whole versus processed foods.
- E. Identify the health benefits of local, organic and sustainable foods.
- F. Differentiate between food allergies, food sensitivities, and food intolerances and explain their impact on health.

11. Meat, Poultry and Seafood

- A. Research USDA food safety and inspection guidelines for meat, poultry and seafood.
- B. Distinguish and analyze grade yields (use of different grades of meat in accordance with the USDA Food Safety and Inspection division) and cuts of meat.
- C. Compare chemical tenderizing to mechanical tenderizing of different types and cuts of meat, poultry, and seafood.
- D. Research the process for purchasing, fabricating, and storing different types of meat.

12. Baking and Pastry

- A. Practice multiple mixing methods in baking.
- B. Apply advanced steps for a rubbed dough, creaming, muffin, and egg foam methods.
- C. Demonstrate how to make a laminated dough.
- D. Describe and demonstrate the functions of ingredients used to make cakes, muffins and pastry.
- E. Prepare cakes using creamed fat and whipped egg mixing methods.
- F. Assemble cakes using basic finishing and decorating techniques.
- G. Prepare a variety of sauces, creams, mousses, and other fillings for making pastries and desserts.

13. Sustainability and Food Production Planning

- A. Define the effects of sustainability in the culinary industry.
- B. Describe the amount of energy and water utilized and methods of conservation.
- C. Identify technological advancements that promotes sustainability.
- D. Practice waste management including reducing, reusing, recycling and composting.
- E. Define pilferage and breakage control.
- F. Identify sustainable practices and maximization of food production through planning.
- G. Research restaurant eating trends involving locally sourced foods.

14. Global Cuisine

- A. Research various types of global cuisine on culinary shows (e.g. Food Network).
- B. Analyze the connection between food and culture.
- C. Identify global food preparation processes.
- D. Cook a traditional dish from another culture.

15. Marketing

- A. Explain the role of marketing and the contemporary marketing mix model.
- B. List the steps in a marketing plan.
- C. Analyze target markets and explain its importance to a business.
- D. Appraise different types of menus and menu formats.
- E. Design, create and price menus.
- F. Apply creative marketing strategies and digital marketing to promote a food service and hospitality enterprise.

16. Catering and Menu Planning

- A. Develop a menu for catering small and large events.
- B. Create and write a proposal for catering an event.
- C. Illustrate a visual representation of a themed catering event.
- D. Prepare a meal for presentation including garnishes, food displaying/plating and table settings.
- E. Develop menu selections, costing and portioning for various sizes of events.

17. Careers and Professionalism in Food Science and Nutrition

- A. Explore career opportunities, trends in the industry, education and experience.
- B. Identify various career options available in the food service and hospitality industry.
- C. Create and update a portfolio to include skills, talents, awards, experiences, reflections, dishes, and job search documents.
- D. Utilize technology of the teacher's choosing to create a digital portfolio.

18. Portfolio Design

- A. Develop personal marketing and computer skills by refining your digital portfolio for post-secondary and employment acceptance.
- B. Compile best samples of original works and documents for a variety of purposes, which shows a progression in the acquisition of knowledge and/or skills.
- C. Demonstrate knowledge of competencies through journaling or summary of selected works or documents.
- D. Revise professional resume and cover letter to align with skills and objective statements of the relevant industry.
- E. Dress professionally and practice interviewing techniques using portfolio materials.
- F. Assemble industry and employability documents (resume, cover letter, certifications, recommendation letters, etc.).
- G. Create a "leave behind" book or folder.
- H. Display portfolio materials during a fair, community event, competition, or professional panel review.
- I. Evaluate and utilize feedback to improve portfolio.

Key Assignments

Assignment	Competencies	Career Ready Practices	Anchor Standards	Pathway Standards	CCSS
1. Students will participate in mock interviews that represent current industry practices (e.g., skills demonstrations, resumes, applications, portfolios, personal websites, etc.).	1 A, B, D 3 B, C, D, I, J 18	2 3 10	2 3		LS 11-12.6 SLS 11-12.2
2. Students will describe the agencies that determine food safety and nutrition regulations and verbally argue their effectiveness while supporting their claims and develop a How-To training on standard kitchen safety and food sanitation for students in Culinary 1.	1 A-F 4 A, C 5 A, B, D-J 6 A-G	2 5 6 10 11	2 3 5 6	A 9 B 1,2,3,6	LS 11-12.1-3 RSIT 11-12.7 SLS 11-12.2 WS 11-12.4
3. Mock inspection: A guest speaker from the industry will be invited to conduct a mock inspection of the kitchen lab to provide students real world experience of restaurant inspections. The guest will also speak to students about the importance of food safety and sanitation.	1 A-F 4 A, C 5 A, B, D-J 6 A-G	2 5 6 10 11	2 3 5 6	A 9 B 1,2,3,6	LS 11-12.1-3 RSIT 11-12.7
4. Working in pairs, students will conduct a general safety audit of the classroom, locating and identifying purpose of the fire suppression system, first aid kit, emergency exits, emergency meet location, and various sinks. Students will use this knowledge to examine the school cafeteria and create a comprehensive workplace safety procedure plan for the school cafeteria staff.	1B,C 2A,D,I,J 4A-G 5A,B,E,H,J,K 7A, C, G, H, I	1 2 4 5 6 7 9 12	2 4 5 6 7 9 10	B 2 B 5 B 6	LS11-12. -12.4, 12.6 RSIT11-12.2-12.4,12.7, RLST11-12.7 WS11-12.1-12.7, 12.10
5. Students will author a proposal for a restaurant brunch menu considering costs, nutritional value, and food allergies then cook an original breakfast sandwich to be served in class.	1 C, D, F 8 A-E 9 A, D 10 A-F	2 6 10 11	2 5 6	A 1-4, 9 B 3-6, 10	LS 11-12.2 LS 11-12.3 RLST 11-12.7 SLS 11-12.2 WS 11-12.7

Assignment	Competencies	Career Ready Practices	Anchor Standards	Pathway Standards	CCSS
6. Working in groups, students will research recipes for a five-course dinner then convert the recipe ingredients to feed a banquet of 500 guests and develop a budget estimating food cost.	1 A-D 2 A, D-J 9 A, D, F	2 5 6 9 11	2 5 7 10	A 1, 9 B 4, 11	LS 11-12.3 LS 11-12.5 RSIT 11-12.7 RLST 11-12.7 SLS 11-12.1 WS 11-12.7 SEP 4-8
7. Working in groups, students will select a dish and research the nutritional, physical and mental health benefits of using local, organic, fresh and sustainable ingredients. Students will present their findings and prepare their dish for the class.	1 B, C 2 A, D, I, J 4 B, E 10 B-F	2 5 6 9 10 11	2 5 6 7	A 1, 4, 5 B 10	LS 11-12.1 RSIT 11-12.7 RLST 11-12.7 WS 11-12.4 WS 11-12.9
8. Students will research USDA regulations and assorted cuts of meat, poultry and seafood then examine appropriate cooking techniques for each. Students will prepare a serving of meat, poultry or seafood utilizing appropriate seasonings and maximizing tenderness and flavor while minimizing the loss of moisture.	2 D, J 6 C-G 11 A-E	1 5 6 11	5 6 10	A 3, 9 B 4, 6	LS 11-12.1 LS 11-12.6 RLST 11-12.7 WS 11-12.7 WS 11-12.9
9. Working in groups, students will bake desserts and muffins utilizing a variety of nuts, fruits, spices, creams, other sauces and fillings, as needed. Students will serve their baked goods at a faculty staff meeting which will be graded by staff using a rubric. Students will write a reflection paper assessing their individual participation in the group, including how well the individual student, and the group managed their time, energy, resources and its effect on their finished product.	1 A-D 2 A, D, I 6 C, F 12 A	1 4 9 10	2 6 7	A 1-4 B 1-11	LS 11-12.2 LS 11-12.3 RLST 11-12.7 SLS 11-12.2 WS 11-12.7 SEP 4-8

Assignment	Competencies	Career Ready Practices	Anchor Standards	Pathway Standards	CCSS
10. Students will contact a restaurant whose menu options mirror the movement of local and sustainable foods and interview a manager and chef regarding the food philosophy, operations, use of technology, costs and systems concerning storage, and breakage control. Students will author an informative essay following their interviews	1 A, B, D 2 D, F 3 D, J 4 C 6 B, D 9 D, F 13 A-D	1 2 4 7 8 11	2 3 4 7	A 3, 9 B 1-11	LS 11-12.1-3 RSIT 11-12.7 SLS 11-12.2 WS 11-12.4
11. Students will research the connection between food and culture of a foreign country then develop a presentation and prepare a traditional dish from the country to be shared with the class.	1 A-D, F 2 B, D 4 C, E 14 A-D	2 4 8 9 10 11 12	2 6 7 8	A 1-4 B 1, 6-10	LS 11-12.2 LS 11-12.3 RLST 11-12.7 SLS 11-12.2 WS 11-12.7
12. Using all aspects of marketing competencies learned in this unit, students will create a fictional restaurant serving specific types of food with a target client, specific menu, defined theme and decor (for the dining room, furniture, dishes, service-ware and menu) to achieve a desired ambiance; and utilize digital sources to promote their foods and enterprise. Students will present their restaurant using multimedia software, visual aids, models, drawing, etc. in a gallery walk with peers asking questions and taking notes.	1 A-F 2 A, B, D-J 3 A, D 4 A-C, E, F 6 B-G 9 A-D15 A-H	1 2 4 5 6 9	2 4 5 6 7 9 10	A1 B5 B12	LS 11-12.3 LS 11-12.6 RLST 11-12.7 SLS 11-12.2 WS 11-12.7

Assignment	Competencies	Career Ready Practices	Anchor Standards	Pathway Standards	CCSS
<p>13. As a class, students will host a themed dining event on campus incorporating cooking techniques acquired in class. Students will collaborate on a menu, marketing the event, determine purchasing costs, prepare foods, and create an area to serve their guests incorporating attractive garnish and table settings.</p>	<p>1 A-F 2 A, B, D-J 3 A, D 4 A-C, E, F 6 B-G 9 A-D 16 A-D</p>	<p>1 2 4 5 6 7 9 10</p>	<p>2 5 6 7 9</p>	<p>A 1, 3, 9 B 1-11</p>	<p>LS 11-12.3 LS 11-12.5 RSIT 11-12.7 RLST 11-12.7 SLS 11-12.1 WS 11-12.7 SEP 4-8</p>
<p>14. Students will create an e-portfolio highlighting their work for prospective restaurants/chefs. This electronic online learning record will help students develop the self-awareness required in the culinary industry as they reflect on their learning and skill development. It will be a collection of reflections, work samples, and extended learning experiences that best illustrate the student's preparedness for further education and employment in the industry. The online portfolios will be reviewed and scored at the end of the course, and will include:</p> <ul style="list-style-type: none"> • Cover page • Letter of introduction • Table of contents • Resume • Work samples 	<p>1 A-F 3 A-J 4 A, G 17, 18</p>	<p>1 2 3 4 7 8 10</p>	<p>2 3 4</p>	<p>A 1-9 B 1-11</p>	<p>LS 11-12.1-6 RSIT 11-12.7 RHSS 11-12.7 SLS 11-12.1-2 WS 11-12.4-9</p>

Standards Assessed in this Program

Career Ready Practices

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

Anchor Standards

2.0 Communications

- Acquire and use accurately sector terminology and protocols at the career and college readiness level for communicating effectively in oral, written, and multimedia formats.

3.0 Career Planning and Management

- Integrate multiple sources of career information from diverse formats to make informed career decisions, solve problems, and manage personal career plans.

4.0 Technology

- Use existing and emerging technology, to investigate, research, and produce products and services, including new information, as required in the sector workplace environment.

5.0 Problem Solving and Critical Thinking

- Conduct short, as well as more sustained, research to create alternative solutions to answer a question or solve a problem unique to the sector using critical and creative thinking, logical reasoning, analysis, inquiry, and problem-solving techniques.

6.0 Health and Safety

- Demonstrate health and safety procedures, regulations, and personal health practices and determine the meaning of symbols, key terms, and domain-specific words and phrases as related to the sector workplace environment.

7.0 Responsibility and Flexibility

- Initiate, and participate in, a range of collaborations demonstrating behaviors that reflect personal and professional responsibility, flexibility, and respect in the sector workplace environment and community settings.

8.0 Ethics and Legal Responsibilities

- Practice professional, ethical, and legal behavior, responding thoughtfully to diverse perspectives and resolving contradictions when possible, consistent with applicable laws, regulations, and organizational norms.

9.0 Leadership and Teamwork

- Work with peers to promote divergent and creative perspectives, effective leadership, group dynamics, team and individual decision making, benefits of workforce diversity, and conflict resolution.

10.0 Technical Knowledge and Skills

- Apply essential technical knowledge and skills common to all pathways in the sector following procedures when carrying out experiments or performing technical tasks.

Pathway Standards

Food Science, Dietetics, and Nutrition Pathway

A1.0 Demonstrate an understanding of key aspects of the food science, dietetics, and nutrition industry and the role of the industry in the local, state, national, and global economies.

A3.0 Demonstrate the application of primary standards and regulations for safe food handling and sanitation practices.

A4.0 Recognize the relationship basic nutritional principles and concepts to the physical and emotional well-being of individuals.

A5.0 Demonstrate an understanding of the correlation of food and fitness to wellness.

A9.0 Demonstrate an understanding of the basic principles of research and development, food analysis, and sensory evaluation in the field of food science and technology.

Food Service and Hospitality Pathway

B1.0 Demonstrate an understanding of major aspects of the food service and hospitality industry and the role of the industry in local, state, national, and global economies.

B2.0 Demonstrate the basics of safe work habits, security, and emergency procedures required in food service and hospitality establishments.

B3.0 Interpret the basic principles of sanitation and safe food handling.

B4.0 Analyze the basics of food service and hospitality management.

B5.0 Demonstrate an understanding of the basics of systems operations and the importance of maintaining facilities, equipment, tools, and supplies.

B6.0 Illustrate and apply the basics of food preparation and safety and sanitation in professional and institutional kitchens.

B7.0 Illustrate and apply the basics of baking, pastry, and dessert preparation and safety and sanitation in professional and institutional kitchens.

B8.0 Apply the knowledge and skills essential for effective customer service.

B9.0 Apply the basic procedures and skills needed for food and beverage service.

B10.0 Demonstrate and apply basic nutritional concepts in meal planning and food preparation.

B11.0 Demonstrate an understanding of the basic processes of costing and cost analysis in food and beverage production and service.

B12.0 Describe the fundamentals of successful sales and marketing methods.

Common Core State Standards

ENGLISH LANGUAGE ARTS

Language Standards

LS 11-12.1: Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

LS 11-12.2: Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

LS 11-12.3: Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.

LS 11-12.4: Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades *11-12 reading and content*, choosing flexibly from a range of strategies.

LS 11-12.5: Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

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

Reading Standards for Information

RSIT 11-12.7: Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.

Reading Standards for Literacy in History/Social Studies

RHSS 11-12.2: Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.

RHSS 11-12.7: Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.

Reading Standards for Literacy in Science and Technical Subjects;

RLST 11-12.7: Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

Speaking and Listening Standards

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

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

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

Writing Standards

WS 11-12.4: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

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

WS 11-12.7: 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.'

WS 11-12.9: Draw evidence from literary or informational texts to support analysis, reflection, and research.

WS 11-12.10: Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for range of tasks, purposes, and audiences.

Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects

WHSST 11-12.8: Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

WHSST 11-12.9: Draw evidence from informational texts to support analysis, reflection, and research.

WHSST 11-12.10: Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes and audiences.

MATHEMATICS

Geometry

G-CO 1: Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, and distance along a line, and distance around a circular arc.

G-CO 2: Represent transformations in the plane using, e.g., transparencies and geometry software; describe transformations as functions that take points in the plane as inputs and give other points as outputs. Compare transformations that preserve distance and angle to those that do not (e.g., translation versus horizontal stretch).

G-CO 4: Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments.

Geometry – Modeling with Geometry

C-MG 1: Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).

C-MG 3: Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost: working with typographic grid systems based on ratios).

SCIENCE

Crosscutting Concept

CC 1: Patterns

Scientific and Engineering Practices

SEP 1: Asking questions (for science) and defining problems (for engineering).

SEP 4: Analyzing and interpreting data.

SEP 5: Using mathematics and computational thinking.

SEP 8: Obtaining, evaluating, and communicating information.

Physical Science

PS 2.c: Stability and Instability in Physical Systems.

HISTORY/ SOCIAL SCIENCE

Principles of American Democracy and Economics

AD 12.8: Students evaluate and take and defend positions on the influence of the media on American political life.

