

## C

## CHEMISTRY

**CHEM 100 Chemistry and Man (3) KCC AA/DP and KCC AS/NS**

*3 hours lecture per week*

*Prerequisite(s): MATH 24 with a grade of "C" or higher, or placement into MATH 25 or higher level math, or one year of high school algebra.*

CHEM 100 is a survey of the basic concepts of general chemistry. CHEM 100 serves as a preparatory course for more advanced chemistry courses.

Upon successful completion of CHEM 100, the student should be able to:

- Utilize the scientific method of inquiry.
- Solve metric-to-English conversion problems and vice versa.
- Convert within the metric system.
- Solve algebraic equations related to chemistry.
- Use algebraic and/or dimensional analysis methods to solve chemistry problems.
- Apply the rules for significant figures to calculations.
- Classify matter.
- Convert between temperature scales.
- Perform calculations related to density, specific gravity, specific heat, kinetic energy, electromagnetic radiation, and chemical bonding.
- Perform calculations related to the mole concept.
- Balance a chemical equation.
- Calculate, when given a balanced chemical equation and the moles of a reactant, the moles of a product produced in the reaction.
- Calculate, when given a balanced chemical equation and the weight of a reactant, the weight of a product produced in a reaction.
- Identify the type of chemical bonds possessed by a molecule or compound.
- Memorize the symbols of 35 elements, 15 polyatomic ions and the prefixes mono-through deca-(i.e. 1 through 10).
- Describe the atomic structure of the atom at a minimum according to the Bohr Theory.

- Describe the shape of S and P orbitals.
- Use the periodic table to delineate for "A" group atoms the number of protons, neutrons, electrons, outer shell electrons, ion charge, and final characterization as either a metal, nonmetal, or metalloid.
- Glean and use information from the periodic table.
- Calculate the atomic weight of an atom.
- Describe what occurs during absorption and emission of radiation by molecules and atoms.
- Distinguish between physical and chemical properties and changes.
- Distinguish between endothermic and exothermic reactions.
- Discuss the laws of chemistry.
- Write formulas for compounds and molecules.
- Name compounds and molecules.
- Calculate the percent composition of a compound.
- Calculate the empirical and molecular formula of a compound.
- Draw electron-dot structures for molecules.
- Define an acid and a base.
- Distinguish between weak and strong acids and bases.
- Explain chemical equilibrium.
- Calculate the pH and pOH of a solution.
- Calculate  $[H^+]$  or  $[OH^-]$  given  $K_w$ .
- Explain the relationships between gas solubility and temperature and pressure.
- Explain the relationship between the solubility of an ionic solid and temperature.
- Calculate the concentration of a solution in percent and molarity.

**CHEM 151 Elementary Survey of Chemistry (3) KCC AA/DP and KCC AS/NS (Inactive)**

*3 hours lecture per week*

*Prerequisite(s): MATH 25.*

CHEM 151 is intended to provide the beginning student with an adequate background in the fundamentals of chemistry. Suitable for students preparing for careers in medical technology, nursing, and the life sciences.

Upon successful completion of CHEM 151, the student should be able to:

- Use the metric system and scientific notation.
- Explain the difference between Ionic, Polar covalent and Non-Polar covalent bonding.
- Use chemical equations to calculate weight or

- volume relationships in chemical reactions.
- Understand and use the mole concept in solving chemical problems.
- Explain a variety of conceptual models used in describing atomic and molecular structure, chemical bonding and acidbase theory.

**CHEM 151L Elementary Survey of Chemistry Lab (1) KCC AA/DY (Inactive)**

*3 hours lab per week*

*Prerequisite(s): Credit or concurrent enrollment in CHEM 151.*

CHEM 151L focuses on experiments introducing laboratory techniques and illustrating chemical principles.

Upon successful completion of CHEM 151L, the student should be able to:

- Demonstrate approved techniques in handling laboratory equipment.
- Record data accurately and in proper form on the lab report sheets.
- Make and use measurements to calculate descriptive properties of matter such as: density, mass, volume, concentration, chemical formulas, etc.

**CHEM 152 Survey of Organic and Bioorganic Chemistry (3) KCC AA/DP (Inactive)**

*3 hours lecture per week*

*Prerequisite(s): CHEM 151 or CHEM 161.*

CHEM 152 focuses on structure, nomenclature, properties, reactions of organic compounds, emphasizing those of practical importance in related fields.

Upon successful completion of CHEM 152, the student should be able to:

- Describe the phenomenon of orbital hybridization and its usefulness in explaining chemical bonding.
- Explain isomerization in organic compounds.
- Explain the phenomenon of optical isomerization.
- Apply the knowledge obtained in CHEM 151 or 161 to the study of organic chemistry.
- Explain the differences in physical properties and chemical reactivity between the three classes of hydrocarbons: alkanes, alkenes and alkynes.

- Explain the differences between the different types of substitution and elimination reactions.
- Explain the differences in physical properties and chemical reactivity between the following classes of organic compounds: alcohols, carboxylic acids, esters, ethers, aldehydes, and ketones.
- Describe the general characteristics and reactions of molecules found in living systems: carbohydrates, fats and proteins.

**CHEM 152L Survey of Organic and Bioorganic Chemistry Laboratory (1) KCC AA/DY (Inactive)**

*3 hours lecture per week*

*Prerequisite(s): CHEM 151L or CHEM 161L; credit or concurrent enrollment in CHEM 152.*

CHEM 152L focuses on techniques of preparation, purification and identification of organic compounds.

Upon successful completion of CHEM 152L, the student should be able to:

- Demonstrate approved techniques in handling laboratory equipment.
- Record data accurately and in proper form on lab report sheets.
- Demonstrate laboratory procedures for separation, purification, and identification of organic compounds.

**CHEM 161 General Chemistry I (3) KCC AA/DP and KCC AS/NS**

*3 hours lecture per week*

*Prerequisite(s): MATH 25 or 2 years high school algebra.*

*Recommended Preparation: MATH 103, 135.*

CHEM 161 introduces the basic principles of chemistry including metric system, atomic and molecular structure, periodic trends and chemical bonding, mole concept, writing and balancing equations, stoichiometry, and heat of reaction.

Upon successful completion of CHEM 161, the student should be able to:

- Convert values into the metric system and scientific notation.
- Distinguish between Ionic, Polar Covalent and Non-Polar Covalent bonding.

- Write the formulae for chemical compounds and molecules.
- Balance chemical equations.
- Use chemical equations to calculate weight or volume relationships in chemical reactions.
- Utilize the mole concept to solve chemical/stoichiometric problems.
- Explain a variety of conceptual models use in describing atomic and molecular structure, chemical bonding.

Student Learning Outcomes for CHEM 161:

(A) The student will be able to apply mathematical problem solving skills in more advanced chemistry courses, other science courses, or in the workplace.

(B) The student will develop critical thinking/problem solving skills and apply them in more advanced chemistry courses, other science courses, or in the workplace.

### **CHEM 161L General Chemistry I Lab (1) KCC AA/DY**

*3 hours lab per week*

*Prerequisite(s): MATH 25; credit or concurrent enrollment in CHEM 161.*

*Recommended Preparation: MATH 103, 135.*

CHEM 161L develops practical laboratory skills. Topics may include density, specific gravity, specific heat, chemical and physical properties, analysis of a mixture, molecular structure, and specific heat.

Upon successful completion of CHEM 161L, the student should be able to:

- Utilize laboratory equipment to measure mass, volume, heat of reactions, density and specific gravity, according to published procedures.
- Perform experiments that demonstrate physical and chemical properties of compounds.
- Identify and predict the molecular structure of compounds.
- Record data accurately and in proper form on the lab report sheets.
- Calculate descriptive properties of matter such as: density, mass, volume, concentration,

yield of reactions, chemical formulas, etc. Also, plot data, and write out chemical equations.

Student Learning Outcomes for CHEM 161L:

(A) The student will be able to apply mathematical problem solving skills in more advanced chemistry courses, other science courses, or in the workplace.

(B) The student will develop critical thinking/problem solving skills and apply them in more advanced chemistry courses, other science courses, or in the workplace.

(C) The student will gain "hands-on" experience in using laboratory equipment, hardware, and glassware and utilize these skills in more advanced chemistry and other science courses or in the laboratory workplace.

### **CHEM 162 General Chemistry II (3) KCC AA/DP and KCC AS/NS**

*3 hours lecture per week*

*Prerequisite(s): CHEM 161.*

*Recommended Preparation: MATH 103, 135.*

CHEM 162 introduces additional basic principles of chemistry including kinetics, redox reactions and electrochemistry, acid-base chemistry, thermodynamics, and isotopes.

Upon successful completion of CHEM 162, the student should be able to:

- Calculate an equilibrium constant.
- Calculate an ionization constant.
- Calculate a solubility product constant.
- Show the relationship between equilibrium and ionization constants.
- Calculate the pH of a weak acid or weak base solution.
- Calculate a hydrolysis constant.
- Calculate the pH of a solution undergoing hydrolysis.
- Use a solubility product constant to determine if precipitation will occur.
- Explain the difference between voltaic and electrolytic cells.

- Calculate standard and non-standard cell voltages.
- Calculate the free energy of a reaction.
- Explain the relationship between free energy and cell voltage.
- Calculate the enthalpy for a given chemical reaction using heats of formation of reactants and products.
- Explain the relationship between free energy, entropy, and enthalpy.

Student Learning Outcomes for CHEM 162:

(A) The student will be able to apply mathematical problem solving skills in more advanced chemistry courses, other science courses, or in the workplace.

(B) The student will develop critical thinking/problem solving skills and apply them in more advanced chemistry courses, other science courses, or in the workplace.

### **CHEM 162L General Chemistry II Lab (1) KCC AA/DY**

*3 hours lab per week*

*Prerequisite(s): CHEM 161; CHEM 161L; credit or concurrent enrollment in CHEM 162.*

*Recommended Preparation: MATH 103, 135.*

CHEM 162L develops additional practical laboratory skills. Topics may include chemical equilibrium, solution chemistry, pH and pK, free energy of a reaction, determination of the molecular weight of a gas, and solution chemistry.

Upon successful completion of CHEM 162L, the student should be able to:

- Demonstrate approved techniques in handling laboratory equipment for pH measurements, kinetics, titration, and thermochemistry.
- Record data accurately and in proper form on the lab report sheets.
- Use measurements to calculate descriptive properties of matter such as: ionization constants, solubility product constants, pH, degree of hydrolysis, and rates of reactions.

Student Learning Outcomes for CHEM 162L:

(A) The student will be able to apply mathematical problem solving skills in more advanced chemistry courses, other science courses, or in the workplace.

(B) The student will develop critical thinking/problem solving skills and apply them in more advanced chemistry courses, other science courses, or in the workplace.

(C) The student will gain "hands-on" experience in using laboratory equipment, hardware, and glassware and utilize these skills in more advanced chemistry and other science courses or in the laboratory workplace.

### **CHEM 272 Organic Chemistry I (3) KCC AA/DP**

*3 lecture hours per week*

*Prerequisite(s): CHEM 162.*

CHEM 272 is the first semester of a comprehensive introduction to organic chemistry including molecular structure, nomenclature, stereochemistry, spectroscopy, reactions and reaction mechanisms, synthesis, and applications to biology. This course is intended for science majors.

Upon successful completion of CHEM 272, the student should be able to:

- Understand the nature of bonding and structure.
- Understand the physical properties associated with molecular structure.
- Give common and IUPAC names for the various organic compounds studied in the first semester.
- Give complete structures from the names.
- Draw stereochemical structures and understand how stereochemistry affects physical and chemical properties.
- Determine the structure of compounds from experimental data including the various spectroscopic techniques.
- Understand how functional group structure determines chemical reactivity.
- Determine the mechanism of a reaction based upon the structure of the functional group.
- Give the types of reactions possible for each functional group and be able to draw all possible products of a reaction.
- Determine what starting materials are necessary to synthesize a particular compound.
- Cite examples of organic mechanisms in biology.

**CHEM 272L Organic Chemistry Lab I (2) KCC AA/DY***5 hours lecture/lab per week**Prerequisite(s): CHEM 162; credit or concurrent enrollment in CHEM 272.*

CHEM 272L is a comprehensive introduction to laboratory principles of organic chemistry including molecular structure, nomenclature, stereochemistry, spectroscopy, reactions and reaction mechanisms, synthesis, and applications to biology. This course is intended for science majors.

Upon successful completion of CHEM 272L, the student should be able to:

- Describe the nature of bonding and structure.
- Describe the physical properties associated with molecular structure.
- Give common and IUPAC names for the various organic compounds studied in the first semester.
- Give complete structures from the names.
- Draw stereochemical structures and understand how stereochemistry affects physical and chemical properties.
- Determine the structure of compounds from experimental data including the various spectroscopic techniques.
- Describe how functional group structure determines chemical reactivity.
- Determine the mechanism of a reaction based upon the structure of the functional group.
- Give the types of reactions possible for each functional group and be able to draw all possible products of a reaction.
- Determine what starting materials are necessary to synthesize a particular compound.
- Cite examples of organic mechanisms in biology.

**CHEM 273 Organic Chemistry II (3) KCC AA/DP***3 lecture hours per week**Prerequisite(s): CHEM 272.*

CHEM 273 is the second semester of a comprehensive introduction to organic chemistry including molecular structure, nomenclature, stereochemistry, spectroscopy, reactions and reaction mechanisms, synthesis, and applications to biology. This course is intended for science majors.

Upon successful completion of CHEM 273, the student should be able to:

- Understand the nature of bonding and structure.
- Understand the physical properties associated with molecular structure.
- Give common and IUPAC names for the various organic compounds studied in the first and second semesters.
- Give complete structures from the names.
- Draw stereochemical structures and understand how stereochemistry affects physical and chemical properties.
- Determine the structure of compounds from experimental data including the various spectroscopic techniques.
- Understand how functional group structure determines chemical reactivity.
- Determine the mechanism of a reaction based upon the structure of the functional group.
- Give the types of reactions possible for each functional group and be able to draw all possible products of a reaction.
- Determine what starting materials are necessary to synthesize a particular compound.
- Cite examples of organic mechanisms in biology.

**CHEM 273L Organic Chemistry Lab II (1) KCC AA/DY***3 lecture hours per week**Prerequisite(s): CHEM 272L.*

CHEM 273L is a continuation of a comprehensive introduction to laboratory principles of organic chemistry including molecular structure, nomenclature, stereochemistry, spectroscopy, reactions and reaction mechanisms, synthesis, and applications to biology. This course is intended for science majors.

Upon successful completion of CHEM 273L, the student should be able to:

- Understand the nature of bonding and structure.
- Understand the physical properties associated with molecular structure.
- Give common and IUPAC names for the various organic compounds studied in the first semester.
- Give complete structures from the names.
- Draw stereochemical structures and understand how stereochemistry affects physical and chemical properties.

- Determine the structure of compounds from experimental data including the various spectroscopic techniques.
- Understand how functional group structure determines chemical reactivity.
- Determine the mechanism of a reaction based upon the structure of the functional group.
- Give the types of reactions possible for each functional group and be able to draw all possible products of a reaction.
- Determine what starting materials are necessary to synthesize a particular compound.
- Cite examples of organic mechanisms in biology.

in stores, time/date on schedules, etc. where specific characters and combinations have been memorized.

- Write simple fixed expressions and limited memorized material and some recombination thereof. Supply information on simple forms and documents. Write names, numbers, dates, own nationality, and other simple autobiographical information as well as some short phrases and simple sentences.

### **CHNS 102 Elementary Mandarin II (4) KCC AA/HSL**

*3 hours lecture, 2 hours lab per week*

*Prerequisite(s): CHNS 101 or satisfactory score on the language placement test.*

CHNS 102 is a continuation of CHNS 101. The four skills of listening, speaking, reading and writing in Standard Mandarin Chinese are further developed. Students will gain these four skills, attaining approximately the Intermediate-low level on the ACTFLETS (American Council on the Teaching of Foreign Languages) proficiency scale.

Upon successful completion of CHNS 102, the student should be able to:

- Listen and understand sentence-length utterances which consist of recombination of learned elements in a limited number of content areas, particularly if strongly supported by the situational context. Comprehension areas cover such basic needs as eating, lodging, transportation, and receiving simple instructions and routine commands.
- Speak and handle successfully a limited number of uncomplicated task-oriented and social functions pertaining to such topic areas as those mentioned above. Ask and answer questions, initiate and respond to simple statements and maintain face-to-face conversation. Perform such tasks as introducing oneself, ordering a meal, asking directions, and making purchases.
- Read for basic survival and social needs, simple connected, specially prepared material and puzzle out pieces of some authentic material as it reflects similarity to specially prepared material and/or to high-frequency oral vocabulary and structure. Puzzle out very simple hand-printed messages, personal notes and very short letters which are written by a native speaker experienced in dealing

## **CHINESE**

### **CHNS 101 Elementary Mandarin I (4) KCC AA/HSL**

*3 hours lecture, 2 hours lab per week*

CHNS 101 is a course designed for beginners of Chinese. Study of basic structures of the Mandarin Chinese language with emphasis on listening, speaking, reading and writing skills. Students will gain these four skills in standard Mandarin Chinese, attaining approximately the Novice-High level on the ACTFL-ETS (American Council on the Teaching of Foreign Languages) proficiency scale.

Upon successful completion of CHNS 101, the student should be able to:

- Listen and know the meaning of short, learned utterances and some sentence-length utterances, especially where context supports understanding and speech is clear. Comprehend limited vocabulary and some simple questions/statements about family members, age, address, time, interests, and other daily activities.
- Speak short statements and ask simple questions, primarily by relying on memorized utterances but occasionally by expanding these through simple recombinations of those elements.
- Read and identify a limited number of character components and high-frequency characters in areas of immediate need. Read for instructional and directional purposes, standardized messages, such as some prices

with foreigners. Decode one or two elements from simplest connected texts dealing with basic personal and social needs, such as signs, public announcements and short, straightforward instructions dealing with public life.

- Write and meet limited practical writing needs. Write short messages, postcards, and take down simple notes, such as telephone messages. Create statements or questions within the scope of limited language experience. Material produced consists of recombination of learned vocabulary and structures into simple sentences on very familiar topics.

### **CHNS 111 Elementary Conversational Mandarin I (3) KCC AA/HSL**

*3 hours lecture per week*

CHNS 111 is designed for students beginning the study of conversational Chinese. Students study the basic structures of the Mandarin Chinese language with emphasis on listening, and speaking skills. They will gain these two skills in standard Mandarin Chinese, attaining approximately the Novice-High level on the ACTFL-ETS (American Council on the Teaching of Foreign Languages) proficiency scale.

Upon successful completion of CHNS 111, the student should be able to:

- Listen and understand short, learned utterances and some sentence-length utterances, especially where context supports understanding and speech is clear. Comprehend limited vocabulary and some simple questions/statements about family members, age, address, time, locations, interests, needs and daily activities.
- Speak short statements and ask simple questions, primarily by relying on memorized utterances but occasionally by expanding these through simple recombinations of those elements. Vocabulary centers on areas such as common objects, places, activities, basic likes and dislikes, and terms for immediate family members.
- Demonstrate an awareness of various Chinese cultural aspects and perspectives.
- Use modern technology, such as world wide web and email, to research topics about China.

### **CHNS 112 Elementary Conversational Mandarin II (3) KCC AA/HSL**

*3 hours lecture per week*

*Prerequisite(s): CHNS 111 or equivalent.*

CHNS 112 is a continuation of CHNS 111 and further develops two skills of listening and speaking in Standard Mandarin Chinese. Students will attain approximately the Intermediate-Low level on the ACTFL-ETS (American Council on the Teaching of Foreign Languages) proficiency scale.

Upon successful completion of CHNS 112, the student should be able to:

- Listen to and understand sentence-length utterances which consist of recombination of learned elements in a limited number of content areas, particularly if strongly supported by the situational context. Comprehension areas cover such basic needs as eating, lodging, transportation, and responding to simple instructions and routine commands.
- Speak and handle successfully a limited number of uncomplicated task-oriented and social functions pertaining to such topic areas as those mentioned above. Ask and answer questions, initiate and respond to simple statements and maintain face-to-face conversation. Perform such tasks as introducing oneself, ordering a meal, asking directions, and making purchases.
- Demonstrate through the study of language a better understanding of various Chinese cultural aspects and perspectives.
- Use modern technology, such as World Wide Web and email, to research topics about China and interact with Chinese learners or native Chinese speakers.

### **CHNS 131 Chinese Conversation and Culture I/ Business and Tourism Industry (4) KCC AA/DH**

*5 hours lecture / 5 hours independent practice or lab per week.*

CHNS 131 is a beginning level Mandarin Chinese designed to develop oral communication skills. Includes oral drills and individual practice for forming Chinese sentences. Also includes cultural information that forms part of the language. Covers vocabulary and situations appropriate for business and hospitality industry. A communicative approach emphasizes questions and answers and situational role-playing.

Upon successful completion of CHNS 131, the student should be able to:

- Understand a number of short utterances in Chinese in areas of immediate need.
- Comprehend sentence-length utterances in situations where the context aids understanding such as in a restaurant or store, or on a train or bus.
- Comprehend simple questions/statements about family members, age, address, time, interests and daily activities.
- Obtain the main ideas of tailored speech likely to be encountered by tourists and business persons.
- Make short statements and ask simple questions by relying on memorized utterances.
- Create sentences based on recombination of learned vocabulary and sentence patterns.
- Carry out tasks involving a variety of activities such as greetings, inquiring, telling time and date, telephoning, shopping and dining.
- Identify a limited number of characters and read for instructional and directional purposes standardized messages, phrases or expressions.
- Interact with Chinese speakers in culturally acceptable ways, employing appropriate greetings, mannerisms, and implications.
- Understand aspects of Chinese culture.
- Use modern technology such as World Wide Web and e-mail to research topics about China.

#### **CHNS 201 Intermediate Mandarin I (4) KCC AA/HSL**

*3 hours lecture, 2 hours lab per week*

*Prerequisite(s): CHNS 102 or satisfactory score on the language placement test.*

CHNS 201 is a continuation of CHNS 102. The four skills of listening, speaking, reading and writing in Standard Mandarin Chinese are further developed. Students will gain these four skills, attaining approximately the Intermediate-Mid level on the ACTFLETS (American Council on the Teaching of Foreign Languages) proficiency scale.

Upon successful completion of CHNS 201, the student should be able to:

- Listen and understand sentence-length utterances which consist of recombination

of learned elements on a variety of topics. Content refers primarily to basic personal background and needs, social conversations and some complex tasks. Comprehension areas cover such basic functions as traveling, schooling and a diversity of instruction and directions.

- Speak and handle successfully a variety of uncomplicated task-oriented and social functions pertaining to such topic areas as those mentioned above. Ask and answer questions, participate in simple conversations on topics beyond the most intermediate needs. Perform such tasks as renting an apartment, mailing a letter, planning a vacation and booking an airline ticket.
- Read and understand some authentic material as it reflects similarity to specially prepared material and/or to highfrequency oral vocabulary and structure. Decode simple hand-printed notes or short letters for main facts on topics such as mail and residence. Read consistently with increased understanding simple connected texts dealing with basic personal and social needs, such as signs, public announcements and short, straightforward instructions dealing with public life.
- Write and meet a number of practical writing needs. Write short simple letters. Contents involves personal preference, daily routine, everyday events, and other topics grounded in personal experience. Evidence of control of the syntax of non-complex sentences. Create a collection of sentences on a given topic.

#### **CHNS 202 Intermediate Mandarin II (4) KCC AA/HSL**

*3 hours lecture, 2 hours lab per week*

*Prerequisite(s): CHNS 201 or satisfactory score on the language placement test.*

CHNS 202 is a continuation of CHNS 201. The four skills of listening, speaking, reading and writing in Standard Mandarin Chinese are further developed. Students will gain these four skills, attaining approximately the Intermediate-High level on the ACTFLETS (American Council on the Teaching of Foreign Languages) proficiency scale.

Upon successful completion of CHNS 202, the student should be able to:

- Listen and sustain understanding over longer stretches of connected discourse on a number

- of topics pertaining to different times and places.
- Speak and handle successfully most uncomplicated communicative tasks and social situations. Initiate, sustain and close a general conversation with a number of strategies appropriate to a range of circumstances and topics.
- Read consistently with full understanding of simple connected texts dealing with basic personal and social needs about which the student has personal interest and/or knowledge.
- Write and meet most practical writing needs and limited social demands. Take notes in some detail on familiar topics and respond in writing to personal questions. Write simple letters, brief synopses and paraphrases, summaries of biographical data, work and school experience.

### **CHNS 290 Chinese Language and Culture through Application (4) KCC AA/DH**

*3 hours lecture/ 3 hours lab per week*

*Prerequisite(s): Students must be native, bilingual speakers of Chinese, or advanced level students with approval of the instructor.*

*Comment: CHNS 290 is conducted in both Chinese and English.*

CHNS 290 is designed to prepare students to serve as Chinese language and culture resources on campus and in the community through service learning experiences.

Application of the “real world” community service experiences, cultural readings, and personal reflections will serve as the basis for communicative activities in class.

Upon successful completion of CHNS 290, students should be able to:

- Describe the diversity and variety of Chinese culture orally and in writing about their service learning community experiences and assigned readings;
- Demonstrate the job-related skills gained from the practical work experience in the supervised community volunteer activities;
- Evaluate orally and in writing the service learning activities using appropriate vocabulary and grammar in communicative

- activities, discussions, and writing activities;
- Describe orally in classroom discussion, and in reflective journals and essays, the needs of the community;
- Apply orally and in writing critical thinking and problem-solving skills related to their service-learning experiences.
- List similarities and differences between Chinese and U.S. culture from various perspectives and values.
- Construct a relationship between language learning and culture.
- Demonstrate effective communication skills in both the students heritage and U.S. cultures.

## **CIVIL ENGINEERING**

### **CE 113 Introduction to Computer and Design (3)**

*3 hours lecture per week*

*Prerequisite(s): MATH 135; Engineering Drawing or high school mechanical drawing.*

CE 113 is an introduction to computer programming methods with emphasis on planning, writing, debugging of programs, together with basic applications.

Upon successful completion of CE 113, the student should be able to:

- Work in a windows operating systems environment.
- Use a word processor as a desk top publishing tool.
- Work with a spreadsheet.
- Work with a Computer Aided Design (CAD) tool.
- Use a spreadsheet to solve civil engineering problems.
- Use a word processor to produce professional-looking reports by integrating the results of CAD and spreadsheet tools into one word processing document.

### **CE 270 Applied Mechanics I (3) KCC AA/DP**

*3 hours lecture per week*

*Prerequisite(s): A grade of “C” or higher in PHYS 170; credit or concurrent enrollment in MATH 231.*

CE 270 is the study of equilibrium of rigid bodies under the action of forces and the application of the principles of mechanics to solve static problems in engineering.

Upon successful completion of CE 270, the student should be able to:

- Demonstrate an understanding of the concepts of forces, resultant and static equilibrium and their application to rigid bodies.
- Demonstrate knowledge and understanding of the equilibrium of rigid bodies in two and three dimensions.
- Demonstrate an understanding of and insights into the concepts of center of gravity, centroids, couples, and moments of inertia.
- Demonstrate knowledge in the analysis of engineering structures subjected to concentrated loads, distributed loads, and frictional forces.
- Utilize abstract thinking and analytical reasoning in the analysis of word problems.
- Utilize calculation techniques in the analysis of dynamics problems in engineering.

### **CE 271 Applied Mechanics II (3) KCC AA/DP**

*3 hours lecture per week*

*Prerequisite(s): A grade of "C" or higher in CE 270; credit or concurrent enrollment in MATH 232.*

CE 271 is the study of the dynamics of particles and rigid bodies under the action of forces: the geometric description of motion and the effects of forces on the motion of bodies.

Upon successful completion of CE 271, the student should be able to:

- Describe the position, velocity and acceleration of particles and rigid bodies in both rectangular and curvilinear coordinate systems.
- Demonstrate knowledge of the kinematics of particles and rigid bodies with respect to both a fixed and translating reference frames.
- Demonstrate knowledge and understanding of the three methods of kinetics analysis: force-mass-acceleration, work-energy, and impulse-momentum.
- Utilize abstract thinking and analytical reasoning in the analysis of word problems.
- Utilize calculation techniques in the analysis of dynamics problems in engineering.

## **COMMUNICATION**

### **COM 201 Introduction to Communication (3)**

**KCC AA/DS and KCC AS/SS**

*3 hours lecture per week*

*Prerequisite(s): Qualification for ENG 100, ENG 160, or ESL 100.*

COM 201 presents an overview of communication focusing on the processes of interpersonal, intercultural, organizational, and international communication and on recent developments in multimedia, mass media, and telecommunications.

Upon successful completion of COM 201, the student should be able to:

- Describe the human communication process, its purposes, functions and modes.
- Demonstrate knowledge of verbal and non-verbal codes.
- Explain the role and dynamics of communication in relationships, groups, and organizations.
- Analyze the processes and identify the pitfalls of interethnic and intercultural communication, including interactions in Hawai'i, Oceania and Asia.
- Describe the role of mass and public communication systems in modern societies.
- Identify and explain the functions and methods of telecommunication in a global society.
- Express clearly in writing ideas and opinions about communication theories, based on critical analyses of readings and other sources of data.

## **COMMUNITY HEALTH WORKER**

### **CHW 100 Self-Exploration for the Community Health Worker (3)**

*3 hours lecture per week*

*Prerequisite(s): Admission to the CHW program.*

*Comment: CHW 100 may not be audited. CHW 100 may not be taken credit/no credit.*

CHW 100 is intended for the student who has been admitted to the certificate of completion curriculum in community health work. It provides

an opportunity for students to explore their personal feelings, values, and goals to assist them in developing greater insights into themselves and the clients that they serve as CHW's.

Upon successful completion of CHW 100, the student should be able to:

- Discuss the values and attitudes that underlie their behavior.
- Discuss choices they have made in decisions that have shaped their life paths.
- Demonstrate awareness of self through ages, stages, and significant milestones in life.
- Recognize and address personal attitudes and behaviors that may hinder ability to perform effectively as a community health worker.
- Demonstrate effective listening skills.
- Explain the influence of culture, values, attitude, and behavior on community health work.
- Develop a personal goal statement and plan of action.

### **CHW 130 Individual Counseling for the Community Health Worker (3)**

*3 hours lecture per week*

*Prerequisite(s): Admission to the CHW program.*

*Comment: CHW 130 may not be audited. CHW 130 may not be taken credit/no credit.*

CHW 130 is designed to introduce and enhance the understanding and counseling skills of student community health workers. Major learning areas include establishing a trusting relationship, interviewing, empathic listening, values clarification, and problem solving. The course is a combination of didactic and experiential learning with a focus on assessment, intervention, and various theories of counseling.

Upon successful completion of CHW 130, the student should be able to:

- Perform as an entry-level community health worker counselor.
- Assess client strengths and weaknesses using a multidimensional model.
- Behave ethically as a helping professional.
- Utilize a sensory-based model for recording and reporting client information.
- Assess his/her own strengths and continued areas of challenge in becoming a successful community health worker interviewer/counselor.

### **CHW 140 Fundamentals of Community Health Work (4)**

*8 hours lecture/lab per week*

*Prerequisite(s): Acceptance into the Community Health Worker program.*

CHW 140 provides an introduction to fundamental concepts and skills essential to function as a community-based health care worker. It includes concepts of community health and resources, appropriate referral and follow-up, and case management.

Upon successful completion of CHW 140, the student should be able to:

- Identify the role of the Community Health Worker (CHW) and explain interaction with local, regional, and national levels of the health care system.
- Demonstrate basic knowledge and skills in community health needs assessment.
- Describe community health roles and relationships.
- Identify common health care problems, refer clients to appropriate resources, and provide basic selected services.
- Describe appropriate methods for providing and enabling services.

### **CHW 145 Community Health Worker Clinical I (1)**

*50 clinical hours total*

*Prerequisite(s): Admission to the community health worker program; CPR and First Aid certification; a grade of "C" or higher in CHW 140.*

*Comment: CHW 145 is offered only at the Wai'anae Health Academy.*

CHW 145 provides the student with practical skills in an agency setting in which to apply knowledge and skills gained in CHW 140. It also increases the student's ability and effectiveness in working as part of a community-based health care team.

Upon successful completion of CHW 145, the student should be able to:

- Demonstrate ability to work as part of a community-based health care team.
- Use ethical standards in relationships with clients.
- Develop skills to assist clients in learning problem-solving techniques to access specific community services/resources

- Discuss clinical experiences and relation to academic content.
- Use appropriate referral forms for each agency or clinic.
- Discuss specific health risk behaviors with clients.
- Demonstrate skills in administrative procedures such as scheduling of appointments, record keeping, record charting.
- Demonstrate understanding of basic principles of authority and responsibility in the clinic or agency setting.
- Exhibit professional behavior.
- Exhibit adaptability to various settings.

*Comment: CHW 210 may not be audited. CHW 210 may not be taken credit/no credit.*

CHW 210 provides an overview of case management skills and practice for community health workers and to introduce them to concepts surrounding the practice of case management in a community setting. Topics include conducting intake and assessment, preparing effective care plans, making and following up on referrals, tracking and documenting outcomes, and developing appropriate discharge plans. Cultural competence, professional ethics and boundaries, and listening skills will be covered.

Upon successful completion of CHW 210, the student should be able to:

- Explain ethical and professional considerations governing case management activities.
- Define the various roles and responsibilities of case managers in community-based agencies.
- Recognize and address personal attitudes and behaviors that may hinder ability to perform effectively as a case manager.
- Describe the influence of values, attitude, and behavior in application of case management concepts and practices.
- Demonstrate effective listening skills.
- Develop appropriate relationships with clients.
- Perform accurate case management assessments.
- Develop effective, client-centered care plans.
- Make and monitor referrals and service appropriately.
- Document and record client activities accurately.
- Participate effectively in team situations.

### **CHW 200 Social Work Principles and Practices for Community Health Workers (3)**

*3 hours lecture per week*

*Prerequisite(s): Satisfactory Completion of the CHW Certificate of Completion.*

*Comment: CHW 200 may not be audited. CHW 200 may not be taken credit/no credit.*

CHW 200 provides an introduction to the profession of social work for community health workers, including its knowledge base, generalist methods, goals, and fields of practice. Students are encouraged to view the profession and themselves in realistic terms and to examine their appropriateness for continued study in social work.

Upon successful completion of CHW 200, the student should be able to:

- Discuss, interpret, and synthesize social work concepts, theories, and data and apply them to different situations, to draw conclusions, or explain a situation.
- Organize information and utilize reference sources, including the text, as appropriate.
- Utilize writing skills and apply the mechanics of constructing a paper.
- Demonstrate oral communication, observational, and assessment skills.

### **CHW 210 Case Management Concepts for Community Health Workers (3)**

*3 hours lecture per week*

*Prerequisite(s): Satisfactory completion of the CHW Certificate of Completion.*

### **CHW 211 Case Management Practicum for Community Health Workers (1)**

*A total of 45 hours clinical experience in case management*

*Prerequisite(s): Satisfactory completion of the CHW Certificate of Completion.*

*Comment: CHW 211 may not be audited. CHW 211 may not be taken credit/no credit.*

CHW 211 provides practical experience in case management skills in a community-based agency where students will be able to observe and apply knowledge and skills acquired in accompanying

coursework. Students will have opportunities to interact with community workers, current and potential clients, agency administration, and the larger community.

Upon successful completion of CHW 211, the student should be able to:

- Demonstrate understanding of the daily responsibilities of case managers in community-based agencies.
- Demonstrate basic knowledge, skills, and sensitivity while working with clients.
- Describe human service roles and relationships to community health work.
- Identify common community health issues.
- Refer clients to appropriate resources.
- Provide basic selected community health services.
- Provide information about the site/organization to community residents.
- Access basic community resources to meet client needs.
- Work as part of a community-based health care team.
- Apply interviewing and counseling skills with clients in the community.
- Demonstrate understanding of the influence of culture on values, attitude, and behavior and impact on the community health worker.
- Demonstrate effective listening skills.
- Define and use ethical and legal standards in relationships with clients.
- Demonstrate understanding of the practicum site's mission and purpose.
- Adhere to policies and procedures of the practicum site.

### **CHW 220 Substance Abuse Awareness for the Community Health Worker (3)**

*3 hours lecture per week*

*Prerequisite(s): Satisfactory completion of the CHW Certificate of Completion*

*Co-requisite(s): CHW 221.*

*Comment: CHW 220 may not be audited. CHW 220 may not be taken credit/no credit.*

CHW 220 is intended for the student who has completed a basic curriculum in community health work. It is designed to expose the student to a practical knowledge of substance abuse issues that impact on the community health worker's particular role in providing assistance to the individual, the family, and the community.

Upon successful completion of CHW 220, the student should be able to:

- Describe the effects of substance abuse on individuals, families and society.
- Identify the symptoms and signs of substance abuse, particularly those that suggest early stages.
- Evaluate the needs of the patient with substance abuse problems.
- Discuss the needs of the patient's family and community in combating drug abuse/addiction.
- Apply models of intervention and carry out referrals for patients with substance abuse problems.
- Observe and apply principles of cultural competence, professional ethics and boundaries.
- Demonstrate effective listening skills in identifying/evaluating drug abuse/addiction problems.

### **CHW 221 Substance Abuse Practicum for the Community Health Worker (1)**

*45 hours observation/practicum*

*Prerequisite(s): Satisfactory completion of the CHW Certificate of Completion*

*Co-requisite(s): CHW 220.*

*Comment: CHW 221 may not be audited. CHW 221 May only be taken credit/no credit.*

CHW 221 is intended for the student who has completed a basic curriculum in community health work. It is designed to provide the student with practical experience in dealing with substance abuse issues that impact on the community health worker's role in providing assistance to the individual, the family, and the community.

Upon successful completion of CHW 221, the student should be able to:

- Describe examples of the effects of substance abuse on individuals and families in the community and the effects on society.
- Demonstrate competence in identifying the symptoms and signs of substance abuse, particularly those that suggest early stages.
- Demonstrate competence in evaluating the needs of the patient with substance abuse problems.
- Discuss the needs of the patient's family and community in combating drug abuse/addition.
- Apply models of intervention and carry out referrals for patients with substance abuse problems.

- Demonstrate cultural competence as well as professional ethics and boundaries.
- Demonstrate effective listening skills in identifying/evaluating drug abuse/addiction problems.

## CULINARY ARTS

### **CULN 111 Introduction to the Culinary Industry/ Career Preparation (2)-**

*2 hours lecture per week*

*(4 hours lecture per week for 8 weeks)*

*Comment: CULN 111 may be offered as a full semester course or as 8-week modules. CULN 111 was formerly FSHE 102.*

CULN 111 provides an overview of the culinary industry within the aspects of the entire hospitality industry. It provides students with an introduction to the historical, social and cultural forces that have affected and shaped the industry of today. Students will identify job qualifications, professional standards, communication skills and attitudes essential for successful workers in the hospitality industry. Students will create a web-based electronic portfolio that will be utilized throughout their educational experience to demonstrate and showcase their learning outcomes.

Upon successful completion of CULN 111, the student should be able to:

- Assess their level of basic skills and its relationship to the educational pathways available through the program.
- Define hospitality and the philosophy of the hospitality industry.
- Trace the growth and development of the hospitality and tourism industry.
- Describe the various cuisines and contributions of leading culinarians.
- Identify professional organizations within the field; explain purposes and benefits
- Outline the organization, structure and functional areas in various hospitality organizations as a perspective for later courses in menu planning, purchasing, food production and service, food and beverage controls, management, etc.

- Evaluate career opportunities through participation in field trips and guest speakers in class.
- Discuss/evaluate industry trends as they relate to career opportunities and future of the industry.
- Discuss and evaluate industry trade periodicals.
- Discuss professional ethics practiced in the industry.
- Evaluate the impact of service-learning experiences upon personal and academic growth.
- Design a web-based electronic portfolio and utilize it to demonstrate learning outcomes.
- Evaluate the role that "Hawaiian Cultural Values" plays within the culinary & hospitality industry.
- Relate the importance of "Professional Standards" in attitude, behavior and dress within the culinary profession.

Within this CULN 111 course, the following student learning outcomes will have been introduced, practiced or demonstrated:

- Contrast the various organizational structures and basic functions within hospitality and culinary establishments.
- Contrast the career opportunities and professional organizations within the field.
- Assess the relevance of various trade publications and electronic methods for continuing education.
- Value cross-cultural perspectives that will allow them to effectively function in the global community.
- Value ethical practices in both personal and professional situations.
- Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
- Apply the experience of service-learning to both personal and academic development by becoming involved in community service activities.

**CULN 112 Sanitation and Safety (2)**

2 hours lecture per week

(4 hours lecture per week for 8 weeks)

*Comment: CULN 112 may be offered as a full semester course or as 8-week modules. CULN 112 was formerly FSHE 103.*

CULN 112 is the study and application of the principles and procedures of sanitation and safety in the hospitality industry. Includes the study of food borne illnesses, biological, chemical, and physical hazards, and cross-contamination as they may occur during the flow of food. An introduction to HACCP (Hazard Analysis Critical Control Point) and other sanitation and safety programs will also be presented. Safety issues and OSHA (Occupational Safety and Health Administration) guidelines and standards will be covered as they apply to the hospitality industry.

Upon successful completion of CULN 112, the student should be able to:

- Identify microorganisms which are related to food spoilage and food-borne illnesses; describe their requirements and methods for growth.
- List and describe symptoms common to food-borne illnesses and list various ways these illnesses can be prevented.
- List and define the fundamentals of good personal hygiene.
- Demonstrate good personal hygiene and health habits in a laboratory setting.
- Demonstrate acceptable procedures when preparing potentially hazardous foods to include time/temperature principles.
- List the major causes of food spoilage.
- Define food spoilage indicators.
- Outline the flow of food through an establishment and list the various ways contamination may be prevented along the pathway.
- Outline the requirements for proper receiving and storage of both raw and prepared foods.
- Recognize sanitary and safety design and construction features of food production equipment and facilities. (i.e., NSF, UL, OSHA ADA, etc.)
- Describe types of cleaners and sanitizers and

their proper use.

- Identify the seven HACCP Principles and the critical control points during all food handling processes as a method for minimizing the risk of food-borne illness.
- Review Material Safety Data Sheets (MSDS) and explain their requirements in handling hazardous materials. Discuss right-to-know laws.
- Develop cleaning and sanitizing schedule and procedures for equipment and facilities.
- Identify proper methods of waste disposal and recycling.
- Describe appropriate measures for insects, rodents and pest control eradication.
- Conduct a sanitation self-inspection and identify modifications necessary for compliance with standards.

Within this CULN 112 course, the following student learning outcomes will have been introduced, practiced or demonstrated:

- Develop an understanding of the basic principles of sanitation and safety and to be able to apply them in the foodservice operations.
- Reinforce personal hygiene habits and food handling practices that protects the health of the consumer.
- Value ethical practices in both personal and professional situations.
- Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
- Apply the experience of service-learning to both personal and academic development by becoming involved in community service activities.

**CULN 115 Menu Merchandising (2)**

2 hours lecture per week

(4 hours lecture per week for 8 weeks)

*Prerequisite(s): CULN 111, FSHE 102, consent of instructor.*

*Comment: CULN 115 may be offered as a full semester course or as 8-week modules. CULN 115 was formerly FSHE 120.*

CULN 115 is a study of the factors involved in planning effective menus for a variety of food service operations. It includes the design, format, selection, costing, pricing, and balance of menu items based upon the needs of the target market.

Upon successful completion of CULN 115, the student should be able to:

1. List basic menu planning principles.
2. Identify principles of menu layout and design.
3. Create menu item descriptions following established truth-in-menu guidelines.
4. Apply principles of nutrition to menu development.
5. Determine menu prices utilizing proper cost controls and appropriate technology.
6. Plan a variety of menus i.e. a la carte, cycle, ethnic, holiday, banquet, reception and buffet.
7. Discuss importance of product mix, check average and their impact on profit contribution.
8. Develop a menu layout for a foodservice operation
9. Discuss the availability of Food and Seasonal Menus.
10. Discuss Menu Planning resources (Internet, professional and vendors).

Within this CULN 115 course, the following student learning outcomes will have been introduced, practiced or demonstrated:

- Apply the principles of menu planning and layout to the development of menus for a variety of types of facilities and service
- Value cross-cultural perspectives that will allow them to effectively function in the global community.
- Value ethical practices in both personal and professional situations.
- Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
- Apply the experience of service-learning to both personal and academic development by becoming involved in community service activities.

### **CULN 120 Fundamentals of Cookery (5)**

*1 hours lecture, 13 hours lab per week*

*(2 hours lecture, 26 hours lab per week for 8 weeks)*

*Prerequisite(s): Credit or concurrent enrollment in CULN 111 or consent of instructor or credit in FSHE 102; credit or concurrent enrollment in CULN 112 or consent of instructor or credit in FSHE 103; student must meet with Culinary counselor to check on orientation requirements.*

*Comment: CULN 120 may be offered as a full semester course or as 8-week modules. CULN 120 was formerly FSHE 110.*

CULN 120 covers the fundamental concepts, skills and techniques of cookery. It includes the study of culinary terms and ingredients; cooking theories and procedures for making stocks, soups and sauces; basic cooking methods; handling and preparation techniques for fruits, vegetables, and starches; proper use of recipes, tools, and equipment with special emphasis on knife handling skills.

Upon successful completion of CULN 120, the student should be able to:

1. Demonstrate knife skills, hand tool and equipment operation, emphasizing proper safety techniques.
2. Identify the parts/components of a recipe.
3. Describe and use a standardized recipe.
4. Outline the procedure for writing a standardized recipe.
5. Write a standardized recipe.
6. Identify and use utensils, pots and pans and demonstrate safe practices using stoves, mixers, ovens, etc.
7. Define and describe the sautéing process.
8. Prepare a variety of foods using the sauté techniques.
9. Evaluate the quality of sautéed items.
10. Define and describe the processes of pan-frying and deep-frying.
11. Fry a variety of foods to their proper doneness.
12. Evaluate the quality of fried foods.
13. Define and describe the roasting and baking processes.

14. Compare and contrast roasting to baking, poeiling, smoke-roasting and spit-roasting.
15. Roast meats, poultry, and fish to the correct doneness to develop the best flavor and texture in the finished dish.
16. Evaluate the quality of roasted items.
17. Define and describe the barbecue process.
18. Select and prepare meats and seasonings and barbecue them to the appropriate doneness.
19. Evaluate the quality of barbecued items.
20. Define and describe the process of grilling and broiling.
21. Grill and broil foods to the proper doneness.
22. Evaluate the quality of grilled and broiled items.
23. Define and describe the processes of braising and stewing, noting the similarities and differences.
24. Braise and stew foods to the proper doneness.
25. Evaluate the quality of braised and stewed items.
26. Define and describe the process of shallow-poaching.
27. Prepare shallow-poached foods properly and produce a sauce that incorporates the cooking liquid.
28. Evaluate the quality of shallow-poached items.
29. Define poaching and simmering and correctly identify the temperature range at which each occurs.
30. Poach and simmer foods to the proper doneness.
31. Evaluate the quality of poached and simmered foods.
32. Define and describe the boiling and steaming process.
33. Prepare boiled and steamed foods to the proper doneness.
34. Evaluate the quality of boiled and steamed items.
35. Utilize standard weights and measures to demonstrate proper scaling and measurement techniques.
36. Identify and use herbs, spices, oils and vinegar, condiments, marinades and rubs.
37. Evaluate the quality of herbs, spices, oils, vinegar, condiments, marinades, and rubs.
38. Perform basic fabrication tasks with meat, poultry, seafood and variety meats.
39. Using the basic cooking methods, prepare meat, seafood, poultry, and variety meats to the proper doneness.
40. Evaluate the quality of prepared meats, seafood, poultry, and variety meats.
41. Define stock and describe its uses.
42. Identify different types of stocks.
43. List the basic ingredients needed for making stocks.
44. Describe the functions of the ingredients.
45. Describe the process of making stocks.
46. Prepare a variety of stocks.
47. Evaluate the quality of a properly made stock.
48. Define, describe and explain the purpose of sauces.
49. Identify and prepare the grand sauces.
50. Prepare a variety of non-grand/classical sauces.
51. List the basic ingredients needed for making grand and non-grand sauces.
52. Describe the functions of the ingredients in sauces.
53. Evaluate the quality of a properly made sauce.
54. Define and describe soup and identify its two basic categories.
55. Prepare a variety of soups from each category.
56. Describe the process of making each category of soup.
57. Evaluate the quality of a properly made soup.
58. Identify a variety of fruits, vegetables, starches, legumes and grains.
59. Prepare a variety of fruits, vegetables, starches, legumes and grains using the basic cooking methods.
60. Evaluate the quality of prepared fruits, vegetables, starches, legumes and grains.
61. Define salad dressing and describe its purposes.
62. Identify, define, and describe the types of

salad dressings.

63. Prepare a variety of salad dressings and evaluate the quality of each.
64. Identify a variety of common salad greens.
65. Prepare and dress greens for a salad.
66. Evaluate the quality of properly prepared and dressed green salad.
67. Identify, describe, and prepare a variety of composed salads.
68. Evaluate the quality of composed salads.
69. Identify, and describe the purpose of the elements of a sandwich.
70. Prepare a variety of hot and cold sandwiches.
71. Evaluate the quality of sandwiches.
72. Identify and prepare a variety of breakfast meats.
73. Evaluate the quality of prepared breakfast meats.
74. Describe a variety of preparation techniques used in egg cookery.
75. Cook eggs using a variety of preparation techniques.
76. Evaluate the quality of prepared eggs.
77. Identify and prepare a variety of breakfast batter products.
78. Evaluate the quality of prepared breakfast batter products.

Within this CULN 120 course, the following student learning outcomes will have been introduced, practiced or demonstrated:

- Develop skills in knife, tool and equipment handling and apply principles of food preparation to produce a variety of food products.
- Operate equipment safely and correctly.
- Apply knowledge of laws and regulations relating to safety and sanitation in the kitchen.
- Value ethical practices in both personal and professional situations.
- Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
- Apply the experience of service-learning to both personal and academic development by becoming involved in community service activities.

### **CULN 130 Intermediate Cookery (5)**

*1 hour lecture, 13 hours lab per week*

*(2 hours lecture, 26 hours lab per week for 8 weeks)*

*Prerequisite(s): CULN 120, FSHE 110, consent of instructor.*

*Comment: CULN 130 may be offered as a full semester course or as 8-week modules. CULN 130 was formerly FSHE 119.*

CULN 130 focuses on the application of basic concepts, skills, and techniques in fundamentals of cookery to short order cookery, including breakfast cookery, as found in coffee shops, snack bars, and other quick service outlets, with emphasis in American Regional Cuisine; to quantity food production with emphasis on menu development, recipe standardization and conversion, and quality control. Includes experience in both quantity food production and short-order cookery.

Upon successful completion of CULN 130, the student should be able to:

1. Demonstrate knife skills, hand tool and equipment operation, emphasizing proper safety techniques.
2. Identify the parts/components of a recipe.
3. Describe and use a standardized recipe.
4. Outline the procedure for writing a standardized recipe.
5. Write a standardized recipe.
6. Identify and use utensils, pots and pans and demonstrate safe practices using stoves, mixers, ovens, etc.
7. Define and describe the sautéing process.
8. Prepare a variety of foods using the sauté techniques.
9. Evaluate the quality of sautéed items.
10. Define and describe the processes of pan-frying and deep-frying.
11. Fry a variety of foods to their proper doneness.
12. Evaluate the quality of fried foods.
13. Define and describe the roasting and baking processes.
14. Compare and contrast roasting to baking, poeiling, smoke-roasting and spit-roasting.
15. Roast meats, poultry, and fish to the

correct doneness to develop the best flavor and texture in the finished dish.

16. Evaluate the quality of roasted items.
17. Define and describe the barbecue process.
18. Select and prepare meats and seasonings and barbecue them to the appropriate doneness.
19. Evaluate the quality of barbecued items.
20. Define and describe the process of grilling and broiling.
21. Grill and broil foods to the proper doneness.
22. Evaluate the quality of grilled and broiled items.
23. Define and describe the processes of braising and stewing, noting the similarities and differences.
24. Braise and stew foods to the proper doneness.
25. Evaluate the quality of braised and stewed items.
26. Define and describe the process of shallow-poaching.
27. Prepare shallow-poached foods properly and produce a sauce that incorporates the cooking liquid.
28. Evaluate the quality of shallow-poached items.
29. Define poaching and simmering and correctly identify the temperature range at which each occurs.
30. Poach and simmer foods to the proper doneness.
31. Evaluate the quality of poached and simmered foods.
32. Define and describe the boiling and steaming process.
33. Prepare boiled and steamed foods to the proper doneness.
34. Evaluate the quality of boiled and steamed items.
35. Utilize standard weights and measures to demonstrate proper scaling and measurement techniques.
36. Identify and use herbs, spices, oils and vinegar, condiments, marinades and rubs.
37. Evaluate the quality of herbs, spices, oils, vinegar, condiments, marinades, and rubs.

38. Perform basic fabrication tasks with meat, poultry, seafood and variety meats.
39. Using the basic cooking methods, prepare meat, seafood, poultry, and variety meats to the proper doneness.
40. Evaluate the quality of prepared meats, seafood, poultry, and variety meats.
41. Define stock and describe its uses.
42. Identify different types of stocks.
43. List the basic ingredients needed for making stocks.
44. Describe the functions of the ingredients.
45. Describe the process of making stocks.
46. Prepare a variety of stocks.
47. Evaluate the quality of a properly made stock.
48. Define, describe and explain the purpose of sauces.
49. Identify and prepare the grand sauces.
50. Prepare a variety of non-grand/classical sauces.
51. List the basic ingredients needed for making grand and non-grand sauces.
52. Describe the functions of the ingredients in sauces.
53. Evaluate the quality of a properly made sauce.
54. Define and describe soup and identify its two basic categories.
55. Prepare a variety of soups from each category.
56. Describe the process of making each category of soup.
57. Evaluate the quality of a properly made soup.
58. Identify a variety of fruits, vegetables, starches, legumes and grains.
59. Prepare a variety of fruits, vegetables, starches, legumes and grains using the basic cooking methods.
60. Evaluate the quality of prepared fruits, vegetables, starches, legumes and grains.
61. Define salad dressing and describe its purposes.
62. Identify, define, and describe the types of salad dressings.
63. Prepare a variety of salad dressings and evaluate the quality of each.

64. Identify a variety of common salad greens.
65. Prepare and dress greens for a salad.
66. Evaluate the quality of properly prepared and dressed green salad.
67. Identify, describe, and prepare a variety of composed salads.
68. Evaluate the quality of composed salads.
69. Identify, and describe the purpose of the elements of a sandwich.
70. Prepare a variety of hot and cold sandwiches.
71. Evaluate the quality of sandwiches.
72. Identify and prepare a variety of breakfast meats.
73. Evaluate the quality of prepared breakfast meats.
74. Describe a variety of preparation techniques used in egg cookery.
75. Cook eggs using a variety of preparation techniques.
76. Evaluate the quality of prepared eggs.
77. Identify and prepare a variety of breakfast batter products.
78. Evaluate the quality of prepared breakfast batter products.

Within this CULN 130 course, the following student learning outcomes will have been introduced, practiced or demonstrated:

- Develop skills in knife, tool and equipment handling and apply principles of food preparation to produce a variety of food products.
- Operate equipment safely and correctly.
- Apply knowledge of laws and regulations relating to safety and sanitation in the kitchen.
- Value ethical practices in both personal and professional situations.
- Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
- Apply the experience of service-learning to both personal and academic development by becoming involved in community service activities.

### **CULN 150 Fundamentals of Baking (5)**

*1 hour lecture, 13 hours lab per week*

*(2 hours lecture, 26 hours lab per week for 8 weeks)*

*Prerequisite(s): Credit or concurrent enrollment in CULN 111 or consent of instructor or credit in FSHE 102; credit or concurrent enrollment in CULN 112 or consent of instructor or credit in FSHE 103; student must meet with Culinary counselor to check on orientation requirements.*

*Comment: CULN 150 may be offered as a full semester course or as 8-week modules. CULN 150 was formerly FSHE 122.*

CULN 150 is an introduction to the fundamental concepts, skills, and techniques of basic baking. Special emphasis is placed on the study of ingredient functions, product identification, weights, measures, and proper use and maintenance of bakeshop tools and equipment. Students are assigned to stations each day and are required to apply the basic baking concepts and techniques in preparing items such as quick breads, yeast breads, rolled-in dough, pâte à choux, pies, cakes, cookies, puddings and pastry creams.

Upon successful completion of CULN 150, the student should be able to:

1. Define baking terms.
2. Identify equipment and utensils used in baking and discuss proper use and care.
3. Demonstrate proper selection of equipment and utensils for specific application.
4. Identify ingredients used in baking.
5. Demonstrate proper scaling and measurement techniques.
6. Apply basic math skill to recipe conversions.
7. Describe properties and list function of various ingredients.
8. Define and describe the steps in the production of yeast-leavened breads.
9. Prepare a variety of yeast-leavened breads.
10. Evaluate the quality of yeast-leavened breads.
11. Define and describe quick-breads and the mixing methods utilized to produce them.
12. Prepare and evaluate the quality of a variety of quick-breads.
13. Define and describe the various types of pies and tarts and the mixing methods utilized to produce them.

14. Prepare a variety of pies and tarts.
  15. Evaluate the quality of prepared pies and tarts.
  16. Define and describe the variety of cookie types and the mixing methods utilized to produce them.
  17. Produce a variety of types of cookies.
  18. Evaluate the quality of prepared cookies.
  19. Define and describe the variety of cake types and the mixing methods utilized to produce them.
  20. Prepare a variety of cakes.
  21. Evaluate the quality of prepared cakes.
  22. Demonstrate basic icing and decorating techniques.
  23. Evaluate the quality of iced and decorated cakes.
  24. Define and describe the variety of laminated dough's.
  25. Explain the process of lamination as it applies to dough's.
  26. Prepare a variety of laminated dough products.
  27. Evaluate the quality of prepared laminated dough products.
  28. Define and describe pate choux, its uses, method of preparation, baking and finishing.
  29. Prepare a variety of pate choux products.
  30. Evaluate the quality of prepared pate choux products.
  31. Define and describe meringues, its various types, uses, and methods of preparation.
  32. Prepare a variety of meringues.
  33. Evaluate the quality of prepared meringues.
  34. Define and describe creams, custards, puddings and related sauces.
  35. Describe the various types of uses of and preparation methods of various creams, custards, puddings and related sauces.
  36. Prepare a variety of creams, custards, puddings and related sauces.
  37. Evaluate the quality of prepared creams, custards, puddings and related sauces.
  38. Define and describe the various types, uses, and methods of preparation of dessert sauces.
  39. Prepare a variety of dessert sauces.
  40. Evaluate the quality of prepared dessert sauces.
  41. Discuss the application of mixes and other value added products.
  42. Define and describe a variety of fillings and toppings for pastries and baked goods.
  43. Discuss methods of preparation and finishing techniques for various fillings and toppings.
  44. Prepare a variety of fillings and toppings for pastries and baked goods.
  45. Demonstrate the presentations of baked goods and desserts.
  46. Evaluate the quality of presentations of baked goods and desserts.
  47. Discuss nutritional concerns as they apply to baking.
  48. Discuss recipe modification to create more nutritionally beneficial baked goods and desserts.
- Within this CULN 150 course, the following student learning outcomes will have been introduced, practiced or demonstrated:
- Apply the fundamentals of baking science to the preparation of a variety of products.
  - Use and care for equipment normally found in the bakeshop or baking area.
  - Value ethical practices in both personal and professional situations.
  - Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
  - Apply the experience of service-learning to both personal and academic development by becoming involved in community service activities.
- CULN 155 Intermediate Baking (5)**  
*1 hours lecture, 13 hours lab per week  
 (2 hours lecture, 26 hours lab per week for 8 weeks)*  
*Prerequisite(s): CULN 150, FSHE 122, consent of instructor.*  
*Comment: CULN 155 may be offered as a full semester course or as 8-week modules. CULN 155 was formerly FSHE 124.*
- CULN 155 includes the study of international culinary terms, ingredient identification, and

safety and sanitation practices. It examines the science of lean and rich yeast dough products, flat breads, breakfast goods and a wide variety of yeast breads. It analyzes the fine points of taste, texture, and appearance that distinguish fine breads from good breads and expands the knowledge and the application to laminated dough products such as classical French puff pastry dough, croissants and Danish pastries. Molding "non" yeast dough will be covered to create simple bread display pieces. It focuses on techniques and presentations creating a variety of layer cakes, tortes, tarts, tartlets, buttercream and icings. A variety of international and popular American pies and baked custards desserts with emphasis on egg cookery will also be covered. Student will continue with theories and skill development producing a variety friandises (fancy cookies) for retail sale, using different makeup techniques and evaluate finished product and presentation.

Upon successful completion of CULN 155, the student should be able to:

- Define and describe the various types of chocolate.
- Temper chocolate.
- Prepare chocolate confections and chocolate display pieces.
- Evaluate the quality of chocolate, chocolate confections, and chocolate display pieces.
- Develop advanced decorating and finishing techniques for cakes.
- Evaluate the quality of decorated cakes.
- Define and describe ice creams, sorbet, and other frozen desserts.
- Discuss the methods of preparation of ice creams, sorbets, and other frozen desserts.
- Prepare a variety of ice creams, sorbets, and other frozen desserts.
- Evaluate the quality of prepared ice creams, sorbets, and other frozen desserts.
- Define and describe hot and cold soufflés.
- Discuss the methods of preparation of hot and cold soufflés.
- Prepare hot and cold soufflés.
- Evaluate the quality of prepared hot and cold soufflés.
- Define and describe marzipan.
- Discuss the method of preparation for marzipan.
- Prepare marzipan and use it in the decoration

of cakes, making of confections, or modeling of fruits or figurines.

- Evaluate the quality of prepared marzipan items.
- Define and describe various types of candies.
- Discuss the method of preparation of various types of candies.
- Prepare various types of candies.
- Evaluate the quality of various types of prepared candies.
- Discuss methods of preparation for cooking sugar and isomalt that is to be used for candies or sugar display pieces.
- Cook sugar and isomalt for basic sugar display work.
- Prepare sugar and/or Isomalt display pieces.
- Evaluate the quality of cooked sugar and isomalt and prepared sugar display pieces.
- Define and describe pastillage and royal icing.
- Discuss the methods of preparation for pastillage and royal icing.
- Prepare pastillage and royal icing.
- Prepare display pieces using pastillage and royal icing.
- Evaluate the quality of pastillage, royal icing and prepared display pieces.

Within this CULN 155 course, the following student learning outcomes will have been introduced, practiced or demonstrated:

- Develop skills in more advanced decorating techniques and more complex preparations of pastry, confections and dessert products.
- Value ethical practices in both personal and professional situations.
- Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
- Apply the experience of service-learning to both personal and academic development by becoming involved in community service activities.

**CULN 160 Dining Room Service/Stewarding Procedures (5)**

2 hours lecture, 26 hours lab per week for 8 weeks

Comment: CULN 160 was formerly FSHE 128.

CULN 160 is the study and application of the variety of service styles and techniques practiced by industry with special emphasis on the importance of the relationship coordination between the front and the back of the house. It includes the study of stewarding procedures and the study of the principles and practices of profitable alcoholic beverage operations.

Upon successful completion of CULN 160, the student should be able to:

- Demonstrate the general rules of table settings and service.
- Describe American, English, French and Russian Service.
- Discuss service methods such as banquets, buffets and catering and a la carte.
- Describe the functions of dining service personnel.
- Discuss training procedures for dining room staff.
- Discuss procedures for processing guest checks using current technology.
- Demonstrate an understanding of guest service and customer relations, including handling of difficult situations and accommodations for the disabled.
- Explain inter-relationships and work flow between dining room and kitchen operations.
- Discuss sales techniques for service personnel including menu knowledge and suggestive selling.
- Identify local, state and federal laws pertaining to the purchase and service of alcoholic beverages.
- Discuss the basic production process for distillation and fermentation.
- Distinguish wines by grape and/or other fruit variety, country, growing region and production process.
- Evaluate the relationship of beverages to food.
- Identify and discuss the presentation and

service of alcoholic, non-alcoholic and de-alcoholized beverages, including coffee and tea.

- Identify equipment and glassware used for beverage preparation and service.
- Discuss opening and closing procedures of a beverage operation.
- Discuss the fundamentals and importance of responsible alcohol service
- Identify levels of intoxication and methods to control excessive consumption by guests
- Discuss Dram Shop Act and liquor law liability.

Within this CULN 160 course, the following student learning outcomes will have been introduced, practiced or demonstrated:

- Differentiate the varieties of alcoholic and non-alcoholic beverages and assess their affinity to foods.
- Explain laws and procedures related to responsible alcoholic service.
- Value ethical practices in both personal and professional situations.
- Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
- Apply the experience of service-learning to both personal and academic development by becoming involved in community service activities.

**CULN 205 Food Service Administration (8)**

18 hours lecture, 12 hours business lab per week for 5 weeks

Prerequisite(s): Email access; sponsored active duty military personnel; Culinary Specialist Rating, pay grades E-6 to E-9, must have remaining enlistment of 24 months.

Recommended Preparation: Keyboarding

Comment: CULN 205 may not be audited. CULN 205 may not be taken credit/no credit. CULN 205 was formerly FSHE 231.

CULN 205 Food Service Administration provides personnel management techniques to better equip Mess Management Specialists in pay grades E-6 through E-9 in the operation of enlisted dining facilities afloat/ashore and officer's dining facilities afloat. Topics covered are math computation, menu planning, logistics endurance, enlisted dining

facility record keeping, private mess operation, budgeting, subsistence waste/fraud/abuse, 3-M/P MS Navy Occupational Safety and Health (NAV OSH) program, COSAL and introduction to food service automation.

Upon successful completion of CULN 205, the student will be able to:

#### Module I: Personal Hygiene, Microbiology, Food Preparation & HACCP

- List the health requirements for medical screening, exemptions, and reinstatements for work.
- Identify proper personal hygiene practices.
- Describe proper hand washing procedures.
- List the different types of inspections.
- Explain the importance of microbiology as it relates to food service.
- Describe the three different types of hazards that may cause food borne illnesses.
- Explain the role the chain of infection plays in a food borne illness outbreak.
- Identify the most significant causative agents of food borne illnesses.
- Describe the critical control points necessary to control microbiological growth and prevent food borne illness.
- Describe the proper food preparation procedures for raw animal products, eggs, fruits and vegetables, and home cooked food.
- State the time temperature requirements for advanced preparation of foods, leftovers, and thawing.
- Describe the proper food serving requirements.
- Summarize background information and terminology relating to HACCP.
- Describe the hazard analysis process.
- State criteria used to determine a Critical Control Point and Critical Limits.
- Describe the flow of food within a facility and how it relates to a HACCP plan.
- Explain various methods to monitor a HACCP plan and associated record-keeping responsibilities.
- Explain the process of verifying the HACCP process.
- Write an HACCP plan given a sample menu.

#### Module II: Inspection, Pest Control, Facilities & Safety

- Define the Prime Vendor concept.
- List the types of food inspections.
- Explain the criteria used to accept or reject perishable subsistence items.
- Explain the criteria used to accept or reject semi-perishable subsistence items.

- Describe the general storage requirements for subsistence items.
- Identify steps involved with cockroach management in a food service facility.
- Describe the important aspects of stored pest management products in a food service facility.
- Explain the importance of rodent management in a food service facility.
- Describe the importance of fly management in a food service facility.
- Describe the six steps of the ware washing process.
- Identify proper procedures to use when washing food service utensils and equipment by manual ware-washing process.
- Explain proper procedures to use when washing food service utensils and equipment by automatic ware washing machine process.
- Describe proper maintenance and cleaning procedures for automatic ware washing machines.
- Identify procedures required to clean and sanitize equipment that must be cleaned in place.
- Explain proper procedures to be employed in cleaning the general dining facility.
- Describe the proper methods to store cleaning supplies.
- List general safety precautions necessary to maintain a safe working environment.
- Explain inherent safety hazards associated with food service operations and equipment.
- Identify specific safety precautions associated with sharp blades, mechanical, electrical, and physical hazards including heat and noise.
- Describe potential of fire hazards within the food service operation and methods of prevention and control.

#### Module III: Nutrition

- Define the abbreviations and terms associated with nutrition/healthy choices.
- Describe the major components of nutrition.
- Describe the major food groups of the Food Guide Pyramid.
- Describe the use of dietary guidelines.
- Describe methods for avoiding too much fat.
- Identify methods of food preparation for enhanced nutritional value.
- Identify use of Low-cal/Low-fat food items.
- Identify ways to disseminate information about nutritional value/choices of food.

#### Module IV: Navy References, Equipment, Pre-deployment & Private Mess Record keeping

- Identify the organization, content, and use of publications and instructions used.

- Describe the procedures for requesting assist visits.
- Identify maintenance responsibilities.
- Identify temperature logs and their uses.
- Describe the procedures and documentation to report inoperable equipment status.
- Discuss effective COSAL Support.
- Discuss simple maintenance.
- Discuss phase replacement.
- Discuss ship's repair and availability (SRA) upkeep and overhaul.
- Determining requirements in accordance with Food Service Administration.
- Determine who your suppliers will be.
- Special menus.
- Catering special events.
- Determine requirements for special events and major deployments in accordance with Food Service Administration.
- Identify the purpose and authority for establishing a private mess.
- Identify the types of private messes.
- Identify the function and responsibilities of key personnel in private messes.
- Identify sources and requisitioning procedures.
- Prepare procurement documents.
- Identify a mess share.
- Identify mess billing procedures.
- Identify the procedures to pay for guest meals.
- Identify accounting records.
- Identify procedures for meals sold for cash.
- Identify the procedures for utilization of non-appropriated funds.
- Identify the procedures for acquiring operating capital.
- Prepare accounting records in accordance with Food Service Administration.
- Prepare mess bills.
- Compute the value of rations to be commuted to the mess and prepare documents.

#### Module V: Recipe Conversion & Menu Planning

- Define abbreviations and terms as required to understand the task or function of Food service Operations and Management.
- Describe the procedures for adjusting Armed Forces recipes using required formulas.
- Adjust Armed Forces recipes by using recipe adjustment formulas as required to understand Food Service Operation and Management.
- Describe the procedures for developing or analyzing cycle menu.
- Describe the procedures for preparing the menu draft. (NAVSUP Form 1092)
- Describe the procedures used to develop a load out plan.

- Describe the procedures used to calculate amount of food to prepare using past acceptability factors.
- Describe the process involved in implementing menu changes.
- Describe the procedures for special meals / feeding situations.
- Prepare the Menu Draft. (NAVSUP Form 1092)
- Prepare a cycle menu.
- Compute/calculate percentage of fat calories in individual food items.
- Compute/calculate approximate amount of calories in a given menu.
- Evaluate a menu for nutritional value.
- Describe the procedures for preparing the Food Preparation Worksheet. (NAVSUP Form 1090)
- Prepare Food Preparation Worksheet. (NAVSUP form 1090)

#### Module VI: Instructor Techniques & Training Responsibilities

- List the characteristics of good instructor techniques.
- List the characteristics of adult learners.
- Distinguish between passive and active learning.
- Describe the different types of instructional methods.
- Identify procedures used in writing a lesson plan.
- State the amount and frequency of training required.
- State the responsibilities/knowledge of the person in charge.
- State the responsibilities/knowledge of food service personnel.
- Establish a facility-training program.

#### Module VII: Financial Management, FSMS & Auditing

- Identify the procedures and for preparation and use of records / documents for the preparation of the monthly financial reports.
- Identify the procedures for the preparation and use of the monthly General Mess summary Document. (NAVSUP Form 1359)
- Complete the following supporting internal control documents and/or records for the preparation of the General Mess summary Documents.
- Prepare General Mess Summary Document. (NAVSUP form 1359)
- Describe the function and responsibilities of support activities.
- Describe the hardware system components of a FSMS system

- Identify which personnel should have access to specific FSM modules.
- Explain the logon procedures.
- Explain the procedures for signing off the FSM System.
- Access and perform typical FSM transactions.
- Perform a daily restoration of the Food Service Management System files.
- Perform a system backup.
- Perform a system restoration.
- Perform the procedures for processing the end of the month accounting documents.
- Explain the procedures used to fill out a NAVSUP audit sheet
- Fill out the NAVSUP audit sheet.
- Identify the procedures for the preparation and use of survey documents.
- Determine the procedures for the preparation and use of substantiating documents for surveys.
- Prepare survey and substantiating documents.
- Identify the types and frequencies of inventories.
- Identify the purpose and use of inventory documentation.
- Perform inventories.
- Prepare inventory documents.
- Explain what is done to documents after an inventory.

#### Module VIII: Procurement, Receipts, Issues, Transfers & Inventories

- Identify internal control procedures, utilized to document procurement of subsistence items.
- Identify reorder processing utilizing publications and instructions.
- Identify the procedures for preparation and use of procurement documents.
- Administer load out of subsistence items.
- Post subsistence items to Requisition Log (NAVSUP Form 1336) up to source.
- Describe the preparation and receiving procedures for subsistence items.
- Identify physical receipt procedures of subsistence items.
- Describe the preparation procedures to receive subsistence items.
- Describe the procedures used in storerooms to secure for sea.
- Explain First-In-First-Out (FIFO) system of stowing subsistence items.
- Explain document distribution at time of receipt.
- Post receipts to internal control documents.
- Explain the processing of receipt documents of subsistence items.
- Describe receipt posting to internal control documents.
- Identify the use, preparation and posting procedures of internal control records.
- Maintain supporting internal control records for the preparation of monthly financial report.
- Identify the procedures for preparation and use of transfer document.
- Identify subsistence transfer preparation procedures.
- Explain the process of transferring subsistence items.
- Review Records Keeper's responsibilities in regards to transfers.

#### **CULN 207 Principles of Culinary Competition I (5)**

*2 hours lecture, 26 hours lab per week for 8 weeks*  
*Prerequisite(s): A grade of "C" or higher in CULN 120 (formerly FSHE 110); minimum GPR of 2.0; successful completion of a practical skills exam; consent of instructor.*

*Comment: CULN 207 may not be audited. CULN 207 may not be taken credit/no credit.*

CULN 207 provides students with the knowledge, skill, techniques, managerial principles, and attitudes necessary to compete in a mock salon or state American Culinary Federation (ACF) culinary competition. Students should anticipate spending a minimum of 10 additional hours each week outside of class, both practicing their skills and fiscal responsibility required for a competition. If selected to participate in an ACF sanctioned competition, junior membership in the American Culinary Federation will be required. Students will begin to develop an ePortfolio of the entire course experience with a detailed overview of the stages leading to competition.

Upon successful completion of CULN 207, the student should be able to:

- Prepare to enter a mock salon or state ACF culinary competition according to the prerequisites of culinary competition and ACF membership requirements.
- Assess the amount of effort and training required to participate in a mock salon or state ACF culinary competition, identifying

quality food displays through lecture and hands-on lab experiences.

- Analyze the components of a properly balanced and designed food display.
- Work in a team environment.
- Design and serve a hot food display for a mock salon or state ACF culinary competition skills salon, cooking phase and cold food presentation as defined by the ACF Student Team Competition Manual: 1) serving methods and presentation; 2) portion size and nutritional balance and sanitation procedures; 3) ingredient compatibility; 4) creativity and practicality; 5) flavor, taste, texture and, doneness; 6) classical presentation; 7) classical cooking methodology and procedures; 8) portion size; 9) taste; 10) flavor progression, theme, variety of basic cooking skills and techniques; 11) menu composition and progression of courses; and 12) storage, shelf life and transportation of foods and centerpieces.
- Plan the logistical requirements to compete at a remote location including the aspects of 1) organization; 2) sanitation; 3) teamwork and work flow; 4) cooking techniques and skills; 5) butchery skills; and 6) time management.
- Plan and design a cold food platter that demonstrates all requirements for cold food displays including 1) serving methods; layout and presentation, implementing the strong line/weak line theories; 2) garnishes; 3) ingredient compatibility; 4) competencies; 5) workmanship; and 6) portion and nutritional size.

### **CULN 208 Principles of Culinary Competition II (5 credits)**

*1 hour lecture, 13 hours lab per week*

*Prerequisite(s): A grade of "C" or higher in CULN 207; minimum GPR of 2.0; consent of instructor.*

*Comment: CULN 208 may not be audited. CULN 208 may not be taken credit/no credit.*

CULN 208 prepares students with the knowledge, skill, techniques, managerial principles and attitudes

necessary to compete in a regional and/or national American Culinary Federation (ACF) culinary competition. This course is required for all those wishing to participate in an ACF culinary hot food competition. Participation by all of the candidates for the College's Culinary Team is required. Students should anticipate spending 10-15 additional hours each week outside of class both practicing their skills and fiscal responsibility required for the regional competition. If the regional competition is won, students should anticipate spending an additional 15-20 hours per week from the ending date of this course through the date of the ACF National Convention in July. If selected to participate in an ACF sanctioned competition, junior membership in the American Culinary Federation will be required. Students will participate in the planning and implementation of a mock culinary competition which will be located at an unannounced offsite location. Students will develop an ePortfolio of the entire course experience with a detailed overview of the stages leading to competition(s).

Upon successful completion of CULN 208, the student should be able to:

- Compete in a regional and/or national ACF culinary competition according to the prerequisites of culinary competition and ACF membership requirements.
- Plan, implement and participate in a regional and/or national ACF competition at an offsite location.
- Assess and apply the training required in regional and/or national ACF culinary competition, identifying quality food displays through lecture and hands-on lab experiences.
- Analyze and apply the components of a properly balanced and designed food display for a regional and/or national ACF culinary competition.
- Work in a team environment.
- Design, practice, implement and participate in an ACF regional competition skills salon, cooking phase and cold food presentation as defined by the ACF Student Team Competition Manual: 1) serving methods and presentation; 2) portion size and nutritional balance and sanitation procedures;

3) ingredient compatibility; 4) creativity and practicality; 5) flavor, taste, texture, and doneness; 6) classical presentation; 7) classical cooking methodology and procedures; 8) portion size; 9) taste; 10) flavor progression, theme, variety of basic cooking skills and techniques.; 11) menu composition and progression of courses; and 12) storage, shelf life and transportation of foods and centerpieces.

- Plan and implement the logistical requirements to compete at a remote location including the aspects of 1) organization; 2) safety and sanitation; 3) teamwork and work flow; 4) cooking techniques and skills; 5) butchery skills; 6) time management; 7) purchasing, receiving and storage; 8) packing and shipping; and 9) travel arrangements to include transportation, lodging, food and beverage.
- Plan, design and create a cold food platter that demonstrates all requirements for cold food displays including 1) serving methods, layout and presentation, implementing the strong line/weak line theories; 2) cooking fundamentals (garnishes); 3) ingredient compatibility, 4) competencies; 5) workmanship; and 6) portion and nutritional size.
- Conduct a skills and attributes inventory.
- Formulate and institute a three phase action plan.
- Practice and solicit feedback.
- Apply techniques, technical skills and other functions of food presentations.

### **CULN 221 Continental Cuisine (5)**

*2 hours lecture, 26 hours lab per week for 8 weeks*

*Prerequisite(s): A grade of "C" or higher in CULN 130, or a grade of "C" or higher in FSHE 119, or consent of instructor/department chairperson.*

*Comment: CULN 221 was formerly FSHE 212.*

CULN 221 focuses on the expansion of competencies gained in both the Fundamentals of Cookery and Intermediate Cookery courses, emphasizing creativity and the refining and perfecting of skills

and techniques acquired; specializing cooked-to-order dishes typically served in hotels and fine dining restaurants with special emphasis on the classical cuisines. The preparation and presentation of Continental and Mediterranean cuisine items for American, French, Russian and Buffet service will be covered.

Upon successful completion of CULN 221, the student should be able to:

- Demonstrate knife skills, hand tool and equipment operation, emphasizing proper safety techniques.
- Identify and use utensils, pots, and pans.
- Demonstrate safe practices using equipment such as stoves, mixers, and ovens.
- Define and describe the sautéing process.
- Prepare a variety of foods using the sauté techniques.
- Evaluate the quality of sautéed items.
- Define and describe the processes of pan-frying and deep-frying.
- Fry a variety of foods to their proper doneness.
- Evaluate the quality of fried foods.
- Define and describe the roasting and baking processes.
- Roast meats, poultry, and fish to the correct doneness to develop the best flavor and texture in the finished dish.
- Evaluate the quality of roasted items.
- Define and describe the process of grilling and broiling.
- Grill and broil foods to the proper doneness.
- Evaluate the quality of grilled and broiled items.
- Define and describe the processes of braising and stewing, noting the similarities and differences.
- Braise and stew foods to the proper doneness.
- Evaluate the quality of braised and stewed items.
- Define poaching and simmering and correctly identify the temperature range at which each occurs.
- Poach and simmer foods to the proper doneness.

- Evaluate the quality of poached and simmered foods.
  - Define and describe the boiling and steaming process.
  - Prepare boiled and steamed foods to the proper doneness.
  - Evaluate the quality of boiled and steamed items.
  - Identify and use herbs, spices, oils and vinegar, condiments, marinades and rubs.
  - Evaluate the quality of herbs, spices, oils, vinegar, condiments, marinades, and rubs.
  - Perform basic fabrication tasks with meat, poultry, seafood and variety meats.
  - Using the basic cooking methods, prepare meat, seafood, poultry, and variety meats to the proper doneness.
  - Evaluate the quality of prepared meats, seafood, poultry, and variety meats.
  - Identify different types of stocks.
  - List the basic ingredients needed for making stocks.
  - Describe the functions of the ingredients.
  - Describe the process of making stocks.
  - Prepare a variety of stocks.
  - Evaluate the quality of a properly made stock.
  - Define, describe and explain the purpose of sauces.
  - Describe the functions of the ingredients in sauces.
  - Evaluate the quality of a properly made sauce.
  - Evaluate the quality of a properly made soup.
  - Identify a variety of fruits, vegetables, starches, legumes, and grains.
  - Prepare a variety of fruits, vegetables, starches, legumes, and grains using the basic cooking methods.
  - Evaluate the quality of prepared fruits, vegetables, starches, legumes and grains.
  - Prepare a variety of salad dressings and evaluate the quality of each.
  - Prepare and dress greens for a salad.
  - Evaluate the quality of properly prepared and dressed green salad.
  - Identify, describe, and prepare a variety of composed salads.
  - Evaluate the quality of composed salads.
  - Discriminate the difference in menu items between the various Continental and Mediterranean cuisines.
  - Explain the difference in plate presentations between the various Continental and Mediterranean cuisines.
  - Prepare an assortment of appetizers, soups, salads, entrees, side dishes and desserts associated with the cuisines of a variety of Continental and Mediterranean countries.
  - Demonstrate good personal hygiene and health habits in a laboratory setting.
  - Demonstrate acceptable procedures when preparing potentially hazardous foods to include time/temperature principles.
  - Practice organizational and preparation (mise en place) techniques as part of commercial food preparation.
  - Demonstrate an understanding and acceptance of the generally accepted standards of professionalism and adhere to the established dress code.
- Within this CULN 221 course, the following student learning outcomes will have been introduced, practiced or demonstrated:
- Develop skills in knife, tool and equipment handling and apply principles of food preparation to produce a variety of food products.
  - Operate equipment safely and correctly.
  - Apply knowledge of laws and regulations relating to safety and sanitation in the kitchen.
  - Value cross-cultural perspectives that will allow them to effectively function in the global community.
  - Value ethical practices in both personal and professional situations.
  - Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
  - Apply the experience of service-learning to both personal and academic development by becoming involved in community service activities.

**CULN 222 Asian/Pacific Cuisine (5)**

*2 hours lecture, 26 hours lab per week for 8 weeks*  
*Prerequisite(s): A grade of "C" or higher in CULN 130 or a grade of "C" or higher in FSHE 119.*

*Recommended Preparation: A grade of "C" or higher in CULN 240 or a grade of "C" or higher in FSHE 209.*

*Comment: CULN 222 was formerly FSHE 216.*

CULN 222 focuses on basic classical Asian/Pacific cookery techniques that have evolved into the culinary concepts and flavors utilized in Pacific Rim and Hawai'i Regional cuisine. Through the production of the contemporary menu, students learn about cooking techniques, specialty ingredients, seasonal foods, spices, and herbs. Lecture topics include Asian/Pacific history, culture, philosophy, and geographical influences on Hawai'i's menus.

Upon successful completion of CULN 222, the student should be able to:

- Produce appetizers, salads, soups, entrees, side dishes, and desserts using specialty cooking methods and various Asian and Pacific techniques.
- List cooking methods, procedures, preparation techniques, and evaluate various Asian or Pacific stocks, soups, sauces and stir fried dishes in terms of flavor, taste, and quality.
- Identify, use, and evaluate the quality of herbs, spices, oils, vinegars, condiments, and ingredients used in Asian and Pacific recipes.
- Prepare vegetable, meat, fish, and poultry utilizing specialty cutting techniques.
- Use and maintain specialized tools and utensils including woks, steamers, cleavers, to prepare Asian and Pacific menus.
- Identify, prepare, and evaluate the quality of seasonal fruits, vegetables, starches, legumes, and grains used in Asian and Pacific recipes.
- Discuss the influence of food history, culture, philosophy, and geography as reflected in Asian and/or Pacific menus.
- Discuss and evaluate the historical and cultural influences that have led to the current development of Pacific Rim and Hawai'i Regional cuisines.
- Set-up a basic *mise en place* that meets industry standards.
- Demonstrate professionalism, including teamwork, work ethics, positive attitude,

responsibility, and dress and grooming, as required by industry standards.

- Apply safety, sanitation, and maintenance guidelines for handling culinary tools, kitchenware, and equipment as required by program operating procedures and government regulations.
- Demonstrate appropriate hygiene, work habits, food handling techniques, safety and sanitation procedures in the production and service of food to the public, as mandated by the State of Hawai'i's Board of Health.

Upon completion of CULN 222, the student will achieve the following student learning outcomes:

- Use specialty knives, tools, and equipment to produce Asian or Pacific menus.
- Apply fundamental Asian or Pacific cooking principles and preparation techniques.
- Operate and maintain kitchen equipment and tools that meet sanitation and safety codes.

Apply safety, sanitation, handling, operation, and maintenance guidelines for handling culinary tools, kitchenware, and equipment as required

- by standard program operational procedures.
- Discuss the value of culinary cultural diversity that will allow students to relate to the international food industry.
- Practice ethical behaviors in personal and professional situations.
- Practice appropriate grooming and dress that reflect the mature work attitude in accordance with industry standards.
- Apply the experience of service learning to both personal and academic development by becoming involved in community service activities.

### **CULN 240 Garde Manger (5)**

*2 hours lecture, 26 hours lab per week for 8 weeks*

*Prerequisite(s): A grade of "C" or higher in CULN 130 (formerly FSHE 119) or consent of instructor/department chairperson.*

*Comment CULN 240 was formerly FSHE 209.*

CULN 240 is a study of the basic garde manger principles with emphasis on the development of skills in the preparation of hors d'oeuvre, appetizers, canapés, and basic garnishes. Items such as aspics, forcemeats, cheeses and decorative centerpieces

along with the various methods of food preservation will also be studied.

Upon successful completion of CULN 252, the student should be able to:

- Identify tools and equipment used in garde manger, emphasizing safety and sanitation procedures.
- Define and describe hors d'oeuvre, appetizers, and canapés.
- Explain the importance of presentation and garnishing for hors d'oeuvre, appetizers, and canapés
- Prepare a variety of hors d'oeuvre, appetizers, canapés and basic garnishes.
- Evaluate the quality of hors d'oeuvre, appetizers, and canapés.
- Define aspic gelee and describe its functions. Demonstrate fundamental skills in the preparation and uses of aspic.
- Evaluate the quality of aspic gelee and items coated with it.
- Define and describe forcemeat and its various forms including pate, terrine, galantine, mousseline, and sausage.
- Prepare and present a variety of forcemeat products.
- Evaluate the quality of forcemeat products.
- Demonstrate food presentation techniques using a variety of plates, platters and trays.
- Evaluate the quality of prepared plates, platters and trays.
- Produce decorative centerpieces (i.e. fruit, vegetable carvings, salt dough, tallow, and ice carvings).
- Define and describe various methods in which food is preserved (i.e. brining, salting, curing, and smoking).
- Prepare foods for preservation and prepare preserved foods.
- Evaluate the quality of preserved foods.
- Define and describe a variety of cheese categories.
- Discuss how various cheeses are made and their uses.
- Use cheese as an ingredient in recipes.
- Taste various cheeses and evaluate their quality.

- Demonstrate good personal hygiene and health habits in a laboratory setting.
- Demonstrate acceptable procedures when preparing potentially hazardous foods to include time/temperature principles.
- Practice organizational and preparation (mise en place) techniques as part of commercial food preparation;
- Demonstrate an understanding and acceptance of the generally accepted standards of professionalism and adhere to the established dress code

Within this CULN 240 course, the following student learning outcomes will have been introduced, practiced or demonstrated:

- Develop skills in producing a variety of cold food products.
- Prepare items appropriate for buffet presentation, including decorative pieces.
- Value cross-cultural perspectives that will allow them to effectively function in the global community.
- Value ethical practices in both personal and professional situations.
- Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
- Apply the experience of service-learning to both personal and academic development by becoming involved in community service activities.

### **CULN 252 Patisserie (5)**

*2 hours lecture, 26 hours of lab per week for 8 weeks*

*Prerequisite(s): A grade of "B" or higher in CULN 155 (formerly FSHE 124) or consent of instructor/department chairperson.*

*Comment: CULN 252 was formerly FSHE 222.*

CULN 252 includes the study of classical patisserie terms, safety and sanitation practices. Emphasis will be placed on hot, cold, and frozen desserts. Contemporary plated desserts, ice cream, sorbet, sherbets, yogurt-based ice cream, compotes and coulis will be introduced. Students will study the broad spectrum of classical and contemporary techniques and presentations in creating popular international desserts from France, Switzerland, Italy,

Austria, and Germany. Topics will include the use of Bavarian cream, ganache, buttercream, mousse filling, chocolate, puff pastry (pâté feuilletée), sugar dough (pâté sucrée) éclair paste (pâté à choux), ribbon cake (biscuit joconde), dacquoise, and other meringue products. The fundamentals of tempering chocolate will be introduced to create chocolate décor and filigree work. Ribbon cake and stencil work to complement dessert presentation will be utilized. Students will be introduced to hot and cold soufflés, French pastries, petits fours, and advanced cake decorating principles.

Upon successful completion of CULN 252, the student should be able to:

- Demonstrate and apply safe standards for personal hygiene that are practiced in the industry.
- Demonstrate and apply safe and sanitary practices in food preparation.
- Define culinary terms commonly used in pastry arts effectively.
- Practice organizational skill (mise en place) techniques as part of commercial food preparation training.
- Identify, use safely, and maintain correctly equipment commonly used in a pastry kitchen.
- Apply mathematical skills and convert recipes accurately.
- Apply technique and skill used for advanced cake decorating methods.
- Evaluate the quality of decorated cakes.
- Apply technique and skill use for stencil paste work for ribbon cake.
- Demonstrate popular puff pastry making methods
- Produce assorted classical puff pastry products.
- Evaluate the quality of prepared puff pastry products.
- Demonstrate chocolate tempering technique, creating advanced chocolate décor and filigree work.
- Prepare, identify, and evaluate meringue based components such as dacquoise and japonaise.
- Prepare, identify and evaluate sponge

based components such as biscuit joconde, ladyfingers, roulades and other sponge products.

- Prepare, identify, and evaluate egg based components such as crème brûlée, crème chiboust, crème diplomat and other pudding products.
- Prepare and identify fruit glaçage, chocolate ganache, coulis, and fresh fruit compote.
- Demonstrate technique and skill used in assembling and presenting contemporary plated desserts.
- Evaluate the quality, originality, and suitability of contemporary plated desserts.
- Prepare an international dessert buffet, using classical specialties from France, Italy, Switzerland, Austria, and Germany.
- Evaluate the balance, proportion, and suitability of an international dessert buffet.
- Define and describe the various production methods of ice cream, sorbet, and other frozen desserts.
- Produce a variety of ice cream, sorbet, and other frozen desserts.
- Create popular ice cream desserts such as; baked Alaska, parfaits, sundaes and coupes.
- Evaluate the quality of prepared ice creams, sorbets, and other frozen desserts.
- Produce a variety of French pastries and petits fours (after dinner confections).
- Define, describe and prepare hot and cold soufflés.
- Evaluate the quality of prepared hot and cold soufflés.
- Demonstrate the skill used in sugar cooking and create simple caramel décor.

Within this CULN 252 course, the following student learning outcomes will have been introduced, practiced or demonstrated:

- Develop skills in more advanced decorating techniques and more complex preparations of plated desserts, French pastries, confections and classical and international dessert products.
- Value ethical practices in both personal and professional situations.
- Practice standards in behavior, grooming and

dress that reflect the mature work attitude expected of industry professionals.

- Apply the experience of service-learning to both personal and academic development by becoming involved in community service activities.

### **CULN 253 Confiserie (5)**

*2 hours lecture, 26 hours lab per week for 8 weeks*

*Prerequisite(s): A grade of "B" or higher in CULN 155 (formerly FSHE 124) or consent of instructor/department chairperson.*

*Comment: CULN 253 was formerly FSHE 224.*

CULN 253 is the study of a variety of traditional and innovative centerpieces. Students will create seasonal centerpieces, using various mediums such as chocolate, royal icing, pastillage, marzipan, nougatine, and sugar products. Principles of preparation and application are presented and applied in the creation of hand-molded marzipan figurines. Student will continue with theory and skill development working with chocolate couverture, using tempering, spraying, coating, molding, and hand dipping applications with special emphasis on French truffles, candies and after-dinner confections. Finished products will be examined, using flavor, texture, color, consistency, creativity, originality and suitability for display exhibit as an evaluation tool.

Upon successful completion of CULN 253, the student should be able to:

- Adhere to the department's daily conduct code.
- Demonstrate and apply safe standards of personal hygiene.
- Demonstrate and apply safe and sanitary practices in food preparation.
- Define international culinary/pastry arts terms effectively.
- Identify, use safely, and maintain correctly specialty hand tools and equipment.
- Design seasonal centerpieces to complement Easter, Mother's Day, Christmas, and other special functions.
- Evaluate the originality, balance in proportion, and suitability for display of seasonal centerpieces.
- Utilize chocolate, pastillage, nougatine, sugar products, and marzipan to create innovative

centerpieces for buffet, sales promotions and a la carte service.

- Identify and describe the characteristics of various types of chocolate/couverture and their uses.
- Demonstrate the technique and skill used for tempering chocolate/couverture, controlling critical temperature zones, using seeding, and tablage methods.
- Demonstrate the technique and skill used for warm chocolate spraying.
- Demonstrate techniques and skills used in creating a nougatine centerpiece, using the proper sequential procedures that include caramelization of sugar and almonds, shaping, cutting, assembling, and decorating.
- Evaluate the originality, balance in proportion, and suitability for display of nougatine centerpiece.
- Discuss the methods of preparation for cooking sugar syrup and commercially available isomalt sugar that is to be used for candies and centerpieces.
- Identify and define the various temperature stages of boiled sugar syrup and isomalt sugar for casting and pulled sugar work.
- Boil sugar syrup and isomalt sugar to various temperature stages to be utilized for casting and pulled sugar work.
- Evaluate the quality and the proper doneness of boiled sugar syrup and isomalt sugar for casting and pulled sugar work.
- Prepare classical French chocolate truffles, pralines, candies and after dinner confections.
- Evaluate the quality and characteristics of French chocolate truffles, pralines, candies, and after-dinner confections.
- Discuss the technique and method how to prepare homemade marzipan paste.
- Evaluate the quality of homemade marzipan paste and commercially available marzipan paste.
- Demonstrate proper technique and skills used making various marzipan figurines, using hand molding and air brushing methods.
- Evaluate the originality, shape, and expression of handmade marzipan figurines.

- Define and describe pastillage and royal icing making methods.
- Demonstrate proper technique and skills used in creating pastillage centerpieces, using the proper sequential procedures that include mixing, shaping, drying, sanding, assembling, painting and/or air brushing.
- Evaluate the pastillage centerpiece based on balanced proportions and suitability as a food display exhibit.

Within this CULN 253 course, the following student learning outcomes will have been introduced, practiced or demonstrated:

- Develop skills in more advanced decorating techniques and more complex preparations of pastry, confections and dessert products.
- Value ethical practices in both personal and professional situations.
- Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
- Apply the experience of service-learning to both personal and academic development by becoming involved in community service activities.

### **CULN 271 Hospitality Purchasing and Cost Control (5)**

*8 hours lecture, 10 hours business lab per week for 8 weeks*

*Prerequisite(s): A grade of "C" or higher in CULN 130, a grade of "C" or higher in FSHE 119, or consent of instructor/department chairperson.*

*Recommended Preparation: Basic computer competency skills.*

*Comment: CULN 271 was formerly FSHE 241.*

CULN 271 is a study of cost control systems as they apply to restaurants, hotels, and other food service operations such as the College's food service complex. It includes experience in the preparation of financial and control related reports, and the analysis of such. It utilizes the practical learning experiences

of the computer laboratory to anchor and reinforce knowledge.

Upon successful completion of CULN 271, the student should be able to:

- Discuss the flow of goods in a foodservice operation.
- Discuss how HACCP practices are addressed in purchasing, receiving, storing, and issuing procedures.
- Describe both formal and informal purchasing methods.
- Analyze the impact of market fluctuations on product cost.
- Discuss the legal and ethical considerations of purchasing.
- Explain the regulations for the inspection and grading of meats, poultry, seafood, eggs, dairy products, fruits, and vegetables.
- Examine both yield and quality grades and the National Association of Meat Purveyors (NAMP) specifications for meats.
- Write a bid specification.
- Evaluate received goods to determine conformity with user specifications.
- Receive and store fresh, frozen, refrigerated, and staple goods.
- Describe the importance of receiving and inspecting product as it enters the facility.
- Conduct yield and quality tests on items such as canned, fresh, frozen, and prepared products.
- Explain the proper receiving and storing of cleaning supplies and chemicals.
- Conduct a yield and cost comparison test of pre-fabricated products and on-premises butchered products.
- Inventory food and non-food items using current technology.
- Explain the procedures for the rotation, costing, and evaluating of stock, including FIFO and LIFO.
- Define and describe par stock.
- Describe the proper procedures for issuing product according to requisition.
- Describe current computerized systems for purchasing and inventory control.

- Perform basic math functions.
  - Calculate and forecast purchase and preparation requirements based on a product's yield on cooking, fabrication, and intangible waste factors.
  - Calculate food costs and percentages with both speed and accuracy
  - Calculate beverage costs and percentages.
  - Calculate labor costs and percentages.
  - Perform recipe yield conversions.
  - Perform the process of recipe costing.
  - Determine selling price of menu items.
  - Perform a make or buy analysis.
  - Define and describe a profit and loss statement and discuss how it is utilized in food-service operations as a tool to determine profitability.
  - Review profit and loss statements to determine profitability.
  - Create a budget utilizing historical information and current situations.
  - Perform calculations using current technology (i.e. computers, calculators, and POS systems).
  - Discuss the Dram Shop Act and liquor law liability.
  - Identify local, state, and federal laws pertaining to the purchase and service of alcoholic beverages.
  - Explain the procedures for implementing internal beverage controls.
  - Demonstrate good personal hygiene and health habits in a laboratory setting.
  - Demonstrate an understanding and acceptance of the generally accepted standards of professionalism and adhere to the established dress code
- Apply knowledge of quality standards and regulations governing food products to the purchasing function.
  - Receive and store food and non-food items properly.
  - Value cross-cultural perspectives that will allow them to effectively function in the global community.
  - Value ethical practices in both personal and professional situations.
  - Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
  - Apply the experience of service-learning to both personal and academic development by becoming involved in community service activities.

Within this CULN 271 course, the following student learning outcomes will have been introduced, practiced or demonstrated:

- Explain laws and procedures related to responsible alcoholic service.
- Perform mathematical functions related to foodservice operations.
- Demonstrate the overall concept of purchasing and receiving practices in quality foodservice operations.