CHEMISTRY

CHEM 100 Chemistry and Man (3) KCC AA/DP and KCC AS/NS
3 hours lecture per week
Prerequisite(s): MATH 25 with a grade of "C" or higher, or placement into higher level math, or one year of high school algebra.
Recommended Preparation: Two years of high school algebra, MATH 103 or higher level mathematics course.

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:

1. Utilize the scientific method of inquiry.
2. Solve metric-to-English conversion problems and vice versa.
3. Convert within the metric system.
4. Solve algebraic equations related to chemistry.
5. Use algebraic and/or dimensional analysis methods to solve chemistry problems.
6. Apply the rules for significant figures to calculations.
7. Classify matter.
8. Convert between temperature scales.
9. Perform calculations related to density, specific gravity, specific heat, kinetic energy, electromagnetic radiation, and chemical bonding.
10. Perform calculations related to the mole concept.
11. Balance a chemical equation.
12. Calculate, when given a balanced chemical equation and the moles of a reactant, the moles of a product produced in the reaction.
13. Calculate, when given a balanced chemical equation and the weight of a reactant, the weight of a product produced in a reaction.
14. Identify the type of chemical bonds possessed by a molecule or compound.
15. Memorize the symbols of 35 elements, 15 polyatomic ions and the prefixes mono- through deca- (i.e. 1 through 10).
16. Describe the atomic structure of the atom at a minimum according to the Bohr Theory.
17. Describe the shape of S and P orbitals.
18. Use the periodic table to delineate for A group atoms the number of protons, neutrons, electrons, number of outer shell electrons, ion charge, ion symbol, the inert gas the ion is isoelectronic with, and final characterization as either a metal, nonmetal, or metalloid.
19. Glean and use information from the periodic table.
20. Calculate the atomic weight of an atom.
21. Describe what occurs during absorption and emission of radiation by molecules and atoms.
22. Distinguish between physical and chemical properties and changes.
23. Distinguish between endothermic and exothermic reactions.
24. Discuss the laws of chemistry.
25. Write formulas for compounds and molecules.
26. Name compounds and molecules.
27. Calculate the percent composition of a compound.
28. Calculate the empirical and molecular formula of a compound.
29. Draw electron-dot structures for molecules.
30. Define an acid and a base.
31. Distinguish between weak and strong acids and bases.
32. Explain chemical equilibrium.
33. Calculate the pH and pOH of a solution.
34. Calculate [H+] or [OH-] given Kw.
35. Explain the relationships between gas solubility and temperature and pressure.
36. Explain the relationship between the solubility of an ionic solid and temperature.
37. 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:

1. Use the metric system and scientific notation.
2. Explain the difference between Ionic, Polar covalent and Non-Polar covalent bonding.
3. Use chemical equations to calculate weight or volume relationships in chemical reactions.
4. Understand and use the mole concept in solving chemical problems.
5. Explain a variety of conceptual models used in describing atomic and molecular structure, chemical bonding and acid-base 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:

1. Demonstrate approved techniques in handling laboratory equipment.
2. Record data accurately and in proper form on the lab report sheets.
3. 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:

1. Describe the phenomenon of orbital hybridization and its usefulness in explaining chemical bonding.
2. Explain isomerization in organic compounds.
3. Explain the phenomenon of optical isomerization.
4. Apply the knowledge obtained in CHEM 151 or 161 to the study of organic chemistry.
5. Explain the differences in physical properties and chemical reactivity between the three classes of hydrocarbons: alkanes, alkenes and alkynes.
6. Explain the differences between the different types of substitution and elimination reactions.
7. Explain the differences in physical properties and chemical reactivity between the following classes of organic compounds: alcohols, carboxylic acids, esters, ethers, aldehydes, and ketones.
8. 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:

1. Demonstrate approved techniques in handling laboratory equipment.
2. Record data accurately and in proper form on lab report sheets.
3. 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 103.
Recommended Preparation: MATH 135.
Comment: CHEM 161 is suitable for students planning careers in science, engineering, nursing, or other areas of study that require a general chemistry course. Normally this course is followed in sequence by CHEM 162. The CHEM 161 course may serve as prerequisite for CHEM 152 in place of CHEM 151. Students who wish to take a lab course should enroll in CHEM 161L.

CHEM 161 is the first course in a two-semester sequence of general chemistry. CHEM 161 introduces the basic principles of chemistry including the metric system, atomic and molecular structure, periodic trends and chemical bonding, the mole concept, writing and balancing chemical equations, stoichiometry and heat of reactions. The course was designed to provide the student with an adequate background in the fundamental concepts of chemistry. Problem solving is emphasized.

Upon successful completion of CHEM 161, the student should be able to:
1. Use the metric system and scientific notation.
2. Explain the differences between Ionic, Polar covalent and Non-Polar covalent bonding.
3. Write the formulas for chemical compounds and molecules.
5. Use chemical equations to calculate weight or volume relationships in chemical reactions.
6. Use the mole concept to solve chemical/stoichiometric problems.
7. Use the concept of chemical equilibrium to solve problems and explain LeChatelier's Principle.
8. Explain a variety of conceptual models use in describing atomic and molecular structure, chemical bonding and acid-base theory.
9. Explain acid-base theory.

CHEM 161L General Chemistry I Lab (1) KCC AA/DY
3 hours lab per week
Prerequisite(s): MATH 103; credit or concurrent enrollment in CHEM 161.
Recommended Preparation: MATH 135.
Comment: Students must have a basic scientific calculator with Log and Ln functions. CHEM 161L may not be audited.

CHEM 161L is an optional laboratory course that accompanies CHEM 161 lecture. Experiments are performed which relate to the lecture material in CHEM 161. The student will develop practical laboratory skills and achieve a satisfactory level of competency in using laboratory equipment. The student will view first-hand some of the chemical principles and laws of chemistry that are discussed in lecture. The student will use the scientific method of inquiry. 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:
1. Utilize laboratory equipment to measure mass, volume, heat of reactions, density and specific gravity, according to published procedures.
2. Perform experiments that demonstrate physical and chemical properties of compounds.
3. Identify and predict the molecular structure of compounds.
4. Record data accurately and in proper form on the lab report sheets.
5. 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; MATH 103.
Recommended Preparation: MATH 135.
Comment: A basic scientific calculator which has Log and Ln functions is needed for CHEM 162.

CHEM 162 introduces additional basic principles of chemistry including kinetics, equilibrium, PH, redox reactions, electrochemistry, acid-base chemistry, gas laws, electrolytes, thermodynamics, and matter and changes of state.

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

1. Calculate an equilibrium constant.
2. Calculate an ionization constant.
3. Calculate a solubility product constant.
4. Show the relationship between equilibrium and ionization constants.
5. Calculate the pH of a weak acid or weak base solution.
6. Calculate a hydrolysis constant.
7. Calculate the pH of a solution undergoing hydrolysis.
8. Use a solubility product constant to determine if precipitation will occur.
9. Explain the difference between voltaic and electrolytic cells.
10. Calculate standard and non-standard cell voltages.
11. Calculate the free energy of a reaction.
12. Explain the relationship between free energy and cell voltage.
13. Calculate the enthalpy for a given chemical reaction using heats of formation of reactants and products.
14. Explain the relationship between free energy, entropy, and enthalpy.
15. Define a chemical solution.
16. Explain how changes in temperature and/or pressure affect the solubility of solids, liquids, and gases in water.
17. Calculate solution concentrations in the following modes: percent, molarity, molality, and normality.
18. Define solute and solvent.
19. Explain how the following factors affect a reaction rate: concentration of reactant, nature of reactant, catalysts, state of subdivision, and temperature.
20. Given data on a table or on a graph, deduce the rate equation for a given chemical reaction.
21. Explain what a catalyst is, how it works, and distinguish between the two types of catalysts.
22. Distinguish between solutions which are strong, weak, or non-electrolytes.
23. Explain how electrolyte solutions conduct an electric current.
24. Relate the types of bonds in a molecule to the type of electrolyte formed.
25. Given the activity series of metals, explain why a reaction will or will not occur.
26. Write the general gas equation.
27. Explain Charles's law, Boyle's Law, and the general gas equation.
28. Use the gas laws in calculations.
29. Explain how the type of chemical bonds in a compound and its molecular weight determine the state of matter at room temperature.
30. Define the following: melting point, boiling point, heat of fusion, heat of vaporization, and specific heat and use any or all of them to calculate the amount of heat needed to bring about a specified change in state of a molecule or compound.

CHEM 162L General Chemistry II Laboratory (1) KCC AA/DY
3 hours lab per week
Prerequisite(s): MATH 103, CHEM 161, CHEM 161L, and credit or concurrent enrollment in CHEM 162.
Recommended preparation: MATH 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:

1. Demonstrate approved techniques in handling laboratory equipment for pH measurements, kinetics, titration, and thermochemistry.
2. Record data accurately and in proper form on the lab report sheets.
3. Use measurements to calculate descriptive properties of matter such as: ionization constants, solubility product constants, pH, degree of hydrolysis, and rates of reactions.
CHEM 272 Organic Chemistry I (3) KCC AA/DP
3 hours lecture per week
Prerequisite(s): A grade of "C" or higher in CHEM 162.
Comment: CHEM 272 is intended for science majors.

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.

Upon successful completion of CHEM 272, the student should be able to:
1. Explain the nature of bonding and structure.
2. Explain the physical properties associated with molecular structure.
3. Give common and IUPAC names for the various organic compounds studied in the first semester.
4. Give complete structures from the names.
5. Draw stereochemical structures and understand how stereochemistry affects physical and chemical properties.
6. Determine the structure of compounds from experimental data including the various spectroscopic techniques.
7. Explain how functional group structure determines chemical reactivity.
8. Determine the mechanism of a reaction based upon the structure of the functional group.
9. Give the types of reactions possible for each functional group and be able to draw all possible products of a reaction.
10. Determine what starting materials are necessary to synthesize a particular compound.
11. Cite examples of organic mechanisms in biology.

CHEM 272L Organic Chemistry Lab I (2) KCC AA/DY
4 hours lecture/lab per week
Prerequisite(s): A grade of "C" or higher in CHEM 162; credit or concurrent enrollment in CHEM 272.
Comment: CHEM 272L is intended for science majors.

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.

Upon successful completion of CHEM 272L, the student should be able to:
1. Gain competency using organic laboratory equipment.
2. Gain competency with organic laboratory procedures.
3. Give IUPAC names for the various organic compounds studied in Chemistry 272.
4. Describe how functional group structure determines chemical reactivity.
5. Determine the mechanism of a reaction based upon the structure of the functional group.
6. Be able to draw all possible products of a reaction.
7. Determine what starting materials are necessary to synthesize a particular compound.
8. Explain how physical properties are used to isolate organic compounds.
9. Explain the processes utilized in the design of organic synthesis, and to communicate these using a flow diagram.
10. Be able to record observations and procedures in a laboratory notebook, and to clearly communicate results and conclusions.

CHEM 273 Organic Chemistry II (3) KCC AA/DP
3 hours lecture per week
Prerequisite(s): A grade of "C" or higher in CHEM 272.
Comment: CHEM 273 is intended for science majors.

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.

Upon successful completion of CHEM 273, the student should be able to:
1. Explain the nature of bonding and structure.
2. Explain the physical properties associated with molecular structure.
3. Give common and IUPAC names for the various organic compounds studied in the first and second semesters.
4. Give complete structures from the names.
5. Draw stereochemical structures and describe how stereochemistry affects physical and chemical properties.
6. Determine the structure of compounds from experimental data including the various spectroscopic techniques.
7. Explain how functional group structure determines chemical reactivity.
8. Determine the mechanism of a reaction based upon the structure of the functional group.
9. Give the types of reactions possible for each functional group and be able to draw all possible products of a reaction.
10. Determine what starting materials are necessary to synthesize a particular compound.
11. Cite examples of organic mechanisms in biology.

CHEM 273L Organic Chemistry Lab II (1) KCC AA/DY
3 hours lab per week
Prerequisite(s): A grade of "C" or higher in CHEM 272L; credit or concurrent enrollment in CHEM 273.
Comment: CHEM 273L is intended for science majors.

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.

Upon successful completion of CHEM 273L, the student should be able to:
1. Gain competency using organic laboratory equipment.
2. Gain competency with organic laboratory procedures.
3. Give IUPAC names for the various organic compounds studied in Chemistry 273.
4. Describe how functional group structure determines chemical reactivity.
5. Determine the mechanism of a reaction based upon the structure of the functional group.
6. Be able to draw all possible products of a reaction.
7. Determine what starting materials are necessary to synthesize a particular compound.
8. Explain how physical properties are used to isolate organic compounds.
9. Explain the processes utilized in the design of organic synthesis, and to communicate these using a flow diagram.
10. Be able to record observations and procedures in a laboratory notebook, and to clearly communicate results and conclusions.
11. Determine the structure of compounds from experimental data including various spectroscopic techniques.

CHINESE

CHNS 101 Elementary Mandarin I (4) KCC AA/HSL
3 hours lecture, 2 hours lecture/lab per week

CHNS 101 is 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:
1. 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.
2. Speak short statements and ask simple questions, primarily by relying on memorized utterances but occasionally by expanding these through simple recombinations of those elements.
3. 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 in stores, time/date on schedules, etc. where specific characters and combinations have been memorized.
4. 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 lecture/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 ACTFL-ETS (American Council on the Teaching of Foreign Languages) proficiency scale.

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

1. Understand sentence length utterances that consist of recombination of learned utterances on a variety of topics. Content refer primarily to basic personal background and needs, social conversations and some complex tasks.
2. Handle successfully a variety of uncomplicated task oriented and social functions. Can ask and answer questions participate in simple conversations on topics beyond the most immediate needs.
3. Read consistently with increased understanding simple connected texts dealing with basic personal and social needs. Student will have sufficient comprehension to understand some authentic material as it reflects similarity to specially prepared material and/or to high frequency oral vocabulary and structure.
5. List some essential points of Chinese geography, society, and culture.

CHNS 111 Elementary Conversational Mandarin I (3) KCC AA/HSL (Inactive)
3 hours lecture per week
Comment: Letter grade and credit/no credit only. CHNS 111 may not be audited. CHNS 111 is currently inactive.

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:

1. 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.
2. 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.
3. Demonstrate an awareness of various Chinese cultural aspects and perspectives.
4. Use modern technology, such as World Wide Web and email, to research topics about China.

CHNS 112 Elementary Conversational Mandarin II (3) (Inactive)
3 hours lecture per week
Prerequisite(s): CHNS 111 or equivalent.
Comment: Letter grade only. CHNS 112 may not be audited. CHNS 112 may not be taken credit/no credit. CHNS 112 is currently inactive.

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:

1. 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.
2. 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.
3. Demonstrate through the study of language a better understanding of various Chinese cultural aspects and perspectives.
4. 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 (Inactive) Spring
5 hours lecture, 5 hours independent practice or lab per week
Comment: CHNS 131 is currently inactive.

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:

1. Understand a number of short utterances in Chinese in areas of immediate need.
2. Comprehend sentence-length utterances in situations where the context aids understanding such as in a restaurant or store, or on a train or bus.
3. Comprehend simple questions/statements about family members, age, address, time, interests and daily activities.
4. Obtain the main ideas of tailored speech likely to be encountered by tourists and business persons.
5. Make short statements and ask simple questions by relying on memorized utterances.
6. Create sentences based on recombination of learned vocabulary and sentence patterns.
7. Carry out tasks involving a variety of activities such as greetings, inquiring, telling time and date, telephoning, shopping and dining.
8. Identify a limited number of characters and read for instructional and directional purposes standardized messages, phrases or expressions.
9. Interact with Chinese speakers in culturally acceptable ways, employing appropriate greetings, mannerisms, and implications.
11. 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:

1. 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.
2. 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.
3. Read and understand some authentic material as it reflects similarity to specially prepared material and/or to high frequency 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.
4. 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:

1. Listen and sustain understanding over longer stretches of connected discourse on a number of topics pertaining to different times and places.
2. 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.
3. 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.
4. 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:

1. Describe the diversity and variety of Chinese culture orally and in writing about their service learning community experiences and assigned readings;
2. Demonstrate the job-related skills gained from the practical work experience in the supervised community volunteer activities;
3. Evaluate orally and in writing the service learning activities using appropriate vocabulary and grammar in communicative activities, discussions, and writing activities;
4. Describe orally in classroom discussion, and in reflective journals and essays, the needs of the community;
5. Apply orally and in writing critical thinking and problem-solving skills related to their service-learning experiences.
6. List similarities and differences between Chinese and U.S. culture from various perspectives and values.
7. Construct a relationship between language learning and culture.
8. Demonstrate effective communication skills in both the students heritage and U.S. cultures.

**CIVIL ENGINEERING**

**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:
1. Solve problems to demonstrate an understanding of the concepts of forces, resultant and static equilibrium and their application to rigid bodies.
2. Apply knowledge and understanding of the equilibrium of rigid bodies in two and three dimensions to analyze structures.
3. Solve problems to demonstrate an understanding of and insights into the concepts of center of gravity, centroids, couples, and moments of inertia.
4. Analyze engineering structures subjected to concentrated loads, distributed loads, and frictional forces.
5. Utilize abstract thinking and analytical reasoning in the analysis of word problems.
6. 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:

1. Describe the position, velocity and acceleration of particles and rigid bodies in both rectangular and curvilinear coordinate systems.
2. Demonstrate knowledge of the kinematics of particles and rigid bodies with respect to both a fixed and translating reference frames.
3. Demonstrate knowledge and understanding of the three methods of kinetics analysis: force-mass-acceleration, work energy, and impulse-momentum.
4. Utilize abstract thinking and analytical reasoning in the analysis of word problems.
5. 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:

1. Describe the human communication process, its purposes, functions and modes.
2. Identify and explain verbal and non-verbal codes.
3. Explain the role and dynamics of communication in relationships, groups, and organizations.
4. Analyze the processes and identify the pitfalls of interethnic and intercultural communication, including interactions in Hawai‘i, Oceania and Asia.
5. Describe the role of mass and public communication systems in modern societies.
6. Identify and explain the functions and methods of telecommunication in a global society.
7. 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: Letter grade only. 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:

1. Discuss the values and attitudes that underlie their behavior.
2. Discuss choices they have made in decisions that have shaped their life paths.
3. Demonstrate awareness of self through ages, stages, and significant milestones in life.
4. Recognize and address personal attitudes and behaviors that may hinder ability to perform effectively as a community health worker.
5. Demonstrate effective listening skills.
6. Explain the influence of culture, values, attitude, and behavior on community health work.
7. 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: Letter grade only. 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:

1. Perform as an entry-level community health worker counselor.
2. Assess client strengths and weaknesses using a multidimensional model.
3. Behave ethically as a helping professional.
4. Utilize a sensory-based model for recording and reporting client information.
5. 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:

1. Identify the role of the Community Health Worker (CHW) and explain interaction with local, regional, and national levels of the health care system.
2. Demonstrate basic knowledge and skills in community health needs assessment.
3. Describe community health roles and relationships.
4. Identify common health care problems, refer clients to appropriate resources, and provide basic selected services.
5. 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:

1. Demonstrate ability to work as part of a community-based health care team.
2. Use ethical standards in relationships with clients.
3. Develop skills to assist clients in learning problem-solving techniques to access specific community services/resources.
4. Discuss clinical experiences and relation to academic content.
5. Use appropriate referral forms for each agency or clinic.
6. Discuss specific health risk behaviors with clients.
7. Demonstrate skills in administrative procedures such as scheduling of appointments, record keeping, record charting.
8. Demonstrate understanding of basic principles of authority and responsibility in the clinic or agency setting.
9. Exhibit professional behavior.
10. Exhibit adaptability to various settings.

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: Letter grade only. 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:

1. Discuss, interpret, and synthesize social work concepts, theories, and data and apply them to different situations, to draw conclusions, or explain a situation.
2. Organize information and utilize reference sources, including the text, as appropriate.
3. Utilize writing skills and apply the mechanics of constructing a paper.
4. 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.

Comment: Letter grade only. 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:

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

**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:** Letter grade only. 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:

1. Demonstrate understanding of the daily responsibilities of case managers in community-based agencies.
2. Demonstrate basic knowledge, skills, and sensitivity while working with clients.
3. Describe human service roles and relationships to community health work.
4. Identify common community health issues.
5. Refer clients to appropriate resources.
6. Provide basic selected community health services.
7. Provide information about the site/organization to community residents.
8. Access basic community resources to meet client needs.
9. Work as part of a community-based health care team.
10. Apply interviewing and counseling skills with clients in the community.
11. Demonstrate understanding of the influence of culture on values, attitude, and behavior and impact on the community health worker.
12. Demonstrate effective listening skills.
13. Define and use ethical and legal standards in relationships with clients.
14. Demonstrate understanding of the practicum site’s mission and purpose.
15. 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:** Letter grade only. 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:

1. Describe the effects of substance abuse on individuals, families and society.
2. Identify the symptoms and signs of substance abuse, particularly those that suggest early stages.
3. Evaluate the needs of the patient with substance abuse problems.
4. Discuss the needs of the patient’s family and community in combating drug abuse/addiction.
5. Apply models of intervention and carry out referrals for patients with substance abuse problems.
6. Observe and apply principles of cultural competence, professional ethics and boundaries.
7. 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:

1. Describe examples of the effects of substance abuse on individuals and families in the community and the effects on society.
2. Demonstrate competence in identifying the symptoms and signs of substance abuse, particularly those that suggest early stages.
3. Demonstrate competence in evaluating the needs of the patient with substance abuse problems.
4. Discuss the needs of the patient’s family and community in combating drug abuse/addiction.
5. Apply models of intervention and carry out referrals for patients with substance abuse problems.
6. Demonstrate cultural competence as well as professional ethics and boundaries.
7. 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 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:

1. Assess their level of basic skills and its relationship to the educational pathways available through the program.
2. Define hospitality and the philosophy of the hospitality industry.
3. Trace the growth and development of the hospitality and tourism industry. Describe the various cuisines and contributions of leading culinarians.
4. Identify professional organizations within the field; explain purposes and benefits.
5. 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.
6. Evaluate career opportunities through participation in field trips and guest speakers in class.
7. Discuss/evaluate industry trends as they relate to career opportunities and future of the industry.
8. Discuss and evaluate industry trade periodicals.
9. Discuss professional ethics practiced in the industry.
10. Evaluate the impact of service-learning experiences upon personal and academic growth.
11. Design a web-based electronic portfolio and utilize it to demonstrate learning outcomes.
12. Evaluate the role that “Hawaiian Cultural Values” plays within the culinary & hospitality industry.
13. 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:

1. Contrast the various organizational structures and basic functions within hospitality and culinary establishments.
2. Contrast the career opportunities and professional organizations within the field.
3. Assess the relevance of various trade publications and electronic methods for continuing education.
4. Value cross-cultural perspectives that will allow them to effectively function in the global community.
5. Value ethical practices in both personal and professional situations.
6. Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
7. 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 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:

1. Identify microorganisms which are related to food spoilage and food-borne illnesses; describe their requirements and methods for growth.
2. List and describe symptoms common to food-borne illnesses and list various ways these illnesses can be prevented.
3. List and define the fundamentals of good personal hygiene.
4. Demonstrate good personal hygiene and health habits in a laboratory setting.
5. Demonstrate acceptable procedures when preparing potentially hazardous foods to include time/temperature principles.
6. List the major causes of food spoilage.
7. Define food spoilage indicators.
8. Outline the flow of food through an establishment and list the various ways contamination may be prevented along the pathway.
9. Outline the requirements for proper receiving and storage of both raw and prepared foods.
10. Recognize sanitary and safety design and construction features of food production equipment and facilities. (i.e., NSF, UL, OSHA ADA, etc.).
11. Describe types of cleaners and sanitizers and their proper use.
12. 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.
13. Review Material Safety Data Sheets (MSDS) and explain their requirements in handling hazardous materials. Discuss right-to-know laws.
14. Develop cleaning and sanitizing schedule and procedures for equipment and facilities.
15. Identify proper methods of waste disposal and recycling.
16. Describe appropriate measures for insects, rodents and pest control eradication.
17. 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:

1. Develop an understanding of the basic principles of sanitation and safety and to be able to apply them in the foodservice operations.
2. Reinforce personal hygiene habits and food handling practices that protects the health of the consumer.
3. Value ethical practices in both personal and professional situations.
4. Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
5. 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 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:

1. Apply the principles of menu planning and layout to the development of menus for a variety of types of facilities and service
2. Value cross-cultural perspectives that will allow them to effectively function in the global community.
3. Value ethical practices in both personal and professional situations.
4. Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
5. 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 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, poeleing, 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:

1. Develop skills in knife, tool and equipment handling and apply principles of food preparation to produce a variety of food products.
2. Operate equipment safely and correctly.
3. Apply knowledge of laws and regulations relating to safety and sanitation in the kitchen.
4. Value ethical practices in both personal and professional situations.
5. Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
6. 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 hours 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 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, poëleing, 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. Prepare a variety of stocks.
46. Evaluate the quality of a properly made stock.
47. Define, describe and explain the purpose of sauces.
48. Identify and prepare the grand sauces.
49. Prepare a variety of non-grand/classical sauces.
50. List the basic ingredients needed for making grand and non-grand sauces.
51. Describe the functions of the ingredients in sauces.
52. Evaluate the quality of a properly made sauce.
53. Define and describe soup and identify its two basic categories.
54. Prepare a variety of soups from each category.
55. Describe the process of making each category of soup.
56. Evaluate the quality of a properly made soup.
57. Identify a variety of fruits, vegetables, starches, legumes and grains.
58. Prepare a variety of fruits, vegetables, starches, legumes and grains using the basic cooking methods.
59. Evaluate the quality of prepared fruits, vegetables, starches, legumes and grains.
60. Define salad dressing and describe its purposes.
61. Identify, define, and describe the types of salad dressings.
62. Prepare a variety of salad dressings and evaluate the quality of each.
63. Identify a variety of common salad greens.
64. Prepare and dress greens for a salad.
65. Evaluate the quality of properly prepared and dressed green salad.
66. Identify, describe, and prepare a variety of composed salads.
67. Evaluate the quality of composed salads.
68. Identify, and describe the purpose of the elements of a sandwich.
69. Prepare a variety of hot and cold sandwiches.
70. Evaluate the quality of sandwiches.
71. Identify and prepare a variety of breakfast meats.
72. Evaluate the quality of prepared breakfast meats.
73. Describe a variety of preparation techniques used in egg cookery.
74. Cook eggs using a variety of preparation techniques.
75. Evaluate the quality of prepared eggs.
76. Identify and prepare a variety of breakfast batter products.
77. 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:

1. Develop skills in knife, tool and equipment handling and apply principles of food preparation to produce a variety of food products.
2. Operate equipment safely and correctly.
3. Apply knowledge of laws and regulations relating to safety and sanitation in the kitchen.
4. Value ethical practices in both personal and professional situations.
5. Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
6. 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 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.
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:

1. Apply the fundamentals of baking science to the preparation of a variety of products.
2. Use and care for equipment normally found in the bakeshop or baking area.
3. Value ethical practices in both personal and professional situations.
4. Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
5. 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 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:

1. Define and describe the various types of chocolate.
2. Temper chocolate.
3. Prepare chocolate confections and chocolate display pieces.
4. Evaluate the quality of chocolate, chocolate confections, and chocolate display pieces.
5. Develop advanced decorating and finishing techniques for cakes.
6. Evaluate the quality of decorated cakes.
7. Define and describe ice creams, sorbet, and other frozen desserts.
8. Discuss the methods of preparation of ice creams, sorbets, and other frozen desserts.
9. Prepare a variety of ice creams, sorbets, and other frozen desserts.
10. Evaluate the quality of prepared ice creams, sorbets, and other frozen desserts.
11. Define and describe hot and cold soufflés.
12. Discuss the methods of preparation of hot and cold soufflés.
13. Prepare hot and cold soufflés.
14. Evaluate the quality of prepared hot and cold soufflés.
15. Define and describe marzipan.
16. Discuss the method of preparation for marzipan.
17. Prepare marzipan and use it in the decoration of cakes, making of confections, or modeling of fruits or figurines.
18. Evaluate the quality of prepared marzipan items.
19. Define and describe various types of candies.
20. Discuss the method of preparation of various types of candies.
21. Prepare various types of candies.
22. Evaluate the quality of various types of prepared candies.
23. Discuss methods of preparation for cooking sugar and isomalt that is to be used for candies or sugar display pieces.
24. Cook sugar and isomalt for basic sugar display work.
25. Prepare sugar and/or Isomalt display pieces.
26. Evaluate the quality of cooked sugar and isomalt and prepared sugar display pieces.
27. Define and describe pastillage and royal icing.
28. Discuss the methods of preparation for pastillage and royal icing.
29. Prepare pastillage and royal icing.
30. Prepare display pieces using pastillage and royal icing.
31. 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:
1. Develop skills in more advanced decorating techniques and more complex preparations of pastry, confections and dessert products.
2. Value ethical practices in both personal and professional situations.
3. Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
4. 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

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:
1. Demonstrate the general rules of table settings and service.
2. Describe American, English, French and Russian Service.
3. Discuss service methods such as banquets, buffets and catering and a la carte.
4. Describe the functions of dining service personnel.
5. Discuss training procedures for dining room staff.
6. Discuss procedures for processing guest checks using current technology.
7. Demonstrate an understanding of guest service and customer relations, including handling of difficult situations and accommodations for the disabled.
8. Explain inter-relationships and work flow between dining room and kitchen operations.
9. Discuss sales techniques for service personnel including menu knowledge and suggestive selling.
10. Identify local, state and federal laws pertaining to the purchase and service of alcoholic beverages.
11. Discuss the basic production process for distillation and fermentation.
12. Distinguish wines by grape and/or other fruit variety, country, growing region and production process.
13. Evaluate the relationship of beverages to food.
14. Identify and discuss the presentation and service of alcoholic, non-alcoholic and de-alcoholized beverages, including coffee and tea.
15. Identify equipment and glassware used for beverage preparation and service.
16. Discuss opening and closing procedures of a beverage operation.
17. Discuss the fundamentals and importance of responsible alcohol service
18. Identify levels of intoxication and methods to control excessive consumption by guests
19. 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:
1. Differentiate the varieties of alcoholic and non-alcoholic beverages and assess their affinity to foods.
2. Explain laws and procedures related to responsible alcoholic service.
3. Value ethical practices in both personal and professional situations.
4. Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
5. 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: Letter grade only. CULN 205 may not be audited. CULN 205 may not be taken credit/no credit.

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

Module II: Inspection, Pest Control, Facilities & Safety
1. Define the Prime Vendor concept.
2. List the types of food inspections.
3. Explain the criteria used to accept or reject perishable subsistence items.
4. Explain the criteria used to accept or reject semi-perishable subsistence items.
5. Describe the general storage requirements for subsistence items.
6. Identify steps involved with cockroach management in a food service facility.
7. Describe the important aspects of stored pest management products in a food service facility.
8. Explain the importance of rodent management in a food service facility.
9. Describe the importance of fly management in a food service facility.
10. Describe the six steps of the ware washing process.
11. Identify proper procedures to use when washing food service utensils and equipment by manual ware-washing process.
12. Explain proper procedures to use when washing food service utensils and equipment by automatic ware washing machine process.
14. Identify procedures required to clean and sanitize equipment that must be cleaned in place.
15. Explain proper procedures to be employed in cleaning the general dining facility.
16. Describe the proper methods to store cleaning supplies.
17. List general safety precautions necessary to maintain a safe working environment.
18. Explain inherent safety hazards associated with food service operations and equipment.
19. Identify specific safety precautions associated with sharp blades, mechanical, electrical, and physical hazards including heat and noise.
20. Describe potential of fire hazards within the food service operation and methods of prevention and control.

Module III: Nutrition
1. Define the abbreviations and terms associated with nutrition/healthy choices.
2. Describe the major components of nutrition.
3. Describe the major food groups of the Food Guide Pyramid.
4. Describe the use of dietary guidelines.
5. Describe methods for avoiding too much fat.
6. Identify methods of food preparation for enhanced nutritional value.
7. Identify use of Low-cal/Low-fat food items.
8. Identify ways to disseminate information about nutritional value/choices of food.

Module IV: Navy References, Equipment, Pre-deployment & Private Mess Record keeping
1. Identify the organization, content, and use of publications and instructions used.
2. Describe the procedures for requesting assist visits.
3. Identify maintenance responsibilities.
4. Identify temperature logs and their uses.
5. Describe the procedures and documentation to report inoperable equipment status.
6. Discuss effective COSAL Support.
7. Discuss simple maintenance.
8. Discuss phase replacement.
9. Discuss ship's repair and availability (SRA) upkeep and overhaul.
10. Determining requirements in accordance with Food Service Administration.
11. Determine who your suppliers will be.
12. Special menus.
13. Catering special events.
14. Determine requirements for special events and major deployments in accordance with Food Service Administration.
15. Identify the purpose and authority for establishing a private mess.
16. Identify the types of private messes.
17. Identify the function and responsibilities of key personnel in private messes.
18. Identify sources and requisitioning procedures.
19. Prepare procurement documents.
20. Identify a mess share.
21. Identify mess billing procedures.
22. Identify the procedures to pay for guest meals.
23. Identify accounting records.
24. Identify procedures for meals sold for cash.
25. Identify the procedures for utilization of non-appointed funds.
26. Identify the procedures for acquiring operating capital.
27. Prepare accounting records in accordance with Food Service Administration.
28. Prepare mess bills.
29. Compute the value of rations to be commuted to the mess and prepare documents.

Module V: Recipe Conversion & Menu Planning
1. Define abbreviations and terms as required to understand the task or function of Food service Operations and Management.
2. Describe the procedures for adjusting Armed Forces recipes using required formulas.
3. Adjust Armed Forces recipes by using recipe adjustment formulas as required to understand Food Service Operation and Management.
4. Describe the procedures for developing or analyzing cycle menu.
5. Describe the procedures for preparing the menu draft. (NAVSUP Form 1092)
6. Describe the procedures used to develop a load out plan.
7. Describe the procedures used to calculate amount of food to prepare using past acceptability factors.
8. Describe the process involved in implementing menu changes.
9. Describe the procedures for special meals / feeding situations.
10. Prepare the Menu Draft. (NAVSUP Form 1092)
11. Prepare a cycle menu.
12. Compute/calculate percentage of fat calories in individual food items.
13. Compute/calculate approximate amount of calories in a given menu.
14. Evaluate a menu for nutritional value.
15. Describe the procedures for preparing the Food Preparation Worksheet. (NAVSUP Form 1090)
16. Prepare Food Preparation Worksheet. (NAVSUP form 1090)

Module VI: Instructor Techniques & Training Responsibilities
1. List the characteristics of good instructor techniques.
2. List the characteristics of adult learners.
3. Distinguish between passive and active learning.
4. Describe the different types of instructional methods.
5. Identify procedures used in writing a lesson plan.
6. State the amount and frequency of training required.
7. State the responsibilities/knowledge of the person in charge.
8. State the responsibilities/knowledge of food service personnel.
9. Establish a facility-training program.

Module VII: Financial Management, FSMS & Auditing
1. Identify the procedures and for preparation and use of records / documents for the preparation of the monthly financial reports.
2. Identify the procedures for the preparation and use of the monthly General Mess summary Document. (NAVSUP Form 1359)
3. Complete the following supporting internal control documents and/or records for the preparation of the General Mess summary Documents.
4. Prepare General Mess Summary Document. (NAVSUP form 1359)
5. Describe the function and responsibilities of support activities.
6. Describe the hardware system components of a FSMS system.
7. Identify which personnel should have access to specific FSM modules.
8. Explain the logon procedures.
9. Explain the procedures for signing off the FSM System.
10. Access and perform typical FSM transactions.
11. Perform a daily restoration of the Food Service Management System files.
12. Perform a system backup.
13. Perform a system restoration.
14. Perform the procedures for processing the end of the month accounting documents.
15. Explain the procedures used to fill out a NAVSUP audit sheet
16. Fill out the NAVSUP audit sheet.

Module VIII: Procurement, Receipts, Issues, Transfers & Inventories
1. Identify internal control procedures, utilized to document procurement of subsistence items.
2. Identify reorder processing utilizing publications and instructions.
3. Identify the procedures for preparation and use of procurement documents.
4. Administer load out of subsistence items.
5. Post subsistence items to Requisition Log (NAVSUP Form 1336) up to source.
6. Describe the preparation and receiving procedures for subsistence items.
7. Identify physical receipt procedures of subsistence items.
8. Describe the preparation procedures to receive subsistence items.
9. Describe the procedures used in storerooms to secure for sea.
10. Explain First-In-First-Out (FIFO) system of stowing subsistence items.
11. Explain document distribution at time of receipt.
12. Post receipts to internal control documents.
13. Explain the processing of receipt documents of subsistence items.
14. Describe receipt posting to internal control documents.
15. Identify the use, preparation and posting procedures of internal control records.
17. Identify the procedures for preparation and use of transfer document.
18. Identify subsistence transfer preparation procedures.
19. Explain the process of transferring subsistence items.
20. Review Records Keeper’s responsibilities in regards to transfers.
21. Identify the procedures for the preparation and use of survey documents.
22. Determine the procedures for the preparation and use of substantiating documents for surveys.
23. Prepare survey and substantiating documents.
24. Identify the types and frequencies of inventories.
25. Identify the purpose and use of inventory documentation.
27. Prepare inventory documents.
28. Explain what is done to documents after an inventory.

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; minimum GPR of 2.0; successful completion of a practical skills exam; consent of instructor.
Comment: Letter grade only. 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:
1. Prepare to enter a mock salon or state ACF culinary competition according to the prerequisites of culinary competition and ACF membership requirements.
2. 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.
3. Analyze the components of a properly balanced and designed food display.
4. Work in a team environment.
5. 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.
6. 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.
7. 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: Letter grade only. 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:
1. Compete in a regional and/or national ACF culinary competition according to the prerequisites of culinary competition and ACF membership requirements.

2. Plan, implement and participate in a regional and/or national ACF competition at an offsite location.

3. 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.

4. Analyze and apply the components of a properly balanced and designed food display for a regional and/or national ACF culinary competition.

5. Work in a team environment.

6. 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.

7. 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.

8. 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.

9. Conduct a skills and attributes inventory.

10. Formulate and institute a three phase action plan.

11. Practice and solicit feedback.

12. 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.*

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:

1. Demonstrate knife skills, hand tool and equipment operation, emphasizing proper safety techniques.
2. Identify and use utensils, pots, and pans.
3. Demonstrate safe practices using equipment such as stoves, mixers, and ovens.
4. Define and describe the sautéing process.
5. Prepare a variety of foods using the sauté techniques.
6. Evaluate the quality of sautéed items.
7. Define and describe the processes of pan-frying and deep-frying.
8. Fry a variety of foods to their proper doneness.
9. Evaluate the quality of fried foods.
10. Define and describe the roasting and baking processes.
11. Roast meats, poultry, and fish to the correct doneness to develop the best flavor and texture in the finished dish.
12. Evaluate the quality of roasted items.
13. Define and describe the process of grilling and broiling.
14. Grill and broil foods to the proper doneness.
15. Evaluate the quality of grilled and broiled items.
16. Define and describe the processes of braising and stewing, noting the similarities and differences.
17. Braise and stew foods to the proper doneness.
18. Evaluate the quality of braised and stewed items.
19. Define poaching and simmering and correctly identify the temperature range at which each occurs.
20. Poach and simmer foods to the proper doneness.
21. Evaluate the quality of poached and simmered foods.
22. Define and describe the boiling and steaming process.
23. Prepare boiled and steamed foods to the proper doneness.
24. Evaluate the quality of boiled and steamed items.
25. Identify and use herbs, spices, oils and vinegar, condiments, marinades and rubs.
26. Evaluate the quality of herbs, spices, oils, vinegar, condiments, marinades, and rubs.
27. Perform basic fabrication tasks with meat, poultry, seafood and variety meats.
28. Using the basic cooking methods, prepare meat, seafood, poultry, and variety meats to the proper doneness.
29. Evaluate the quality of prepared meats, seafood, poultry, and variety meats.
30. Identify different types of stocks.
31. List the basic ingredients needed for making stocks.
32. Describe the functions of the ingredients.
33. Describe the process of making stocks.
34. Prepare a variety of stocks.
35. Evaluate the quality of a properly made stock.
36. Define, describe and explain the purpose of sauces.
37. Describe the functions of the ingredients in sauces.
38. Evaluate the quality of a properly made sauce.
39. Evaluate the quality of a properly made soup.
40. Identify a variety of fruits, vegetables, starches, legumes, and grains.
41. Prepare a variety of fruits, vegetables, starches, legumes, and grains using the basic cooking methods.
42. Evaluate the quality of prepared fruits, vegetables, starches, legumes and grains.
43. Prepare a variety of salad dressings and evaluate the quality of each.
44. Prepare and dress greens for a salad.
45. Evaluate the quality of properly prepared and dressed green salad.
46. Identify, describe, and prepare a variety of composed salads.
47. Evaluate the quality of composed salads.
48. Discriminate the difference in menu items between the various Continental and Mediterranean cuisines.
49. Explain the difference in plate presentations between the various Continental and Mediterranean cuisines.
50. Prepare an assortment of appetizers, soups, salads, entrees, side dishes and desserts associated with the cuisines of a variety of Continental and Mediterranean countries.
51. Demonstrate good personal hygiene and health habits in a laboratory setting.
52. Demonstrate acceptable procedures when preparing potentially hazardous foods to include time/temperature principles.
53. Practice organizational and preparation (mise en place) techniques as part of commercial food preparation.
54. 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:

1. Develop skills in knife, tool and equipment handling and apply principles of food preparation to produce a variety of food products.
2. Operate equipment safely and correctly.
3. Apply knowledge of laws and regulations relating to safety and sanitation in the kitchen.
4. Value cross-cultural perspectives that will allow them to effectively function in the global community.
5. Value ethical practices in both personal and professional situations.
6. Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
7. 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.

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:

1. Produce appetizers, salads, soups, entrees, side dishes, and desserts using specialty cooking methods and various Asian and Pacific techniques.
2. 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.
3. Identify, use, and evaluate the quality of herbs, spices, oils, vinegars, condiments, and ingredients used in Asian and Pacific recipes.
4. Prepare vegetable, meat, fish, and poultry utilizing specialty cutting techniques.
5. Use and maintain specialized tools and utensils including woks, steamers, cleavers, to prepare Asian and Pacific menus.
6. Identify, prepare, and evaluate the quality of seasonal fruits, vegetables, starches, legumes, and grains used in Asian and Pacific recipes.
7. Discuss the influence of food history, culture, philosophy, and geography as reflected in Asian and/or Pacific menus.
8. Discuss and evaluate the historical and cultural influences that have led to the current development of Pacific Rim and Hawai‘i Regional cuisines.
9. Set-up a basic mise en place that meets industry standards.
10. Demonstrate professionalism, including teamwork, work ethics, positive attitude, responsibility, and dress and grooming, as required by industry standards.
11. Apply safety, sanitation, and maintenance guidelines for handling culinary tools, kitchenware, and equipment as required by program operating procedures and government regulations.
12. 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:

1. Use specialty knives, tools, and equipment to produce Asian or Pacific menus.
2. Apply fundamental Asian or Pacific cooking principles and preparation techniques.
3. Operate and maintain kitchen equipment and tools that meet sanitation and safety codes.
4. Apply safety, sanitation, handling, operation, and maintenance guidelines for handling culinary tools, kitchenware, and equipment as required by standard program operational procedures.
5. Discuss the value of culinary cultural diversity that will allow students to relate to the international food industry.
6. Practice ethical behaviors in personal and professional situations.
7. Practice appropriate grooming and dress that reflect the mature work attitude in accordance with industry standards.
8. 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 or consent of instructor/department chairperson.

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:

1. Identify tools and equipment used in garde manger, emphasizing safety and sanitation procedures.
2. Define and describe hors d’oeuvre, appetizers, and canapés. Explain the importance of presentation and garnishing for hors d’oeuvre, appetizers, and canapés.
3. Prepare a variety of hors d’oeuvre, appetizers, canapés and basic garnishes.
4. Evaluate the quality of hors d’oeuvre, appetizers, and canapés.
5. Define aspic gelee and describe its functions. Demonstrate fundamental skills in the preparation and uses of aspic.
6. Evaluate the quality of aspic gelee and items coated with it.
7. Define and describe forcemeat and its various forms including pate, terrine, galantine, mousseline, and sausage.
8. Prepare and present a variety of forcemeat products.
9. Evaluate the quality of forcemeat products.
10. Demonstrate food presentation techniques using a variety of plates, platters and trays.
11. Evaluate the quality of prepared plates, platters and trays.
12. Produce decorative centerpieces (i.e. fruit, vegetable carvings, salt dough, tallow, and ice carvings).
13. Define and describe various methods in which food is preserved (i.e. brining, salting, curing, and smoking).
14. Prepare foods for preservation and prepare preserved foods.
15. Evaluate the quality of preserved foods.
16. Define and describe a variety of cheese categories.
17. Discuss how various cheeses are made and their uses.
18. Use cheese as an ingredient in recipes.
19. Taste various cheeses and evaluate their quality.
20. Demonstrate good personal hygiene and health habits in a laboratory setting.
21. Demonstrate acceptable procedures when preparing potentially hazardous foods to include time/temperature principles.
22. Practice organizational and preparation (mise en place) techniques as part of commercial food preparation;
23. 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:

1. Develop skills in producing a variety of cold food products.
2. Prepare items appropriate for buffet presentation, including decorative pieces.
3. Value cross-cultural perspectives that will allow them to effectively function in the global community.
4. Value ethical practices in both personal and professional situations.
5. Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
6. 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 or consent of instructor/department chairperson.

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:

1. Demonstrate and apply safe standards for personal hygiene that are practiced in the industry.
2. Demonstrate and apply safe and sanitary practices in food preparation.
3. Define culinary terms commonly used in pastry arts effectively.
4. Practice organizational skill (mise en place) techniques as part of commercial food preparation training.
5. Identify, use safely, and maintain correctly equipment commonly used in a pastry kitchen.
6. Apply mathematical skills and convert recipes accurately.
7. Apply technique and skill used for advanced cake decorating methods.
8. Evaluate the quality of decorated cakes.
9. Apply technique and skill use for stencil paste work for ribbon cake.
10. Demonstrate popular puff pastry making methods
11. Produce assorted classical puff pastry products.
12. Evaluate the quality of prepared puff pastry products.
13. Demonstrate chocolate tempering technique, creating advanced chocolate décor and filigree work.
14. Prepare, identify, and evaluate meringue based components such as dacquoise and japonaise.
15. Prepare, identify and evaluate sponge based components such as biscuit joconde, ladyfingers, roulades and other sponge products.
16. Prepare, identify, and evaluate egg based components such as crème brûlée, crème chiboust, crème diplomat and other pudding products.
17. Prepare and identify fruit glaçage, chocolate ganache, coulis, and fresh fruit compote.
18. Demonstrate technique and skill used in assembling and presenting contemporary plated desserts.
19. Evaluate the quality, originality, and suitability of contemporary plated desserts.
Upon successful completion of CULN 253 Confiserie (5), the student should be able to:

20. Prepare an international dessert buffet, using classical specialties from France, Italy, Switzerland, Austria, and Germany.
21. Evaluate the balance, proportion, and suitability of an international dessert buffet.
22. Define and describe the various production methods of ice cream, sorbet, and other frozen desserts.
23. Produce a variety of ice cream, sorbet, and other frozen desserts.
24. Create popular ice cream desserts such as: baked Alaska, parfaits, sundaes and coupes.
25. Evaluate the quality of prepared ice creams, sorbets, and other frozen desserts.
26. Produce a variety of French pastries and petits fours (after dinner confections).
27. Define, describe and prepare hot and cold soufflés.
28. Evaluate the quality of prepared hot and cold soufflés.
29. 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:

1. Develop skills in more advanced decorating techniques and more complex preparations of plated desserts, French pastries, confections and classical and international dessert products.
2. Value ethical practices in both personal and professional situations.
3. Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
4. 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 or consent of instructor/department chairperson.

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:

1. Adhere to the department’s daily conduct code.
2. Demonstrate and apply safe standards of personal hygiene.
3. Demonstrate and apply safe and sanitary practices in food preparation.
4. Define international culinary/pastry arts terms effectively.
5. Identify, use safely, and maintain correctly specialty hand tools and equipment.
6. Design seasonal centerpieces to complement Easter, Mother’s Day, Christmas, and other special functions.
7. Evaluate the originality, balance in proportion, and suitability for display of seasonal centerpieces.
8. Utilize chocolate, pastillage, nougatine, sugar products, and marzipan to create innovative centerpieces for buffet, sales promotions and a la carte service.
9. Identify and describe the characteristics of various types of chocolate/ouverture and their uses.
10. Demonstrate the technique and skill used for tempering chocolate/ouverture, controlling critical temperature zones, using seedland Tablage methods.
11. Demonstrate the technique and skill used for warm chocolate spraying.
12. Demonstrate techniques and skills involved in creating a nougatine centerpiece, using the proper sequential procedures that include caramelization of sugar and almonds, shaping, cutting, assembling, and decorating.
13. Evaluate the originality, balance in proportion, and suitability for display of nougatine centerpiece.
14. Discuss the methods of preparation for cooking sugar syrup and commercially available isomalt sugar that is to be used for candies and centerpieces.
15. Identify and define the various temperature stages of boiled sugar syrup and isomalt sugar for casting and pulled sugar work.
16. Boil sugar syrup and isomalt sugar to various temperature stages to be utilized for casting and pulled sugar work.
17. Evaluate the quality and the proper doneness of boiled sugar syrup and isomalt sugar for casting and pulled sugar work.
18. Prepare classical French chocolate truffles, pralines, candies and after dinner confections.
19. Evaluate the quality and characteristics of French chocolate truffles, pralines, candies, and after-dinner confections.
20. Discuss the technique and method how to prepare homemade marzipan paste.
21. Evaluate the quality of homemade marzipan paste and commercially available marzipan paste.
22. Demonstrate proper technique and skills used making various marzipan figurines, using hand molding and air brushing
methods.
23. Evaluate the originality, shape, and expression of handmade marzipan figurines.
24. Define and describe pastillage and royal icing making methods.
25. 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.
26. 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:

1. Develop skills in more advanced decorating techniques and more complex preparations of pastry, confections and dessert products.
2. Value ethical practices in both personal and professional situations.
3. Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
4. 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.

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:

1. Discuss the flow of goods in a foodservice operation.
2. Discuss how HACCP practices are addressed in purchasing, receiving, storing, and issuing procedures.
3. Describe both formal and informal purchasing methods.
4. Analyze the impact of market fluctuations on product cost.
5. Discuss the legal and ethical considerations of purchasing.
6. Explain the regulations for the inspection and grading of meats, poultry, seafood, eggs, dairy products, fruits, and vegetables.
7. Examine both yield and quality grades and the National Association of Meat Purveyors (NAMP) specifications for meats.
8. Write a bid specification.
9. Evaluate received goods to determine conformity with user specifications.
10. Receive and store fresh, frozen, refrigerated, and staple goods.
11. Describe the importance of receiving and inspecting product as it enters the facility.
12. Conduct yield and quality tests on items such as canned, fresh, frozen, and prepared products.
13. Explain the proper receiving and storing of cleaning supplies and chemicals.
14. Conduct a yield and cost comparison test of pre-fabricated products and on-premises butchered products.
15. Inventory food and non-food items using current technology.
16. Explain the procedures for the rotation, costing, and evaluating of stock, including FIFO and LIFO.
17. Define and describe par stock.
18. Describe the proper procedures for issuing product according to requisition.
19. Describe current computerized systems for purchasing and inventory control.
20. Perform basic math functions.
21. Calculate and forecast purchase and preparation requirements based on a product’s yield on cooking, fabrication, and intangible waste factors.
22. Calculate food costs and percentages with both speed and accuracy
23. Calculate beverage costs and percentages.
24. Calculate labor costs and percentages.
25. Perform recipe yield conversions.
26. Perform the process of recipe costing.
27. Determine selling price of menu items.
28. Perform a make or buy analysis.
29. Define and describe a profit and loss statement and discuss how it is utilized in food-service operations as a tool to
determine profitability.
30. Review profit and loss statements to determine profitability.
31. Create a budget utilizing historical information and current situations.
32. Perform calculations using current technology (i.e. computers, calculators, and POS systems).
33. Discuss the Dram Shop Act and liquor law liability.
34. Identify local, state, and federal laws pertaining to the purchase and service of alcoholic beverages.
35. Explain the procedures for implementing internal beverage controls.
36. Demonstrate good personal hygiene and health habits in a laboratory setting.
37. Demonstrate an understanding and acceptance of the generally accepted standards of professionalism and adhere to the established dress code.

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

1. Explain laws and procedures related to responsible alcoholic service.
2. Perform mathematical functions related to foodservice operations.
3. Demonstrate the overall concept of purchasing and receiving practices in quality foodservice operations.
4. Apply knowledge of quality standards and regulations governing food products to the purchasing function.
5. Receive and store food and non-food items properly.
6. Value cross-cultural perspectives that will allow them to effectively function in the global community.
7. Value ethical practices in both personal and professional situations.
8. Practice standards in behavior, grooming and dress that reflect the mature work attitude expected of industry professionals.
9. Apply the experience of service-learning to both personal and academic development by becoming involved in community service activities.

CULN 310 Current Trends in the Culinary Industry (3)
3 hours lecture per week
Prerequisite(s): AS degree in Culinary Arts with a concentration in Culinary Arts or consent of the instructor.
Comment: Letter grade only. CULN 310 may not be audited. CULN 310 may not be taken credit/no credit.

CULN 310 focuses on current trends in the culinary industry that impact Hawai‘i’s cultural, social, environmental, and economic viability in the global marketplace. Students examine hospitality and culinary managerial issues that affect business strategies on a macro and/or micro level. Course content includes eco-sustainability, market stability, labor development workforce, cultural values, and national and international culinary trends that affect Hawai‘i’s food service and tourism industries.

Upon successful completion of CULN 310, the student should be able to:

1. Evaluate ethical, social, environmental and economic issues that impact the quality of the industry’s human resources.
2. Describe the challenges of sustainability regarding Hawai‘i’s food sources and how to better manage them to include aquaculture, organic farming, bio-technology, product sustainability, and Native Hawaiian methods of farming.
3. Evaluate the legal issues that affect the restaurant industry in Hawai‘i and elsewhere.
4. Analyze local, national, and international safety and sanitation issues such as irradiation, genetic engineering, bio-waste and safe practices in farming and processing activities.
5. Formulate a list of challenges faced by suppliers that support Hawai‘i’s food business and visit farms, seafood suppliers, and other food service businesses and organizations that have an overall effect on the food service business in Hawai‘i and internationally.
6. Propose a plan that demonstrates a proactive approach to environmental issues such waste recycling, energy conservation, or other industry practices.
7. Evaluate new business opportunities in culinology, personal & private chef services, research & development, and health care.
8. Integrate Native Hawaiian, Asian and/or Pacific Island cultures in enhancing Hawai‘i’s culinary industry.
9. Assess the challenges in providing services to a global culinary market.
10. Argue the value of maintaining industry involvement in community activities.
CULN 321 Contemporary Cuisines (3)
1 hour lecture, 6 hours lab per week
Prerequisite(s): AS degree in Culinary Arts with a concentration in Culinary Arts or consent of the instructor.
Comment: Letter grade only. CULN 321 may not be audited. CULN 321 may not be taken credit/no credit.

CULN 321 evaluates the contemporary menus and techniques used by chefs throughout Hawai‘i and abroad. Students prepare and cook menu items that utilize techniques and food products found in contemporary cutting-edge restaurants, hotels and clubs. Students will assess cooking technologies that incorporate molecular gastronomy, energy efficiency, environmental awareness and cost effectiveness.

Upon successful completion of CULN 321, the student should be able to:
1. Define the roles of team dynamics, effective communication, and leadership in producing a contemporary menu.
2. Select and use the proper cooking technologies, equipment, supplies, and production set-up required to produce a contemporary menu.
3. Predict the impact of the target market’s demographics and psychographics upon the appropriate product quality and taste, plate presentations, and service that will contribute to the menu’s success.
4. Integrate theoretical and practical knowledge of new and learned techniques to evaluate unique and creative dishes that have been developed by the world’s leading chefs.
5. Compare and contrast traditional and classical cooking techniques to contemporary culinary techniques, utilizing research, analysis, and application.
6. Design, produce and evaluate a contemporary menu.
7. Prepare a meal service that is evaluated on taste profiles, dish presentation and service.

CULN 322 Advanced Asian Cuisines (3)
1 hour lecture, 6 hours lab per week
Prerequisite(s): AS degree in Culinary Arts with a concentration in Culinary Arts or consent of the instructor.
Comment: Letter grade only. CULN 322 may not be audited. CULN 322 may not be taken credit/no credit. Student must purchase Asian specialty knives and tools at an approximate cost of $200.

CULN 322 assesses the advanced cooking techniques, presentation and service of traditional and modern Asian Cuisine incorporating the various regions of China, Southeast Asia and countries that make up the Asian Pacific culinary arena. The influence of this cuisine on the traditional and contemporary cuisine of Hawai‘i will be evaluated and critiqued. Students will prepare and cook menu items that utilize specialized Asian cooking methods, tools, small wares and food preparation equipment while working with indigenous food resources, products and seasonal ingredients exclusive of the country or region. Topics address the impact of culture, geography, religion and history on the culinary traditions of Asia.

Upon successful completion of CULN 322, the student should be able to:
1. Define the roles of team dynamics, effective communication, and leadership in producing an advanced Asian menu.
2. Select and use the proper cooking technologies, equipment, supplies, and production set-up required to produce an advanced Asian menu.
3. Evaluate the influence of an Asian country’s geography, culture, religion and history on the presentation style and development of the cuisine.
4. Apply advanced culinary techniques to the preparation and presentation of dishes exclusive of Hawai‘i or an Asian culinary region.
5. Compare and contrast differences in spices, seasonings, flavoring combinations, and food ingredients representative of a culinary region.
6. Design, produce and evaluate an advanced Asian menu.
7. Prepare a meal service that is evaluated on taste profiles, dish presentation and service.
CULN 330 (Alpha) Special Culinary Topics (3)
1 hour lecture, 6 hours lab per week
Prerequisite(s): AS degree in Culinary Arts with a concentration in Culinary Arts or consent of the instructor.
Comment: Letter grade only. CULN 330 may not be audited. CULN 330 may not be taken credit/no credit. CULN 330 is repeatable for a maximum of 3 credits with consent of instructor. Student must purchase specialty knives and tools at an approximate cost of $200.

CULN 330 appraises advanced level culinary cuisine topics that build upon culinary and managerial skills learned in the AS degree level of culinary and/or pastry arts, and may vary semester to semester. Each course will support theoretical and practical experience in a specific topic as it relates to culinary and/or hospitality learning. Students may also synthesize into their learning knowledge obtained by working with visiting chefs and mentors. Specific objectives will be formulated for each special topics class.

Upon successful completion of CULN 330, the student should be able to:

1. Assess culinary topics as they relate to learning objectives.
2. Define the roles of team dynamics, effective communication, and leadership in producing the special topic menu.
3. Select the cooking technologies, equipment, supplies, and production set-up required to produce the special topic menu.
4. Evaluate the influence of geography, culture, religion and history on the presentation style and development of the special topic menu.
5. Apply advanced culinary techniques to the preparation and presentation of dishes reflective of the special topic menu.
6. Prepare a meal service that is evaluated on taste profiles, dish presentation and service.

CULN 360 Beverage Service Management (3)
3 hours lecture per week
Prerequisite(s): AS degree in Culinary Arts with a concentration in Culinary Arts or consent of the instructor.
Comment: Letter grade only. CULN 360 may not be audited. CULN 360 may not be taken credit/no credit.

CULN 360 evaluates quality service and management of both alcoholic and non-alcoholic beverages to include: product information, food pairings, purchasing, controlling, storing, pricing, marketing, selling and serving of a restaurant’s beverage menu. Beverage laws and regulations will also be covered in this class. Class projects include the design of a beverage menu and layout of a beverage program for a typical business. This course prepares students to take a National Certification Exam in Alcohol Awareness.

Upon successful completion of CULN 360, the student should be able to:

1. Select beverages that will best meet the operational objectives of a food service operation.
2. Justify the selection of beer, wine and spirits made in relationship to their impact upon the taste and flavors of foods.
3. Assess a wine based upon information provide on its label.
4. Examine the service procedures of wines, beers, sakes, spirits, coffee, and tea to guests.
5. Analyze the history, social and cultural impact of alcoholic beverages and the process of how wines, beers and spirits are produced, manufactured, sold and marketed.
6. Formulate a wine, beer and spirits menu that complements the food menu, marketing trends, cost/mark-up, and type of operation.
7. Construct a program to purchase, receive, issue, store, inventory and cost out beverages utilizing industry standard specifications and cost analysis.
8. Evaluate the impact that dram shop laws and federal and state rules and regulations governing alcohol distribution, and sales have on today’s beverage industry.
9. Identify the impact of responsible alcohol service training provided by a National Certification program.

CULN 380 Nutritional Cuisines (3)
1 hour lecture, 6 hours lab per week
Prerequisite(s): AS degree in Culinary Arts with a concentration in Culinary Arts or consent of the instructor.
Comment: Letter grade only. CULN 380 may not be audited. CULN 380 may not be taken credit/no credit.

CULN 380 introduces the principles of nutritional science in the preparation of food in order to maintain a healthy eating style. Students formulate menus that integrate healthy standards for the general public as well as special dietary needs. These standards are recommended by agencies such as the American Dietetic Association and the American Heart Association. Students will synthesize the principles of nutrition and basic cooking techniques to prepare recipes and menus that promote healthy eating. They will select and balance food nutrients, quality seasonal products, and appropriate portion size, while maximizing texture, color, and flavor.
Upon successful completion of CULN 380, the student should be able to:

1. Distinguish between healthy and unhealthy diets and assess their psychological and physiological results on the body.
2. Analyze global trend and fad menus and the effect on maintaining societal health.
3. Develop a cyclical menu that incorporates a healthy eating style based on the American Dietetic Association (ADA), the American Heart Association, and other governmental agency guidelines.
4. Prepare recipes with food substitutions and flavor enhancers, incorporating the international food pyramid guidelines.
5. Experiment with cooking techniques that maximize the nutritional value of proteins, legumes, vegetables, and starches in a dish.
6. Compare differences between cardiacc, hypertension, and diabetic diseases, and assess the long-term effect on the body with and without diet adjustments.
7. Analyze a menu utilizing industry software programs for record keeping.
8. Identify laws and regulations required by various state and federal agencies in the production of client meals.

DANCE

DNCE 121 Beginning Ballet I (3) KCC AA/DA
1.5 hours lecture, 3 hours lecture/lab per week
Recommend Preparation: Qualification for ENG 100 or ESL 100.
Comment: DNCE 121 may be repeated for a maximum of 6 credits. Students will be required to purchase appropriate clothing, including footwear, for Dance 121.

DNCE 121 will introduce students to basic vocabulary and movement techniques that identify ballet as a unique performance art. Each class period, students will engage in physical practice to gain mastery in the fundamentals of ballet technique.

Upon successful completion of DNCE 121, the student should be able to:

1. Identify, using appropriate vocabulary, perform and explain the basic purposes of a range of basic barre exercises.
2. Identify, using appropriate vocabulary, and perform a range of basic center exercises.
3. Perform simple choreographed combinations in the areas of adagio, petite allegro, grand allegro, and pirouette preparation.
4. Explain the importance of the fundamental techniques of plié, and tendu.
5. Distinguish performance dynamics through execution of adagio, petite allegro and allegro combinations.
6. Display increased levels in personal strength, flexibility, coordination and movement memory.
7. Discuss Ballet in its relationship to its historical context and to other art forms.

DNCE 122 Beginning Ballet II (3) KCC AA/DA
1.5 hours lecture, 3 hours lecture/lab per week
Prerequisite(s): DNCE 121 or consent of instructor
Comment: DNCE 122 is repeatable for a maximum of six credits. Students will be required to purchase appropriate clothing, including footwear, for Dance 122.

DNCE 122 provides a continuing course in the art and performance of Ballet at a beginning level. Students will develop their understanding of ballet vocabulary and mastery of ballet techniques through continued physical practice in combinations of increasing complexity.

Upon successful completion of DNCE 122, the student should be able to:

1. Identify, using appropriate vocabulary, perform and explain how a range of basic barre exercises develop into increasingly complex sequences of movement.
2. Identify, using appropriate vocabulary, and perform a range of center exercises beyond the basic elements of ballet.
3. Perform simple choreographed combinations in the areas of adagio, petite allegro, grand allegro, and pirouette en dehors and en dedans.
4. Explain the importance of the fundamental techniques of plié, and tendu.
5. Identify stage directions, various directions in space, and directions of movement, using appropriate vocabulary.
6. Begin to explore potential for personal expression through performance dynamics in the execution of adagio, petite allegro and allegro combinations.
7. Display increased levels in personal strength, flexibility, coordination and movement memory.
8. Explain the relationship of Ballet to other art forms.
DNCE 131 Modern Dance I (3) KCC AA/DA
1.5 hours lecture, 3 hours lecture/lab per week
Comment: DNCE 131 is repeatable once for a maximum of six credits.

DNCE 131 Modern Dance I is an introduction to basic modern dance technique as a communicative art form. This course emphasizes skills in various styles of movement fundamentals, rhythm, kinesthetic awareness, and creative process.

Upon successful completion of DNCE 131, the student should be able to:
1. Demonstrate comprehension and articulate movement vocabulary.
2. Demonstrate by combining specific dance/movement patterns a development of muscle memory and kinesthetic awareness.
3. Demonstrate the creative process by expressing movement through structured improvisation problems.
4. Show comprehension of alignment, centering, and balance.
5. Show an acute sense of rhythm, pulse, and phrasing.
6. Demonstrate an increased range and variety of body motion, flexibility, strength, control, and coordination.

DNCE 132 Modern Dance II (3)
1.5 hours lecture, 3 hours lecture/lab
Prerequisite(s): DNCE 131 or consent of instructor.
Comment: DNCE 132 is repeatable once for a maximum of six credits.

DNCE 132 Modern Dance II is the second course in a two-semester sequence of introductory level modern dance technique. The emphasis of this course is to continue developing skills in fundamental movements and concepts and to further develop comprehension of dance as a communicative art form through the creative process.

Upon successful completion of DNCE 132, the student should be able to:
• Demonstrate greater technical proficiency and range of varied body motion, flexibility, strength, and coordination.
• Demonstrate greater comprehension and articulation of movement vocabulary and concepts.
• Demonstrate proficiency of muscle memory and kinesthetic awareness by/through combining specific dance/movement patterns.
• Show further comprehension of alignment, centering and balance.
• Demonstrate greater comprehension of the creative process by exploring movement through structured improvisation.
• Show an acute sense of rhythm, pulse, and phrasing.

DNCE 150 Introduction to Dance (3) KCC AA/DA and KCC AS/AH
3 hours lecture per week

DNCE 150, Introduction to Dance, is predominantly a lecture class introducing students to dance as an art form and as an activity uniquely human. Dance techniques, movement analysis, choreographic styles, dance history and philosophy are examined by participatory activities, lectures, demonstrations, videos and performances. Varieties of dance are considered with an emphasis on Western theatrical styles.

Upon successful completion of DNCE 150, the student should be able to:
1. Identify and analyze dance using the basic knowledge of the elements of movement, lab analysis, and dance technique of a variety of dance styles.
2. Demonstrate verbal, written, and group communication skills relevant to dance.
3. Explain the history, philosophy, and cultural aspects of various types of dance.

DNCE 212 Traditional Hula (3) KCC AA/DA
1.5 hours lecture, 3 hours lecture/lab per week
Comment: DNCE 212 may be taken for a letter grade and credit/no credit. DNCE 212 may not be audited.

DNCE 212 is a beginning course in traditional hula. DNCE 212 includes performance of repertoire and technique at an elementary level.

Upon successful completion of DNCE 212, the student should be able to:
1. Define terminology and cultural aspects concerning this art form.
2. Demonstrate chanting, basic dance steps and hand/implement movements associated with traditional hula.
3. Explain the meanings and the reasoning of the texts studied.
4. Discriminate between various types of hula in the traditional/ancient style.
5. Perform the course material with some mastery.
6. Develop a conceptual and kinesthetic understanding of movement techniques associated with traditional hula.
7. Develop strength, flexibility, endurance, and overall coordination.
8. Develop technical proficiency in elementary hula techniques associated with traditional hula.
9. Examine the religious, aesthetic and metaphorical symbols that are manifested in traditional hula.

DNCE 213 Modern Hula (3) KCC AA/DA
1.5 hours lecture, 3 hours lecture/lab per week
Comment: Letter grade and credit/no credit only. DNCE 213 may not be audited.

DNCE 213 is a beginning course in modern hula, with emphasis on dances that can be developed creatively and used in social situations.

Upon successful completion of DNCE 213, the student should be able to:
1. Develop conceptual and kinesthetic movement techniques associated with modern hula.
2. Develop strength, flexibility, endurance, and overall coordination.
3. Trace the development and evolution of the modern hula form from its traditional roots.
4. Demonstrate basic dance steps and hand-implement movements associated with modern hula.
5. Recognize and discriminate musical forms conducive to modern hula accompaniment.
6. Develop technical proficiency in elementary hula techniques associated with modern hula.
7. Examine the social, economic, colonial, and cultural forces that have in the past and will in the future continue to shape this unique art form.

DEAF STUDIES

DEAF 101 Deaf Studies (3)
3 hours lecture per week
Prerequisite(s): Qualification for ENG 100; credit or concurrent enrollment in ASL 101 or instructor consent.

DEAF 101 focuses on the values, culture, beliefs, norms, and traditions commonly shared by American Deaf Culture members. Among the topics explored are rules for social interaction, how identity and relations are defined, and the role of language and cultural icons. The course provides an overview of history, language, education and social issues relevant to the Deaf Community of Hawai‘i and of the U.S. mainland through an in-depth study of Deaf heritage as well as notable Deaf persons and their contributions.

Upon successful completion of DEAF 101, the student should be able to:
1. Define criteria for membership in the Deaf Community.
2. Discuss challenges faced by parents raising deaf children.
3. Differentiate various communication approaches and languages used by deaf people.
4. Identify features of Deaf Culture and diversity within the culture.
5. Determine the impact of technology on the lives of deaf people.
6. Investigate the range of deaf people’s employment and social experiences.
7. Compare pathological and cultural perspectives of deaf people.
8. Distinguish the educational options available to deaf students.
9. Locate major deaf-related national and local resources.
10. Compare and contrast minority experiences for deaf and hearing people.
11. Evaluate career opportunities working with deaf people.
DEAF 201 Introduction to Deaf Studies and Deaf Education (3)
3 hours lecture per week
Prerequisite(s): ASL 101 with a grade of “B” or higher; ASL 102 with a grade of “B” or higher; ENG 100.
Comment: Letter grade only. DEAF 201 may not be audited. DEAF 201 may not be taken credit/no credit.

DEAF 201 will provide an overview of historical, linguistic, educational, cultural, and social issues relevant to the Deaf Community of the U.S., Hawaii and the Pacific including an in-depth study of notable Deaf persons, and contributions by Deaf and hearing people to education and the community. Roles and responsibilities of educational personnel in K-12 settings and evaluate career opportunities working in the Deaf World will be examined.

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

1. Define terminology used in Deaf Studies and Deaf Education.
2. Trace the history of education of deaf children in the context of educational principles and practices, including Deaf Education in Hawaii and the Pacific.
3. Identify causes of deafness and incidence of related disabilities.
4. Distinguish between the medical/pathological and the cultural view of deaf people and discuss the foundations for those views.
5. Describe parental reactions and the impact of deafness on the family.
6. Investigate the influence of hearing status on the language, cognitive, and social-emotional development of deaf and hearing children.
7. Differentiate between various communication methods and educational philosophies used in the education of deaf children.
8. Explain the importance of language and literacy development for deaf children and strategies used in educational settings.
9. Compare and contrast educational options available to deaf students and the legal basis for placement and services.
10. Debate issues regarding appropriate education and least restrictive environment for deaf children.
11. Evaluate career opportunities working with deaf children.

DEAF 202 Effective Teaching Strategies (3)
3 hours lecture per week
Prerequisite(s): DEAF 201.
Corequisite(s): ASL 202.
Recommended Preparation: Experience working with deaf children, especially in an educational setting.
Comment: Letter grade only. DEAF 202 may not be audited. DEAF 202 may not be taken credit/no credit.

DEAF 202 will provide an overview of issues related to developing English and ASL literacy and other academic skills in children who are deaf or hard-of-hearing. Differing schools of thought and approaches will be examined. The course will introduce literacy and content methods and materials used in K-12 classrooms. Models of teaching, learning styles, curriculum areas, and scope of subjects, classroom procedures, student learning outcomes, and statewide standards will be discussed.

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

1. Compare and contrast various literacy development approaches in working with deaf and hard of hearing children.
2. Demonstrate literacy development strategies including the use of ASL and printed English in the classroom.
3. Identify appropriate teaching materials for literacy development and other academic content areas.
4. Apply instructional strategies and materials to meet the statewide literacy and content standards.
5. Adapt instructional strategies to meet a variety of academic and literacy levels.

DEAF 294 Deaf Education Capstone Seminar and Practicum (3)
Seminar Face-to-Face Contact Hours: 12 hours (1.5 hours every other week for 8 weeks)
Seminar On-line Contact Hours: 12 hours (1.5 hours every other week for 8 weeks)
Practicum Hours: 150 (10 hours per week for 15 weeks)
Prerequisite(s): DEAF 201; DEAF 202; ED 285; demonstrated ASL fluency (e.g., as evaluated by the ASLPI) at the intermediate level (2.0 on ASLPI); instructor consent.
Comment: DEAF 294 may not be audited. DEAF 294 may not be taken credit/no credit. Students must obtain fingerprints, background check and TB test clearance, as required by their practicum site.

DEAF 294 provides a culminating opportunity for pre-education majors and educational paraprofessionals in Deaf Education to effectively apply and integrate what they have gained in previous program courses and field assignments to preK-12 settings. In their practicum settings, students will be expected to use appropriate teaching methods and learning principles, conduct classroom instruction and activities, and manage behaviors in small and/or large groups, under the direction and supervision of a mentor teacher. Students will also be expected to communicate effectively in American Sign Language and English. In seminar sessions, students will be expected to problem-solve relevant issues, share pivotal learning incidents, and appraise their personal and professional growth.
Students will also create a comprehensive portfolio, showcasing evaluations of their practicum performances, professional disposition and conduct, ethical behaviors, and knowledge of the field.

Upon successful completion of DEAF 294, the student should be able to:

1. Effectively apply and integrate what they have learned from previous program courses and field assignments.
2. Use appropriate teaching methods and learning principles.
3. Conduct classroom instruction and activities and manage behaviors in small and/or large groups.
4. Apply critical thinking, reflection, and problem-solving skills to relevant issues.
5. Effectively communicate in American Sign Language and English.
6. Reflect on and appraise experiences in terms of personal and professional growth.
7. Demonstrate professional disposition and conduct, as well as ethical behaviors in all interactions and situations.
8. Complete a Professional Portfolio

**DENTAL ASSISTING**

**DENT 100 Essentials of Dental Assisting (3)**
4 hours lecture per week for 12 weeks

Prerequisite(s): Acceptance into the Dental Assisting program or consent of the program director.
Corequisite(s): DENT 100L; DENT 103; DENT 103L; DENT 105; DENT 106; DENT 106L; DENT 108.
Comment: DENT 100 is offered in the fall and spring semesters only. Letter grade only. DENT 100 may not be audited. DENT 100 may not be taken credit/no credit.

DENT 100 offers historical aspects of the dental profession, dental terminology, concept of four-handed dentistry, charting procedures, instruments and instrument transfer, isolation techniques, asepsis and infection control measures. Patient management, dental ethics, and jurisprudence will be included.

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

1. Identify allowable and prohibited duties of a dental assistant.
2. Explain the ethical standards established by professional dental organizations.
3. Explain the legal responsibilities and obligations of the dental assistant and the dentist.
4. Explain the concept of four-handed, sit-down dentistry.
5. Explain the role of the dental assistant in patient management including recording clinical findings.
6. Explain the importance of isolation techniques, asepsis, and infection control in the dental environment.
7. Explain responses to medical emergencies in a dental office.
8. Explain management of medically complex dental patients.

**DENT 100L Essentials of Dental Assisting Lab (3)**
7.5 hours lecture/lab per week for 12 weeks

Prerequisite(s): Acceptance into the Dental Assisting program or consent of the program director.
Corequisite(s): DENT 100; DENT 103; DENT 103L; DENT 105; DENT 106; DENT 106L; DENT 108.
Comment: DENT 100L is offered in the fall and spring semesters only. Letter grade only. DENT 100L may not be audited. DENT 100L may not be taken credit/no credit.

DENT 100L is the application of knowledge gained in DENT 100. Emphasis on the safe and efficient use of dental operatory equipment, proper positioning in the delivery of quality dental care, anesthetics, rubber dam use, proper care and use of the autoclave, tray setups. Importance of asepsis and infection control measures are especially emphasized.

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

1. List the policies and standards of the Dental Assisting Program as they relate to student safety.
2. Demonstrate the principles of four-handed dentistry, including identification of and efficient transfer of dental instruments.
3. Demonstrate appropriate positions for the patient, dental assistant, and operator.
4. Locate and operate the various control mechanisms for the dental chair, dental unit, oral evacuation system, air and water supply, and the hand pieces.
5. Demonstrate proper positioning of the dental light.
6. Demonstrate proper patient dismissal procedures.
7. Demonstrate accurate recordings of clinical findings with appropriate symbols and color coding.
8. Demonstrate knowledge of syringes, anesthetics, and needles with the selection of the appropriate items for a procedure and the proper passing and retrieval of a loaded anesthetic syringe.
9. Demonstrate proficiency in the application of isolation procedures to include oral evacuation techniques and proper placement of armamentarium intraorally.
10. Explain the OSHA guidelines and its categorization of tasks, work areas, and personnel.

DENT 103 Dental Materials (1)
1.25 hours lecture per week for 12 weeks
Prerequisite(s): Acceptance into the Dental Assisting program or consent of the program director.
Corequisite(s): DENT100; DENT 100L; DENT 103L; DENT 105; DENT 106; DENT 106L; DENT 108.
Comment: DENT 103 is offered in the fall and spring semesters only. Letter grade only. DENT 103 may not be audited. DENT 103 may not be taken credit/no credit.

DENT 103 identifies the various materials used in the practice of dentistry and the structure, composition, uses, manipulation and properties of these materials.

Upon successful completion of DENT 103, the student should be able to:
1. List various types of dental cements, their properties and indications for use.
2. Explain the effect of temperature and rate of spatulation on various cements.
3. Discuss various restorative materials and factors involved in material selection.
4. Explain principles of retention in adhesive dentistry and traditional amalgam restorations.
5. Discuss gypsum products and model fabrication and desirable properties of both.
6. Identify different impression materials and discuss their properties and manipulation.

DENT 103L Dental Materials Lab (2)
5 hours lecture/lab per week for 12 weeks
Prerequisite(s): Acceptance into the Dental Assisting program or consent of the program director.
Corequisite(s): DENT100; DENT 100L; DENT 103; DENT 105; DENT 106; DENT 106L; DENT 108.
Comment: DENT 103L is offered in the fall and spring semesters only. Letter grade only. DENT 103L may not be audited. DENT 103L may not be taken credit/no credit.

DENT 103L emphasizes the practical application of the knowledge gained in DENT 103. The manipulation of the different dental materials shall be demonstrated and replicated. The importance of proper use and safety while operating laboratory equipment will be stressed.

Upon successful completion of DENT 103L, the student should be able to:
1. Demonstrate competency in dispensing materials and mixing techniques.
2. Demonstrate proficiency in working with alginate impression material.
3. Demonstrate manipulative technique in working with elastomeric impression materials.
4. Identify and demonstrate manipulative techniques in working with light-cured esthetic restorative material.
5. Explain fabrication of other dental appliances such as bleaching trays, mouth guards and bite splints.
6. Demonstrate proficiency in manipulation of gypsum products.
7. Demonstrate competency in handling amalgam alloys.
8. Explain temporary crown fabrication and cementation.

DENT 105 Dental Sciences (2)
2.5 hours lecture per week for 12 weeks
Prerequisite(s): Acceptance into the Dental Assisting program or consent of the program director.
Corequisite(s): DENT 100; DENT 100L; DENT 103; DENT 103L; DENT 105; DENT 106; DENT 106L; DENT 108.
Comment: DENT 105 is offered in the fall and spring semesters only. Letter grade only. DENT 105 may not be audited. DENT 105 may not be taken credit/no credit.

DENT 105 introduces the student to principles of general anatomy, physiology, microbiology and nutrition placing emphasis on dental aspects of oral anatomy, histology, embryology, pathology, and pharmacology.
Upon successful completion of DENT 105, the student should be able to:

1. List the significance of prefixes, suffixes, and root words in using dental terminology.
2. Discuss oral microbiology and the causative agents of gingivitis and periodontitis.
3. Identify and use terminology specific to general anatomy and physiology.
4. Explain oral histology and embryology.
5. Discuss oral and dental pathological and nonpathological conditions.
7. Explain the importance of proper nutrition in overall good health and well being.
8. Relate current trends in dental care derived from articles in professional publications.

**DENT 106 Dental Radiography (1)**

1.25 hours lecture per week for 12 weeks

*Prerequisite(s):* Acceptance into the Dental Assisting program or consent of the program director.
*Corequisite(s):* DENT 100; DENT100L; DENT 103; DENT 103L; DENT 105; DENT 106L; DENT 108.

*Comment: DENT 106 is offered in the fall and spring semesters only. Letter grade only. DENT 106 may not be audited. DENT 106 may not be taken credit/no credit.*

DENT 106 offers basic knowledge on the discovery of x-rays, role of x-rays in dentistry, physical properties and the hazards of radiation. Radiation safety measures will be emphasized. Radiographic techniques and processing procedures will be discussed. Common anatomical landmarks critical to proper mounting of x-rays will be identified.

Upon successful completion of DENT 106, the student should be able to:

1. Explain the historical beginnings of x-rays.
2. Explain the role and practice of radiology in dentistry.
3. Define electromagnetic radiation.
4. List three principal characteristics of electromagnetic radiation.
5. Explain the generation of x-rays.
6. Identify the component parts of an x-ray machine.
7. Explain the importance of radiation safety measures.
8. Contrast the paralleling vs. bisection-of-the-angle techniques.
9. Explain the importance of proper film placement and accurate exposure factors.
10. Explain the film developing process.
11. Explain the importance of proper film mounting and storage.

**DENT 106L Dental Radiography Lab (1)**

3.5 hours lab per week for 12 weeks

*Prerequisite(s):* Acceptance into the Dental Assisting program or consent of the program director.
*Corequisite(s):* DENT 100; DENT 100L; DENT 103; DENT 103L; DENT 105; DENT 106; DENT 108.

*Comment: DENT 106L is offered in the fall and spring semesters only. Letter grade only. DENT 106L may not be audited. DENT 106L may not be taken credit/no credit.*

DENT 106L emphasizes the practical application of the material presented in DENT 106. Under close supervision of the instructor, students will practice film taking on manikins, critique finished products, and retake as necessary. Radiation safety measures will be stressed and implemented.

Upon successful completion of DENT 106L, the student should be able to:

1. Explain the role of the dental assistant in exposing dental x-rays.
2. Assemble the component parts of the XCP setup.
3. Expose and process a full-mouth series of good diagnostic quality radiographs using the paralleling technique on an adult manikin.
4. Expose and process a full-mouth series of radiographs using the bisection-of-the-angle technique on an adult manikin and a child manikin.
5. Expose and process two series of bitewing x-rays on an adult manikin.
6. Implement radiation safety measures at all times.
DENT 108 Clinical Externship (3)
38 hours clinical per week for 4 weeks
Prerequisite(s): Acceptance into the Dental Assisting program or consent of the program director.
Corequisite(s): DENT 100; DENT 100L; DENT 103; DENT 103L; DENT 105; DENT 106; DENT 106L.
Comment: DENT 108 is offered in the fall and spring semesters only. Letter grade only. DENT 108 may not be audited. DENT 108 may not be taken credit/no credit. Students will purchase their own clinical wear according to the recommendation of the affiliating agency.

DENT 108 provides excellent opportunities to apply the knowledge and skills acquired during the on-campus training period. Students will be able to experience first-hand the importance of a cooperative learning setting and develop their abilities to work in a team during a clinical assignment to one of the various dental clinics in the community during the last four weeks of the semester.

Upon successful completion of DENT 108, the student should be able to:
1. Demonstrate competency in the skills needed to function as an entry-level dental assistant.
2. Demonstrate a high level of achievement in clinical situations.
3. Demonstrate knowledge and skills in the application of asepsis and infection control procedures.
4. Demonstrate confidence in patient management.
5. Demonstrate positive attitudes about self, members of the dental team and the dental profession.

DENT 200 Dental Office Administration (3)
6 hours lecture/lab per week
Prerequisite(s): DENT 100; DENT 100L.
Corequisite(s): DENT 205; DENT 208; DENT 210.
Comment: Letter grade only. DENT 200 may not be audited. DENT 200 may not be taken credit/no credit.

DENT 200 gives an overview of administrative functions in a dental office. Students will participate in DENTRIX training. DENTRIX is the software program that more than 70% of dental offices use in Hawaii. Using this system, students will familiarize themselves with patient records, insurance claims filing, charting, appointment and recall functions. Students will also learn about verbal communication, in particular phone etiquette and management. Students will also learn about dental written communication, between practice and patients, with other dental professionals and insurance companies.

Upon successful completion of DENT 200, the student should be able to:
1. Describe good phone courtesy and handling of different phone calls.
2. Describe internal and external marketing.
3. Discuss ways of sending written communication from a dental office.
4. Identify documentation forms and describe information contained in patient records.
5. Discuss the management of inventory systems
6. Identify proper record keeping as measure of risk management and as part of complete patient healthcare delivery.
7. Modify schedules, patient records, treatment plans and insurance claims using computer programs for the dental office.
8. Explain guidelines for office policies and staff management issues.
9. Discuss accounts receivable and accounts payable as they pertain to a dental office.
10. Demonstrate office management function integration using dental computer software.

DENT 205 Dental Sciences II Focus on Pathology and Development (1)
1 hour lecture per week
Prerequisite(s): DENT 105.
Corequisite(s): DENT 200; DENT 208; DENT 210.
Comment: Letter grade only. DENT 205 may not be audited. DENT 205 may not be taken credit/no credit.

DENT 205 focuses on oral pathology, developmental anomalies and oral conditions as they relate to systemic conditions.

Upon successful completion of DENT 205, the student should be able to:
1. Note the elements of a complete clinical description.
2. Describe the steps involved in reaching a differential diagnosis.
3. Write possible ways of determining definitive diagnosis.
4. Define the terms used to describe the inflammatory process.
5. Describe the impact of immune deficiency on an individual and the role that opportunistic infections play in the process.
6. List measures an individual can take to lower the risk of developing cancer.
7. Describe the characteristics of developmental hereditary and congenital disorders.
8. Describe oral implications based on sample case studies which present with different systemic conditions.
9. Discuss the development of human dentition and supporting structures.
10. Identify and discuss pathology of the oral cavity.
11. List oral manifestations of systemic conditions.
12. Discuss oral diseases and how they impact overall health of individuals.

DENT 206L Dental Radiography II (2)
4 hours lab/clinical per week
Prerequisite(s): DENT 106; DENT 106L or at least one year experience taking dental x-rays.
Recommended Preparation: Prior experience taking dental x-rays.
Comment: Letter grade only. DENT 206L may not be audited. DENT 206L may not be taken credit/no credit.

Students in DENT 206L will expose dental radiographs on human patients and learn preliminary interpretation of dental radiographs on a variety of patients.

Upon successful completion of DENT 206L, the student should be able to:

1. Demonstrate proficiency in the use of XCP instruments on a variety of patients.
2. Demonstrate proficiency in the use of the bisection-of-the-angle and the paralleling techniques.
3. Expose and process quality diagnostic bitewings using both adult and child patients.
4. Identify anatomical landmarks, anomalies and radiographic artifacts.
5. Practice radiation safety measures while taking radiographs.

DENT 208 Dental Specialty Rotation (3)
8-12 hours clinical (for a total of 150 hours over 15 weeks) and 1.5 hours seminar per week
Prerequisite(s): DENT 108.
Corequisite(s): DENT 205; DENT 200; DENT 206L; DENT 210.
Comment: Letter grade only. DENT 208 may not be audited. DENT 208 may not be taken credit/no credit.

DENT 208 has students rotating through 6 different offices in specialty areas such as Orthodontics, Endodontics, Periodontics, Pedodontics, Oral Maxillofacial Surgery and Prosthodontics. Students may also elect to work in a clinic that serves special needs patients exclusively or in a nursing home setting.

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

1. Identify the different dental specialties.
2. Demonstrate knowledge and skills in the identification of specialty instruments and their functions.
3. Demonstrate knowledge and skills in assembling tray setups for various procedures.
4. Discuss the different skills required for assisting in different specialty practices.

DENT 210 Seminar for National Board Exam for Certified Dental Assistant (1)
1 hour seminar per week
Recommended Preparation: Two years of work experience as a dental assistant or participation in or completion of a dental assisting program. Eligibility to take the Dental Assisting National Board Certified Dental Assistant examination is allowed only after successful completion of a CODA accredited dental assisting program or at least 3350 hours of work experience.
Comment: Credit/no credit grading only. DENT 210 may not be taken for a letter grade. DENT 210 may not be audited.

DENT 210 prepares students to take the Dental Assisting National Board Certified Dental Assistant Exam.

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

1. Prepare to take the 3 part Practice Dental Assisting National Board Certified Dental Assistant Exam.