

COURSES (A-D)

ACCOUNTING

ACC 132 Payroll and Hawai`i General Excise Taxes (3)

3 hours lecture per week

Recommended Preparation: ICS 100 or ICS 101; ACC 201.

ACC 132 provides training in the maintenance of payroll tax reporting systems and compliance with federal and State of Hawai`i payroll (and selected employment) laws. Students gain experience in input, processing, and reporting of payroll tax-related transactions and events within the context of both manual and computerized payroll systems. This course will also cover accounting for and reporting of Hawai`i General Excise and Use taxes. The course contents of ACC 132 prepare students for the payroll certification examinations offered by the American Payroll Association, such as Fundamental Payroll Certification (FPC) and/or Certified Payroll Professional (CPP). This course is designed as a recommended course for certain advanced ACC courses, but also serves those students seeking immediate employment as payroll clerks.

Upon successful completion of ACC 132, the student should be able to:

1. Maintain both manual and computerized payroll systems and related personnel records.
2. Compute gross pay, withholdings, net pay, and employer taxes in a manual payroll system.
3. Maintain general and subsidiary records of all payroll amounts in a manual payroll system and generate related journal entries.
4. Interpret reports and generate journal entries within the framework of a computerized payroll system (e.g. payroll service bureau).
5. Select, maintain, operate and backup a computerized payroll system.
6. Compute required periodic payroll tax deposits/payments.
7. Prepare required monthly, quarterly, and annual payroll tax returns for federal and Hawai`i state payroll taxes: Federal forms 940, 941, W-2, W-3; State of Hawai`i forms HW3, HW-14, UCBP-6.
8. Reconcile paychecks, computerized payroll records, payroll tax returns, and payroll tax deposits/payments.
9. Issue corrected paychecks and generate related journal entries; input corrections to computerized payroll records; prepare amended payroll tax returns; generate adjusting disbursements for payroll tax deposits/payments.
10. Compute Temporary Disability Insurance premiums. Estimate workman's compensation insurance premiums for various classes of workers and in total.
11. Discuss important employer non-financial reporting requirements
12. Perform certain human resource functions and responsibilities related to hiring, management, employee development and termination.
13. Monitor a company's compliance with applicable federal and State of Hawai`i payroll tax and selected employment laws.
14. Capture relevant data, account for, and properly report Hawai`i General Excise and Use taxes.

ACC 134 Individual Income Taxes (3)

3 hours lecture per week

Recommended Preparation: ICS 100 or ICS 101.

ACC 134 is a course for paraprofessional accountants who are assisting an accounting professional in the preparation of the annual tax return of an individual. The course content includes the Federal and Hawai`i income tax systems and basic concepts of taxation for individuals. Students gain experience in the use of tax preparation software and tax research tools and methodologies.

Upon successful completion of ACC 134 the student should be able to:

1. Explain basic income tax concepts and the U.S. and Hawai`i tax codes as they relate to individuals.
2. Explain the basic principles of income recognition.
3. Properly categorize common items as included or excluded from Gross Income.
4. Explain the basic principles of deductions and credits.
5. Properly categorize items as deductible "for" or "from" Adjusted Gross Income.
6. Discuss selected special topics, including limitations on deductible losses, application of capital gains rates, etc.
7. Prepare moderately complex U.S. and Hawai`i income tax returns for individuals both manually and by using commercial tax preparation software, such as CCH Prosystem fx®.
8. Demonstrate an awareness of the various options available under the law(s) as to the recognition of income, deductions, credits, etc.
9. Show knowledge of basic principles of individual tax research using IRS publications as well as software "Help" menus, library, Internet and CD-ROM tax research tools.
10. Prepare and present basic research projects involving individual income tax issues.

ACC 137 Business Income Taxes (3)

3 hours lecture per week

Recommended Preparation: ICS 100 or ICS 101; ACC 134; ACC 201; ACC 202.

ACC 137 prepares students to be paraprofessional accountants assisting an accounting professional in the preparation of the annual tax return of a business. The course covers the Federal and Hawai'i tax systems and basic concepts of the taxation of business entities. Students are also introduced to tax preparation software, tax research tools and methodologies.

Upon successful completion of ACC 137, the student should be able to:

1. Explain basic business income tax concepts.
2. Explain the characteristics of the various forms of business entity and their tax implications.
3. Explain the income tax treatment of each of the following business entities: Proprietorship (Schedule C), C corporation, S corporation, Partnership, Limited Liability Company (LLC).
4. Prepare basic income tax returns for the above businesses entities manually and by using commercial tax preparation software, such as CCH ProSystem fx® or similar program.
5. Apply the proper tax treatment to elements of business income, expense, credits and special items at a basic level.
6. Explain the major differences between "tax" and "book" incomes.
7. Perform basic business tax research using IRS publications as well as software "help" menus, library and the Internet.
8. Prepare and present basic research projects involving business income tax issues.

ACC 150 QuickBooks® for Hawai'i Businesses (3)

3 hours lecture per week

Recommended Preparation: ICS 100 or ICS 101; ACC201.

Comment: Students are expected to provide their own USB compatible high density electronic storage media of minimum size specified by instructor.

ACC 150 introduces popular entry-level accounting software, QuickBooks Pro®. Students gain expertise in the use of QuickBooks Pro® within the framework of an accounting information system. Accounting, business and computer knowledge are reinforced through application of this software tool to case studies and team projects. The course content of ACC 150 prepares students for the QuickBooks® Certification Examination.

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

1. Use QuickBooks Pro® to administer the sales and collections cycle and generate related reports.
2. Use QuickBooks Pro® to administer the purchases and payments cycle and generate related reports.
3. Use QuickBooks Pro® to administer the payroll function and generate related reports.
4. Use QuickBooks Pro® to administer the inventory control function and generate related reports.
5. Use QuickBooks Pro® to administer job cost accounting system and generate related reports.
6. Perform month-end and year-end procedures in QuickBooks Pro®.
7. Import and export data using QuickBooks Pro®.
8. Work as a team member to perform research and present results using presentation software such as PowerPoint®.

ACC 155 Excel® for Businesses (3)

3 hours lecture per week

Prerequisite(s): Credit or concurrent enrollment in ICS 100 or ICS 101.

Recommended Preparation: ACC 202.

Comment: Students are expected to provide their own USB compatible high density electronic storage media of minimum size specified by instructor.

ACC 155 emphasizes the use of spreadsheets and databases as a tool for making business decisions. Students gain not only technical expertise and advanced spreadsheet skills, but also operating proficiency in the use of Microsoft Excel® within the framework of a business information system. Basic Access® will be introduced to students as an alternate tool to deal with data intensive situations. Accounting, business and computer knowledge are reinforced through application of these software tools to model building, trouble shooting, case studies, and team projects.

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

1. Use Excel® to prepare common accounting workpapers, including various supporting schedules, loan amortization schedules, payroll reconciliation, book-to-tax conversion, etc.
2. Design an Excel® worksheet template needed for solution of a business question such as those related to cost-volume-profit planning, capital budgeting, and incremental analysis.
3. Use selected advanced Excel® Data features.
4. Use DDE and OLE features as they relate to other Microsoft programs such as Access®.
5. Record and debug basic macros
6. Assign macros to buttons to create customized menus.
7. Modify recorded macros using VBA® (Visual Basic for Applications),
8. Use selected other advanced Excel® tools.
9. Import data from QuickBooks® or other integrated general ledger systems.
10. Use Access® to create and maintain databases to track accounting and business data.
11. Investigate single-purpose utility programs (e.g. cash flow forecast and fixed asset modules/software) as alternatives to Excel®.
12. Create/Read documents using Adobe Acrobat Reader/Writer or similar software.
13. Work as a team member to perform research and present results using presentation software such as PowerPoint®.

ACC 201 Introduction to Financial Accounting (3)

3 hours lecture per week

Prerequisites: A grade of "C" or higher in ENG 21 or higher level ENG, or a grade of "C" or higher in ESOL 94 or higher, or consent of instructor.

Recommended Preparation: ICS 100 or ICS 101; qualification for MATH 24 or higher.

ACC 201 is an introduction to accounting theory and procedure. Students learn how to record, report, and analyze financial information for sole proprietorships and partnerships.

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

1. Explain the purpose and give examples of the uses of basic financial statements of a business entity.
2. Define assets, liabilities, and owner's equity, and discuss the relationship of the accounting equation to the process of recording business transactions.
3. Explain the purpose of the journal, ledger, and trial balance and show how they are used in the recording process to facilitate the compiling and accumulation of accounting information.
4. Record transactions for service and merchandising businesses in special journals and the general journal.
5. Explain the purpose of adjusting and closing entries, proficiently prepare adjusting and closing entries.
6. Explain the basic steps of the accounting cycle.
7. Prepare and explain the basic elements of the Income Statement, Statement of Owner's Equity, and the Balance Sheet for a service or a merchandising business.
8. Explain "Internal Control" as a function of Accounting and indicate the basic principles involved in establishing controls to safeguard assets and enhance the accuracy and reliability of accounting records.
9. Describe the nature of special journals and subsidiary ledgers, proficiently execute manual recording procedures, and fully explain how computerization affects such procedures.
10. List the basic procedures necessary for effective accounting and control of cash transactions; correctly preparing bank reconciliations; and establishing and maintaining petty cash funds.
11. Record and control transactions involving credit sales and purchases, including the procedures for recording uncollectible accounts.

ACC 202 Introduction to Managerial Accounting (3)

3 hours lecture per week

Prerequisite(s): ACC 201 or both ACC 124 and ACC 125.

Recommended Preparation: ICS 100 or ICS 101.

ACC 202 introduces students to accounting for corporations and an introduction to methods for evaluating financial performance, including cost accounting, budgeting, break-even analysis, ratio analysis, and sources and uses of cash.

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

1. List, define, and indicate the application of basic accounting principles and concepts and their application to accounting procedures and financial reporting requirements.
2. Recognize the differences in the nature of proprietorships, partnerships and corporations and relate such differences in the accounting for and reporting of owners' equities.
3. List, define, and indicate the application of the flow of production costs and record rudimentary transactions involved in manufacturing operations.

4. Prepare financial statements (basic and special) and use analytical techniques used in the analysis and interpretation of financial reports for decision-making purposes.
5. Discuss principles of budgetary control and prepare special budget reports used in the administration of budget-based accounting systems.
6. Utilize the Internet and email as research and communications tools.
7. Effectively communicate accounting information and reports orally and in writing.
8. Determine amounts and record transactions involving corporate organization, issuance, subscription and purchase of the various classes of capital stock, declaration and distributions of dividends, accumulation and restriction of retained earnings.
9. Prepare the stockholders' equity section of the Balance Sheet, the Statement of Retained Earnings and the Income Statement, including presentation of extraordinary and unusual gains and losses, prior period adjustments, and earnings per share.
10. Describe the nature of bonds and record transactions involving bonds including issuance, redemption, interest and amortization of discount and premium, bond sinking funds, and other long-term liabilities, and indicate their balance sheet presentation.
11. Record transactions involving long and short-term investments and show their balance sheet presentation.
12. Analyze cash flows at an introductory level and prepare a Statement of Cash Flows using the indirect method.
13. Analyze and interpret information contained in corporate financial statements from the viewpoint of creditors and investors.
14. List and define examples of production processes, types of and flow of manufacturing costs.
15. Prepare journal entries to record manufacturing costs.
16. Compute product costs and the value inventories for manufacturing operations under job order costing.
17. Compute product costs and the value inventories for manufacturing operations under process costing.
18. Discuss principles used in budgetary systems and prepare basic analytical reports used in administration of those systems.
19. List, define, and indicate the application of the use of standard costing in budgets as instruments of planning and control.
20. Compute basic material and labor cost variances in a standard cost accounting system.
21. Compute basic overhead cost variances in a standard cost accounting system.
22. Discuss capital budgeting techniques, such as cash payback period, discounted cash flow, net present value, and internal rate of return, and indicate their usefulness in managerial decision-making.
23. Discuss other aids in the managerial decision-making process, including incremental cost-benefit analysis.

ACC 221 Intermediate Accounting (3) (Inactive)

6 hours lecture per week for 8 weeks or

3 hours lecture per week for 16 weeks

Prerequisite(s): ACC 132; ACC 133; ACC 150; ACC 155; ACC 202 or approval of the Business Education Department Chairperson.

Recommended Preparation: BUS 100; ENG 160; SP 151, SP 251 or SP 145.

ACC 221 covers generally accepted accounting principles (GAAP) at beyond the introductory level and is intended for students nearing graduation in the Associate of Science in Accounting program, or for those transferring to four-year Accounting programs. Applications of GAAP to recording and reporting requirements for the Income Statement, Statement of Retained Earnings, Balance Sheet, and Statement of Cash Flows are covered in depth. Other topics such as financial statement classification, manufacturing activity financial statements, and reporting and recording alternatives and other advanced issues related to GAAP are also covered. Students will also gain experience in the application of fundamental accounting tools such as spreadsheets and general ledger software to the solution of real-world accounting problems.

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

1. Demonstrate understanding of generally accepted accounting principles (GAAP) and concepts and their application to recording and reporting requirements beyond the introductory level.
2. Prepare comprehensive financial reports with Income Statement, Statement of Retained Earnings, Balance Sheet, and Statement of Cash Flows properly classified.
3. Demonstrate understanding of advanced problems involving valuations, recording and reporting alternatives, and analysis and interpretation of data.
4. Describe the various generally accepted accounting principles and concepts, their development and application. Discuss and apply accounting procedures for control, recording, and reporting of cash and temporary investments.
5. Discuss the problems of valuation of receivables and demonstrate the various methods of estimating and recording doubtful accounts.
6. Discuss accounting and control procedures applicable to inventories; compute the value of inventories using various acceptable methods of pricing and valuation; and discuss the effects of inventory values in the determination of income.
7. Record transactions involving current liabilities to trade creditors or vendors, officers and employees, and government taxing authorities.
8. Discuss the theoretical and practical problems of accounting for valuation of long-term assets, both tangible and intangible. Record acquisitions, expenditures after acquisition, periodic allocations of cost, and disposals.
9. Demonstrate understanding of various types of long-term investments and liabilities, their recording, and their financial statement presentation.
10. Demonstrate an understanding of, and record corporate transactions involving formation, paid in capital, earnings and distributions to stockholders. Prepare financial statements for corporations including calculation and presentation of earnings per share.

11. Prepare and analyze a statement of cash flows.
12. Describe techniques used for analysis and interpretation of financial statements.

ACC 231(Alpha) Professional Skills (3)

3 hours lecture per week

Prerequisite(s): Credit or concurrent registration in ACC 202 or approval of the instructor or Business Education Department Chairperson.

Recommended Preparation: Credit or concurrent registration in ACC 132; 137 (133); 150; 155.

Comment: Students are expected to provide their own USB compatible high density electronic storage media of minimum size specified by instructor.

ACC 231(Alpha) covers the major hands-on practical skills accountants need to know. The topics presented may vary from semester to semester, in order to ensure these skills remain relevant in Hawai'i's accounting field. This course emphasizes real world situations and provides an opportunity for students to demonstrate outcomes of their coursework, critically assess and appropriately apply what has been learned, and effectively use their business teamwork, interpersonal and communication skills - all at a paraprofessional accountant level. ACC 231(Alpha) integrates and builds on professional skills, techniques and knowledge learned in previous courses. The course may be divided into multiple distinct sections, and each may be taught by a different accounting specialist. Coverage of topics may vary, depending on which professional skill sets are chosen. Concepts will be discussed, demonstrated, exercised, and applied primarily through case studies and fieldwork.

Upon successful completion of ACC 231(Alpha), for the professional skill sets chosen, the student should be able to:

1. Apply knowledge, skills and techniques current in the accounting field.
2. Describe the impact of selected topics on current business practices, operating procedures and customer relationship management.
3. Effectively utilize knowledge, skills and techniques current in the accounting field.
4. Apply Generally Accepted Accounting Principles and sound principles of internal control.
5. Evaluate the implementation of selected technologies for efficiency and effectiveness.
6. Make basic recommendations about informed courses of action based on accounting and/or tax knowledge.
7. Use available industry-standard resources and techniques to research selected issues.
8. Demonstrate proficiency in the use of software uniquely applicable to the accounting profession.
9. Exhibit a paraprofessional level of comportment during the conduct of fieldwork studies on selected topics and present findings through paraprofessional-level oral and written presentations.
10. Recognize, be able to define, and demonstrate the practical application of workplace-standard accounting terminology and vocabulary.
11. Describe the purposes of the major components in an accounting system and demonstrate the application of this knowledge.

ACC 231B Professional Skills: Research, Workpapers, and Systems Simulation (3)

3 hours lecture per week

Prerequisite(s): Credit or concurrent registration in ACC 202 or approval of the instructor or Business Education Department Chairperson.

Recommended Preparation: Credit or concurrent registration in ACC 132; 137 (133); 150; 155.

Comment: Students are expected to provide their own USB compatible high density electronic storage media of minimum size specified by instructor.

ACC 231B covers the major hands-on practical skills accountants need to know. ACC 231B emphasizes real world situations and provides an opportunity for students to demonstrate outcomes of their learning, critically assess and appropriately apply what has been learned, and effectively use their business teamwork, interpersonal and communication skills - all at a paraprofessional accountant level.

ACC 231B integrates and builds on professional skills, techniques and knowledge learned in previous courses. The course is composed of three distinct topics:

- A. **Workpaper preparation and document management principles and practices.**
Students will design and create workpapers and supporting schedules to document general ledger and bank account reconciliations, analyze expenses, recap fixed asset accounts, serve as supporting schedules (lead sheets), and report transactional integrity. Students also learn general principles that will assist them in providing other schedules as needed to assist in the monthly or annual closing process. Students will research actual workplace practices regarding workpaper preparation and document management principles and practices present their findings both in writing and through classroom oral presentation.
- B. **Accounting Research**
Students will identify issues subject to research, research them using industry standard tools, document findings, form conclusions, make recommendations and write up the results at the paraprofessional level. Topics for research may include practical applications of FASB pronouncements, individual income or excise tax issues, Sarbanes-Oxley compliance practices, or other issues current in the accounting field. Teams of students (or individuals) will summarize and present their findings both in writing and through classroom oral presentation.
- C. **Systems Simulation**
Students will complete an entire accounting cycle simulation from completion and filing of source documents, through worksheet, supporting schedule and financial statement preparation, through a post-closing trial balance.

Upon successful completion of ACC 231B, the student should be able to:

1. Apply knowledge, skills and techniques current in the accounting field to research, workpaper, and systems simulation problems and cases.
2. Describe the impact of workpapers, research and systems issues on current business practices, operating procedures and customer relationship management.
3. Effectively utilize knowledge, skills and techniques current in the accounting field as they apply to research, workpaper, and systems simulation problems and cases.
4. Apply Generally Accepted Accounting Principles and sound principles of internal control to research, workpaper, and systems simulation problems and cases.
5. Evaluate the implementation of research, workpaper, and systems technologies for efficiency and effectiveness.
6. Make basic recommendations about informed courses of action based on accounting and/or tax research conducted.
7. Make basic recommendations about informed courses of action through paraprofessional-level oral and written presentations
8. Apply selected accounting and tax research skills to research, workpaper, and systems simulation problems and cases.
9. Proficiently utilize financial and tax research software.
10. Generate and use contemporary professional-level workpapers and supporting schedules to document maintenance of the audit trail.
11. Effectively use contemporary professional-level hardware and software components required for transaction generation, documentation, accumulation, summarization, review and analysis.
12. Exhibit a paraprofessional level of comportment during the conduct of fieldwork studies on research, workpaper, and accounting systems.
13. Exhibit a paraprofessional level of comportment in interactions with accounting professionals and in presentations.
14. Present findings from fieldwork studies on research, workpaper, and accounting systems through paraprofessional-level oral and written presentations.
15. Utilize workplace-standard accounting terminology and vocabulary in the preparation of workpapers and supporting documentation, in interactions with accounting professionals, in accounting and tax research cases and scenarios, and in the classroom.
16. Recognize, be able to define, and apply workplace-standard accounting terminology and vocabulary to systems simulations problems and cases.
17. Describe the purposes of the major components in an accounting system and demonstrate the application of this knowledge in research, workpaper, and systems simulation problems and cases.

ACC 250 (Alpha) Topics in Application of AIS Tools - Midrange Solutions I (3) (Inactive)

6 hours lecture per week 8 week course; 3 hours lecture per week (16 week course).

Prerequisite(s): ACC 132; ACC 150; ACC 202 or approval of the Business Education Department Chairperson.

ACC 250 presents accounting information systems (AIS) topic(s) which may vary from semester to semester. Its purpose is to maintain currency with rapidly changing AIS technologies in Hawai'i's accounting field. Probable topics include familiarization with the characteristics and application of midrange integrated accounting packages such as MAS90. Students will have the opportunity to apply the skills learned in ACC 201, ACC 202, ACC 132, and ACC 150 to the administration of the "back office" modules/components of a moderately sophisticated computerized accounting system. Because the definition of what constitutes "back office" varies among software manufacturers, the specific modules/components studied may vary, depending on which manufacturer's midrange solution is currently in use. Concepts will be discussed, demonstrated, exercised, and applied in case studies to provide an understanding of AIS technologies and control systems and to assist students in making informed decisions about proper manual supporting systems and related technologies.

Upon successful completion of ACC 250, for the modules/components chosen, the student should be able to:

1. Describe the purpose of the back office modules/components in an AIS.
2. Use standard terminology and vocabulary related to the back office modules/components.
3. Understand the hardware and software components required for transaction generation, accumulation and summarization, and how they are related.
4. Demonstrate the practical application of skills in the installation, configuration, and management of the AIS components.
5. Evaluate the implementation of the technology for efficiency and effectiveness.
6. Describe the relationship of the back office modules/components to other AIS components.
7. Describe its impact on current business practices, operating procedures, and customer interface.

ACC 250B Topics in Application of AIS Tools – Midrange Solutions I – MAS90 (3) (Inactive)

6 hours lecture per week 8 week course; 3 hours lecture per week (16 week course).

Prerequisite(s): ACC 202; ACC 132; ACC 150 or Approval of the Business Education Department Chairperson.

ACC 250B covers the fundamentals of administering an accounting information system (AIS) that uses the MAS90 midrange integrated accounting package. Students will have the opportunity to apply the skills learned in ACC 201, ACC 202, ACC 132, and ACC 150 to the administration of the Core modules/components of MAS90. Concepts will be discussed, demonstrated, exercised, and applied in case studies to provide an understanding of AIS technologies and control systems and to assist students in making informed decisions about proper manual supporting systems and related technologies.

Upon successful completion of ACC 250B, the student should be able to:

1. Describe the purpose of the Core modules/components in an AIS that uses MAS90.
2. Use standard terminology and vocabulary related to the Core modules/components: Library Master, General Ledger, Accounts Receivable, Accounts Payable, Bank Reconciliation, and Payroll.
3. Understand the hardware and software components required for transaction generation, accumulation and summarization, and how they are related.
4. Demonstrate the practical application of skills in the installation, configuration, and management of the AIS components.
5. Evaluate the implementation of the technology for efficiency and effectiveness.
6. Describe the relationship of the Core modules/components to other AIS components.
7. Describe its impact on current business practices, operating procedures, and customer interface.
8. Document the operational processes in an AIS and evaluate accounting internal controls.

ACC 251(Alpha) Midrange Accounting Applications (3)

3 hours lecture per week

Prerequisite(s): ACC 150 or approval of the instructor or Business Education Department Chairperson.

Recommended Preparation: ACC 202; concurrent registration in ACC 231(any alpha).

Comment: Students are expected to provide their own USB compatible high density electronic storage media of minimum size specified by instructor. ACC 251 (Alpha) is repeatable for a maximum of six credits. A student may not repeat the same topic course for additional credit.

ACC 251(Alpha) covers the operation of a midrange accounting software system. The topics presented may vary from semester to semester, in order to maintain currency with rapidly changing accounting software systems technologies in Hawai'i's accounting field. Primary topics include hands-on practical skills in the operation of the software systems covered. Students will have the opportunity to integrate the skills learned in previous accounting classes to the course work. Coverage of specific modules (or system components) may vary, depending on which manufacturer's midrange solution is currently in use. Concepts will be discussed, demonstrated, exercised, and applied in case studies to provide an understanding of accounting software systems technologies and control systems and to assist students in making informed decisions about proper manual supporting systems and related technologies.

Upon successful completion of ACC 251(Alpha), for the modules/components chosen, the student should be able to:

1. Describe the purpose of the modules/components in an accounting software system.
2. Use standard terminology and vocabulary related to the modules/components.
3. Use the hardware and software components required for transaction generation, accumulation and summarization.
4. Explain how hardware and software components are related.
5. Install, configure and manage the system's components.
6. Evaluate the implementation of the technology for efficiency and effectiveness.
7. Describe the relationship of the modules/components to other system components.
8. Describe its impact on current business practices, operating procedures and customer interface.

ACC 251B Midrange Accounting Applications - MAS90/200 (3)

3 hours lecture per week

Prerequisite(s): ACC 150 or approval of the instructor or Business Education Department Chairperson.

Recommended Preparation: ACC 202; concurrent registration in ACC 231.

Comment: Students are expected to provide their own USB compatible high density electronic storage media of minimum size specified by instructor.

ACC 251B allows students the opportunity to apply the skills learned in ACC 150 to the administration of the major modules/components of a moderately sophisticated computerized accounting system. The following MAS90/200 modules are covered:

- Core Modules: Library Master, General Ledger, Accounts Payable, Accounts Receivable
- Distribution Modules: Sales Order, Purchase Order, Inventory Management

Concepts will be discussed, demonstrated, exercised, and applied in classroom activities and case studies to provide an understanding of accounting system technologies and control systems. Student will also investigate proper manual supporting systems and related technologies.

Upon successful completion of ACC 251B, the student should be able to:

1. Describe the purpose of the major Core and Distribution modules/components in an accounting system that uses MAS90/200.
2. Use standard terminology and vocabulary related to the Core modules/components: Library Master, General Ledger, Accounts Payable, Accounts Receivable modules.
3. Use standard terminology and vocabulary related to the Distribution modules/components: Inventory Management, Sales Order and Purchase Order modules.
4. Describe the hardware and software components required for transaction generation, accumulation and summarization and how they are related.
5. Demonstrate the practical application of skills in the installation, configuration, and management of the accounting system components.
6. Evaluate the implementation of the technology for efficiency and effectiveness.
7. Describe the relationship of the modules/components to other accounting system components.
8. Describe the impact of the technology on current business practices, operating procedures and customer interface.
9. Document the operational processes in an accounting system and evaluate accounting internal controls.

ACC 293V Accounting Internship (1-3)

1 hour seminar per week for one semester. Forty hours of work experience per credit. If taken as a three-credit course, then 10 hours work experience per week for a maximum of 12 weeks.

Prerequisite(s): Satisfactory completion of any Accounting program Certificate of Competence or higher level certificate/degree, or consent of program coordinator or instructor.

Comment: ACC 293V is repeatable for a maximum of nine credits, however, only three credits may be applied towards the fulfillment of the AS Accounting degree requirements. Letter grade only. May not be audited. May not be taken credit/no credit.

ACC 293V integrates classroom learning with supervised practical experience. The course offers the opportunity to develop workplace soft skills as well as technical skills. Through a partnership between the employer and the college, students get practical on-the-job training while earning credits towards their Accounting degree (or certificate). The classroom portion of ACC 293V covers goal-setting, letter writing, creation of a professional resume, proper etiquette for job interviews, and other career related topics.

Upon successful completion of ACC 293V, the student should be able to:

1. Describe the interpersonal and technical skills required for the accounting field.
2. Identify the personal qualities, attitudes, and work habits required in the accounting field.
3. Clarify his or her career goals and aspirations.
4. Perform activities in the cooperative work area involving such areas as routine tasks, problem or crisis situations, creative suggestions or initiatives, personal development, work attitudes and other competencies as determined by the instructor.
5. Write professional résumés and cover letters appropriate to potential job openings.
6. Present himself or herself professionally during interviews.
7. Maintain a detailed time record summarized by task category.
8. Demonstrate the proficiency in overall work competencies, such as analyzing or describing the job assignment in relationship to principles, concepts or procedures covered in the Accounting program.
9. Demonstrate practical work place experience and relate that experience to the Accounting field.
10. Communicate clearly, and meet industry standards for the Accounting field in workplace ethics, behavior, team work and interpersonal relations skills.
11. Identify the personal qualities, work habits, and attitudes that lead to genuine success in the work place.
12. Write an essay demonstrating overall competency, such as analyzing or describing the student's job in terms of the organization and its relationship to principles, concepts or procedures covered in the Accounting field.
13. Explain the importance of lifelong learning in the constantly changing Accounting field.

AMERICAN SIGN LANGUAGE**ASL 101 Elementary American Sign Language I (4) KCC AA/HSL**

3 hours lecture, 2 hours lecture/lab per week

ASL 101 introduces students to the use and study of American Sign Language (ASL), including its rules of grammar and the cultural aspects of the Deaf Community. Emphasis is on building elementary receptive and expressive ASL vocabulary; and syntax including appropriate grammatical and affective facial expressions.

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

1. Identify others by using basic descriptions (descriptive and semantic classifiers).
2. Ask and answer basic questions (Yes/No and Who).
3. Respond to and give basic commands.
4. Practice responding to signers perspective when seeing directions or explanations.
5. Use appropriate classifiers and facial grammar to describe shapes and locations.
6. Exchange information and participate in discussions about close personal information- self, family, surroundings, and activities.
7. Accurately convey various types of numbers: cardinal (1-100), basic number sentences, relative and clock time, age, etc.
8. Express personal preferences on an introductory level.
9. Practice elementary ASL syntax both manual and non-manual including: basic sentence structures such as affirmations (express agreement), negations, confirmations, interrogatives, commands, declaratives and personal and possessive pronouns.
10. Incorporate culturally, appropriate, attention-getting behaviors, basic etiquette and conversational strategies.
11. Interact with Deaf people in social situations and through service learning activities to get an understanding of the Deaf Community and Deaf Culture.
12. Discuss aspects of the Deaf Community, including its culture, how Deaf and hearing people have interacted historically and the role of ASL in the lives of Deaf people.
13. Provide feedback to classmates during large and small group activities.

ASL 102 Elementary American Sign Language II (4) KCC AA/HSL

3 hours lecture, 2 hours lecture/lab per week

Prerequisite(s): ASL 101 or equivalent or instructor consent.

In ASL 102, students continue the study and use of American Sign Language (ASL), including its rules of grammar and cultural aspects of the Deaf Community. Emphasis is placed on continued building of elementary receptive and expressive sign vocabulary, and syntax, including appropriate grammatical and affective facial expressions.

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

1. Demonstrate basic, functional conversational skills in ASL through giving and asking directions, making requests, contradicting others, explaining relationships and describing others.
2. Demonstrate an increased proficiency in ASL syntax as developed in ASL 101 (including basic sentence structures, such as affirmations, negations, confirmations, interrogatives, commands and declaratives).
3. Show beginning level competency with new grammatical concepts (rhetorical and wh-questions).
4. Continue to use simple temporal markers, pronominalization, numbers, spatial referencing, noun-verb pairs, and contrastive structure.
5. Use role shifting, descriptive classifiers, dual personal pronouns, temporal sequencing and inflecting verbs.
6. Demonstrate social and cultural behaviors in a polite, informal register of ASL.
7. Demonstrate knowledge of low-intermediate level ASL vocabulary.
8. Discuss various aspects of the Deaf Community, its culture, how Deaf and hearing people have interacted historically and the role of ASL in the lives of Deaf people.
9. Show the role of creative signing in ASL.
10. Produce written transcriptions of short ASL texts beyond the 101 level.
11. Provide feedback to classmates during large and small group activities.

ASL 201 Intermediate American Sign Language I (4) KCC AA/HSL

3 hours lecture, 2 hours lecture/lab per week

Prerequisite(s): ASL 102 or equivalent or instructor consent.

In ASL 201 students continue to refine the language skills and knowledge acquired in American Sign Language 101-102. Emphasis is on encouraging students to talk about people and things in a more abstract manner, using more complex grammar, descriptors and conversational strategies.

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

1. Demonstrate basic, functional conversational skills in ASL through making requests, suggestions and complaints, talking about routines, exchanging complex personal information, and describing locations in detail.
2. Use the ASL syntax learned in ASL 101-102 more accurately.
3. Use conditionals, "when" clauses, descriptive and locative classifiers properly.
4. Recognize and use more complex temporal markers, numbers, role shifting, spatial referencing, temporal sequencing, inflecting verbs, and contrastive structure.
5. Show an increased, intermediate-level vocabulary that includes everyday objects and activities.
6. Comfortably describe family history and countries of origin.
7. Demonstrate the ability to produce the correct signs for various countries and nationalities.
8. Accurately convey life events.
9. Sustain narratives about personal experiences.
10. Demonstrate appropriate social and cultural behaviors in a polite, semi-formal register of ASL.
11. Discuss more aspects of the Deaf Community, its culture and the role ASL plays in the lives of Deaf people.
12. Demonstrate an understanding of several forms of ASL literature. Produce transcriptions of longer ASL texts.
13. Use finger spelled words and lexical borrowings appropriately.
14. Provide feedback in ASL to classmates during large and small group activities.
15. Produce transcriptions of longer ASL texts.

ASL 202 Intermediate American Sign Language II (4) KCC AA/HSL

3 hours lecture, 2 hours lecture/lab per week

Prerequisite(s): ASL 201 or equivalent or instructor consent.

In ASL 202 students continue to refine the language skills and knowledge acquired in American Sign Language 101-201. To strengthen their fluency, students will concentrate on describing objects, events, locations and complicated circumstances in greater detail. Also, creative expressions of ASL will be covered extensively.

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

1. Demonstrate increased control and confidence over grammar, vocabulary and common expressions used in daily conversation.
2. Describe unusual objects and their function in great detail by using appropriate descriptive and instrument classifiers.
3. Show the distinction between similar objects.
4. Make recommendations, give opinions, express feelings about certain activities, and handle digressions and interruptions.
5. Describe various disruptions using element classifiers.
6. Recognize and use more complex adverbial and adjectival facial modifiers.
7. Accurately use complex numbers and temporal markers, inflecting and spatial verbs, and comparative and contrastive structure.
8. Comfortably negotiate common interactions, such as shopping and dining out.
9. Sustain and comprehend longer narratives about various circumstances and activities.
10. Demonstrate appropriate social and cultural behaviors in a variety of settings.
11. Discuss, in detail, aspects of the Deaf Community not previously covered in ASL 101-201, including its culture and the role of ASL in the lives of Deaf people.
12. Demonstrate examples of creative ASL (i.e., Sign play).
13. Identify and understand several forms of ASL literature.
14. Produce transcriptions of complex ASL texts.
15. Use and show comprehension at the intermediate level of fingerspelled words and lexical borrowings.
16. Provide feedback in ASL to classmates during large and small group activities.

ASL 290 American Sign Language and Deaf Culture through Application (4) KCC AA/DH

3 hours lecture, 3 hours lab per week

Prerequisite(s): Students must be native, bilingual users of American Sign Language, or have completed ASL 202 or equivalent or approval of the instructor.

Comment: ASL 290 is designed for native, bilingual users of American Sign Language and for the advanced level ASL students. Instructor approval is required. ASL 290 is conducted in American Sign Language.

ASL 290 is designed to prepare students to serve as American Sign Language and Deaf 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 ASL 290, the student should be able to:

1. Using ASL, describe diversity and variety of Deaf Culture as identified through service learning experience and assigned readings.
2. Demonstrate job-related skills gained from practical work experience in supervised service learning activities.
3. Evaluate and integrate the service learning experiences using appropriate vocabulary and grammar in communicative activities, discussions, and projects.
4. Using ASL, critique the needs of the Deaf community in classroom discussion, reflective journals, and presentations.
5. Apply critical thinking and problem-solving skills related to service-learning experiences and course projects.
6. Compare and contrast linguistic and cultural features, perspectives, and values within Deaf Communities and between Deaf Culture and U.S. mainstream (non-signing) culture.
7. Assess the relationship between language acquisition, language learning, and culture.
8. Effectively communicate in ASL, incorporating Deaf Culture norms.

AMERICAN STUDIES

AMST 201 American Experience: Institutions and Movements (3) KCC AA/DH and KCC AS/AH

3 hours lecture per week

Recommended Preparation: Credit in or qualification for ENG 100, ENG 160 or ESL 100.

AMST 201 is an interdisciplinary course that examines continuity, diversity, and changes in American values and lives in an historical context, as manifested in social institutions and social movements. It introduces students to various types of primary materials (fictional and historical narratives, sermons, speeches, legal documents, journalistic accounts, films, etc.) and to different ways of reading and analyzing such materials.

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

1. Identify the continuity of some American values in an historical context.
2. Examine and evaluate the significance of ethnic, racial, and cultural diversity in American life.
3. Identify and analyze major themes in selected narrative, dramatic, and cinematic works dealing with the American experience.
4. Identify and examine specific American social movements and their significance.
5. Identify and describe the issues involved in socio-economic inequality, and the possibilities of social mobility in America.
6. Write essays that identify and elaborate specific American cultural values.
7. Develop and defend value judgments.
8. Express ideas clearly, orally and in writing.

AMST 202 American Experience: Culture and the Arts (3) (Inactive) KCC AA/DH and KCC AS/AH

3 hours lecture per week

Recommended Preparation: Qualification for or completion of ENG 100, ENG 160 or ESL 100.

AMST 202 examines continuity, diversity, and change in American values and lives in an historical context, as manifested in art and culture. It introduces students to the techniques of interpreting various types of primary materials (such as novels, stories, poems, songs, etc.).

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

1. Demonstrate an understanding of the process of continuity and change in diverse American cultural values over time.
2. Identify and evaluate specific examples of American artistic creativity in such fields as literature, film, visual arts, and music.
3. Identify specific American cultural and artistic movements, and their significance.
4. Identify major themes in selected narrative, dramatic and visual works dealing with American experience.
5. Demonstrate an awareness of the diversity of American values and experience in an historical context.
6. Explain the relationship between artistic expression and the culture from which it emerges.
7. Identify certain techniques that artists use to contribute to an esthetic effect.
8. Assess and evaluate primary source materials (speeches, literary texts, autobiographical narratives, photographs, songs, etc).
9. Develop and defend value judgments.
10. Express ideas clearly, orally and in writing.

AMST 211 Contemporary American Domestic Issues I (3) (Inactive) KCC AA/DS and KCC AS/SS

3 hours lecture per week

Recommended Preparation: Qualification for ENG 100, ENG 160, or ESL 100.

AMST 211 examines contemporary American domestic issues within their historical contexts and in relation to American values and institutions.

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

1. Demonstrate an understanding of the importance of political, social, and cultural diversity in American life.
2. Demonstrate an understanding of the citizen's relationship to government and other social institutions.
3. Explain significant values conflicts, such as that between individualism and conformity, in American life.
4. Utilize basic concepts and terminology pertaining to the analysis of social issues.
5. Demonstrate an understanding of the historical importance of civil rights and civil liberties in American culture.
6. Explain the interdisciplinary approach to the study of America.
7. Formulate and defend value judgments pertaining to American social issues.
8. Demonstrate an understanding of the importance of historical perspective for understanding various social issues.
9. Demonstrate an understanding of the role of social conflict and dissent in shaping America.

10. Speak knowledgeably about the complexity of American values and identity.
11. Write informed papers on a variety of American social issues.
12. Express ideas and opinions clearly, orally and in writing.

AMST 212 Contemporary American Issues II (3) (Inactive) KCC AA/DS and KCC AS/SS

3 hours lecture per week

Prerequisite(s): Qualification for ENG 100; qualification for MATH 24.

AMST 212 is an interdisciplinary introduction that explores America's relationship with the rest of the world.

Upon successful completion of AMST 212, the student should be able to:

1. Gain a better understanding of the values which comprise the American character.
2. Demonstrate an understanding of how our historical and cultural values have helped to determine how we relate to other cultures and ideologies.
3. Understand the changes which have occurred in post World War II foreign affairs.
4. Develop a better understanding of national defense issues.

ANTHROPOLOGY

ANTH 151 Emerging Humanity (3) KCC AA/FGA and KCC AS/SS

3 hours lecture per week

Prerequisite(s): Qualification for ENG 100.

ANTH 151 introduces students to human biological evolution and the development of technology, language, and sociopolitical institutions across the world prior to circa AD 1500. Archaeology and physical anthropology provide a long-term global perspective on the emergence and development of humanity over the last 5 million years. Specific topics include (but are not limited to) the origins of plant and animal domestication, the genesis of cities and urbanism, and the political and ecological consequences of human impact on the natural environment.

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

1. Identify the major theoretical orientations in anthropology and explain how these orientations shape the fieldwork experience.
2. Explain how anthropologists study subsystems of culture, including archaeology, economic, kinship, political, and religious systems, personality development and cultural change.
3. Articulate a concept of culture that will be useful in analyzing cross-cultural issues in Hawai'i, the United States and the world.
4. Differentiate cross-cultural differences and similarities in Hawai'i's multi-cultural society.
5. Describe patterns of culture in Asia and the Pacific Islands areas and discuss culture, adaptation, language, political organization or society in Asian and Pacific Island regions.
6. Use anthropological perspectives on work to explore career interests in health, human services, education and other fields.
7. Identify cross-cultural issues and develop a research paper using literature sources and interviews.
8. Express and discuss research results in writing.

ANTH 152 Global Perspectives on Humanity (3) KCC AA/FGB

3 hours lecture per week

Prerequisite(s): ENG 100.

ANTH 152 is a critical examination of the modern era through the discipline of Anthropology. In this course, students will investigate the movements of European nations and the impact of colonization on Asia, North and South America and vast expanse of the Pacific Islands. We will study the progress of the great civilizations on earth and follow trends in globalization and cultural development in the post-1500 world. The course will provide students with a multicultural perspective on the world, and deepen their understanding from a global perspective.

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

1. Analyze global issues and events through inquiry and inform her/himself about the historical, geographical, cultural, political, economic, and religious contexts within which these issues must be understood and choices made.
2. Compare and contrast her/his own and other cultures and the multiple perspectives, values, and identities they engender.
3. Identify the world's different political systems, including democracy, and recognize that democracy can be practiced in differing

ways.

4. Link cultural literacy with language learning and actively pursue linguistic and cultural competencies in languages beyond her/his own.
5. Communicate across cultures effectively by listening, negotiating, and speaking up.
6. Translate global learning into ethical and reflective practice, mindful of the consequences of her/his actions in a locally diverse and globally heterogeneous community.
7. Recognize the impact of culture in her/his own life, and believe that her/his personal actions, both individually and collaboratively, can, in turn, influence the world.

ANTH 200 Cultural Anthropology (3) KCC AA/DS and KCC AS/SS

3 hours lecture per week

Prerequisite(s): Qualification for ENG 100; qualification for MATH 24.

ANTH 200 examines the concept of culture with a focus on culture as an adaptive strategy developed by human populations in response to their environment.

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

1. Explain how anthropologists study economic, kinship, political, religious systems, personality development and cultural change.
2. Differentiate cross-cultural differences and similarities in Hawaii's multi-cultural society.
3. Describe patterns of culture in Asia and the Pacific Island areas and be able to discuss culture, adaptation, language, political organization or society in Asian and Pacific Island regions.
4. Use anthropological perspectives on work to explore career interests in health, human services, education and other fields.
5. Identify cross-cultural issues and develop a research paper using literature sources and interviews.
6. Express and discuss research results in writing.
7. Identify the major theoretical orientations in cultural anthropology and understand how these orientations shape the fieldwork experience.
8. Develop a concept of culture that will be useful in analyzing cross-cultural issues in Hawaii, the United States and the world.

ANTH 210 Archaeology (3) Inactive

3 hours lecture per week

ANTH 210 Introduces prehistoric archaeology, the methods and techniques of excavation and laboratory analysis, and a brief survey of man's cultural growth in prehistoric times.

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

1. Identify the interactions between the two major fields of anthropology, physical anthropology and cultural anthropology.
2. Identify the methods archaeologists use in gathering material evidence about man's past.
3. Analyze and diagnose anatomical and attribute differences, and understand the process of archaeological inference.
4. Identify the major explanatory concepts and theories in archaeology.
5. Identify environmental and cultural processes, which shape the archaeological record.
6. Identify how archaeologists examine living human populations to gain insights into the formation of archaeological sites and materials.
7. Delineate major archaeological work in Hawai'i and the Pacific.
8. Apply archaeological concepts and theories, and utilize literature and informant sources, to prepare a research paper.
9. Express clearly in writing, and verbally present, research results.

ANTH 215 Physical Anthropology (3) (Inactive) KCC AA/DB

3 hours lecture per week

Prerequisite(s): Qualification for ENG 100; qualification for MATH 24.

ANTH 215 introduces physical anthropology: modern methods, techniques, and theories of the study of human evolution, primates, and physical adaptations of modern humans to their environment.

Upon successful completion of ANTH 215, the student should be able to:

1. Identify the major concerns, methods, and theoretical orientation of the field of physical anthropology and relate it to other social science fields and branches of anthropology.
2. Describe the major causes of biological variation in living human populations and theories relating these factors to environment and culture.
3. Identify the major explanatory concepts and theories now accepted in the study of human evolution, including genetics and DNA analysis.
4. Explain how primate evolution and behavior relates to the study of human evolution and variation.
5. Demonstrate the use of computers and laboratory techniques to gather and interpret physiological data on human and primate populations.
6. Identify and explain the relationships of fossil evidence to current theories of primate and hominid evolution.
7. Apply fieldwork observations, laboratory work, and library research to obtain and analyze data and prepare research reports.
8. Express clearly, in writing, and verbally present research results.

ANTH 235 Introduction to Pacific Island Peoples (3) Inactive

3 hours lecture per week

Prerequisite(s): Qualification for ENG 100; qualification for MATH 24.

ANTH 235 introduces the traditional and contemporary cultures of the Pacific. Emphasis is placed on cultural change and comparisons between Hawai'i and other Pacific Island societies.

Upon successful completion of ANTH 235, the student should be able to:

1. Recognize the voyaging spirit and skills of Pacific island navigators.
2. Explain Pacific settlement theory and the role of archeology in the development of this theory.
3. Explain the relationship between culture and ecology in the Pacific Islands.
4. Identify cultural differences and similarities in the three culture areas of the Pacific: Melanesia, Micronesia, and Polynesia.
5. Analyze oral narrative materials to gain insight into traditional Pacific cultures.
6. Evaluate the impact of European and Asian influence in Hawai'i and other Pacific island societies.
7. Compare and contrast economic opportunities and constraints in Hawai'i and other Pacific societies.
8. Identify social problems in the contemporary Pacific and assess their potential impact on the state of Hawai'i.
9. Identify cross-cultural issues and develop a research paper using literature sources and interviews.
10. Express and discuss research results clearly in writing.

ART

ART 101 Introduction to the Visual Arts (3) KCC AA/DA and KCC AS/AH

3 hours lecture per week

Recommended Preparation: Qualification for or completion of ENG 22.

ART 101 focuses on the nature of the visual arts and their expression in various forms.

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

1. Apply a knowledge and understanding of the elements of art, the principles of design and the creative process.
2. Exhibit a familiarity with major historical and contemporary movements in art and be able to understand how art reflects its time.
3. Apply an understanding of the various media.
4. Explore the visual arts' influence on the quality of life.
5. Become involved in the act of creativity.
6. Incorporate writing as a tool for analyzing art forms.

ART 105 Introduction to Ceramics (3) KCC AA/DA

6 hours lecture/lab per week

Recommended Preparation: Qualification for MATH 24.

Comment: Course materials cost approximately \$45.

ART 105 focuses on three-dimensional concepts in clay; hand-building and wheel-throwing techniques.

Upon successful completion of ART 105, the student should be able to:

1. Exhibit basic skill competency by producing finished ceramic objects with hand building and wheel throwing techniques.
2. Proceduralize the ceramic process.
3. Comprehend and sensitively apply the visual elements of line, shape, color, texture, volume and mass and the design principles of balance, rhythm, dominance, contrast, variation and unity to the execution of ceramic objects.
4. Apply a basic understanding of color and color theory as it relates to the use of glazes.
5. Complete the creative problem-solving process from planning and discovery to implementation and evaluation.
6. Utilize a basic understanding of drawing as a means of notation, conceptualization and visual organization.
7. Exhibit an awareness of historic and contemporary examples of ceramics.
8. Begin to use the ceramic process to express personal imagery.
9. Identify and articulate the concepts and intent of a finished ceramic piece.

ART 106J Sculpture - Small-Scale, Jewelry (3) KCC AA/DA

6 hours lecture/lab per week

Comment: ART 106J may not be audited. Approximate cost for supplies for ART 106J is \$60.00.

ART 106J gives students experience in the fabrication and casting of three-dimensional forms on a small scale including jewelry, small-scale sculpture, and miniature multi-media art. Fabrication techniques may include cutting, joining, surface decorating, and finishing. Casting techniques may include the use of wax and organic materials for the lost wax process.

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

1. Successfully use a variety of tools, processes, and techniques in the development of metalwork.
2. Successfully apply the visual elements and principles of design.
3. Comprehend concept development from planning to execution of metalwork.
4. Develop craftsmanship through hand-eye coordination and the process of creative problem solving in the manifestation of metalwork.
5. Perform visual communication skills through critique, presentation and discussion.

ART 107 Introduction to Photography (3) KCC AA/DA

6 hours lecture/lab per week

Comment: Students must have a film camera with adjustable shutter speed, aperture and light meter. ART 107 materials and supplies will cost from \$150-200 (not counting the cost of a film camera).

ART 107, an introductory course, provides instruction in the elements, principles and techniques of black and white photography. No prior knowledge of photography is required.

Upon successful completion of ART 107, the student should be able to:

1. Perform and apply basic photographic techniques such as single lens reflex camera operation, black and white film processing and darkroom print enlargement.
2. Apply the fundamental visual, design and camera optical principles.
3. Develop knowledge of the traditions and history of photography.
4. Experiment by taking risks through the creative problem-solving process: from planning and discovery to implementation and evaluation.
5. Develop strong communication skills to effectively critique and analyze photographic imagery.

ART 109 Understanding Image in Motion (3) (Inactive)

3 hours lecture per week

Prerequisite(s): Qualification for ENG 100 or consent of instructor.

Comment: ART 109 is repeatable once for a maximum of six credits.

ART 109 is a lecture survey course that explores the art of the moving image, both in film and video. It includes the history of moving images, national and international styles, various genres (theatrical features, documentaries, animation, experimental, fine art, etc). It examines aesthetic issues of the moving image, editing, structure, cinematography, lighting and drama. It explains the techniques employed to meet those aesthetic goals. Every class session includes a lecture introduction and a screening of some filmic works.

Upon successful completion of ART 109, the student should be able to:

1. Demonstrate through writing knowledge of the history, theory, aesthetics, current trends and/or genres of the moving image as it relates to film and video.
2. Analyze and document the content of the moving image with respect to a targeted audience in a research paper.
3. Identify the impact of moving images on human communication in the context of current social, cultural and political trends.
4. Demonstrate strong verbal communication and writing skills through oral presentations and writing assignments.
5. Use appropriately the vocabulary of the moving image, both film and video, in speaking and writing.

ART 111 Introduction to Watercolor Painting (3) KCC AA/DA

6 hours lecture/lab per week

Comment: Approximate cost of art supplies for ART 111 is \$80.00.

ART 111 offers an introduction to watercolor materials, techniques, vocabulary, and the review of watercolor masters through visual media and demonstration(s).

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

1. Select and use watercolor materials.
2. Show proficiency in the use of various watercolor techniques.
3. Utilize the various art elements and design principles in communicating visual ideas.
4. Utilize various design principles in composing a watercolor painting.
5. Complete the creative problem-solving process, from planning and discovery to implementation and evaluation.

ART 112 Introduction to Digital Arts (3) KCC AA/DA

6 hours lecture/lab per week

Recommended Preparation: ART 115

Prerequisite(s): Qualification for ENG 100

Comments: Student must purchase design supplies (approximately \$40.00)

ART 112 is a studio introduction to digital technology and its applications to the production of visual art. Emphasis will also be placed on developing an aesthetic criteria for evaluation.

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

1. Create original digital graphic artwork using appropriate design principles, elements of art, vocabulary, digital graphic software, and digital graphical technological processes.
2. Apply problem-solving techniques to develop art projects according to specifications, then critique and defend own artwork.
3. Use the vocabulary and technological processes of digital graphics.
4. Use digital graphics to generate original visual images.
5. Use a variety of industry-standard digital graphic software packages and input/output devices.
6. Work with vector and bitmap images.
7. Apply the visual elements of line, shape, value, color, texture, space, time and motion as well as the design principles of balance, rhythm, emphasis, contrast, variation, and unity in the creation of digital art works.
8. Demonstrate basic animation principles and skills.
9. Complete the creative problem-solving process from the preliminary planning stage and exploration through revisions to the final product.
10. Experiment by taking risks through the process of exploration during the creative process.
11. Achieve individual creative decisions.
12. Develop strong communication skills (written and oral) to effectively critique and defend coursework.

ART 113, 114, 115, and 116 are intended for potential Art majors, but are also open to other students. These courses are the building blocks for all of the 200 level studio courses.

ART 113 Introduction to Drawing (3) KCC AA/DA

6 hours lecture/lab per week

Recommended Preparation: ART 101

Comment: Course materials for ART 113 will cost approximately \$75.

ART 113 is an introductory drawing course focusing on the descriptive, expressive, and formal aspects of visual language through drawing practice.

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

1. Use the basic elements of the visual arts (line, value, shape, texture, modeling, pattern, composition) to arrive at an illusion of space, image and form.
2. Demonstrate a thorough understanding of basic linear perspective.
3. Demonstrate a skillful use of a variety of drawing materials and techniques.
4. Develop an awareness of the interaction of seeing, mental visualization and drawing.

ART 114 Introduction to Color (3) KCC AA/DA

6 hours lecture/lab per week

Comment: Course supplies and materials for ART 114 will cost approximately \$150.00

ART 114, an introductory color course, focuses on theory and application of color as related to studio art practice.

Upon successful completion of ART 114, the student should be able to:

1. Perceive and describe the multiple dimensions of color: hue, value, intensity and temperature.
2. Establish a solid understanding of color interaction, theories and vocabulary.
3. Demonstrate skills in paint mixing, matching and application.
4. Utilize paper and paint to creatively solve posed color problems.
5. Develop a personal sense of color.

ART 115 Introduction to Design (3) KCC AA/DA

6 hours lecture/lab per week

Recommended Preparation: Credit or concurrent enrollment in ART 101

Comment: Course materials and supplies for ART 115 will cost approximately \$125.00.

ART 115 is a foundation studio course that focuses on the structure and fundamentals of two-dimensional design. Emphasis is placed on studio projects that introduce the visual elements and apply the principles of design. This is a beginning art course that prepares the student for further study in drawing, painting, sculpture, graphic design, illustration and other advanced visual studies.

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

1. Use the vocabulary and technological processes of digital graphics.
2. Use digital graphics to generate original visual images.
Use a variety of industry-standard digital graphic software packages and input/output devices.
3. Work with vector and bitmap images.
4. Apply the visual elements of line, shape, value, color, texture, space, time and motion as well as the design principles of balance, rhythm, emphasis, contrast, variation, and unity in the creation of digital art works.
5. Demonstrate basic animation principles and skills.
6. Complete the creative problem-solving process from the preliminary planning stage and exploration through revisions to the final product.
7. Experiment by taking risks through the process of exploration during the creative process.
8. Achieve individual creative decisions.
9. Develop strong communication skills (written and oral) to effectively critique and defend coursework.

ART 116 Introduction to Three-Dimensional Composition (3) KCC AA/DA

6 hours lecture/lab per week

Comment: Formerly ART 106. ART 116 may not be audited. Approximate cost for supplies for ART 116 is \$80.00.

ART 116 is a foundation course in three-dimensional design and is concerned with a visual dialogue concerning form and space. Elements of art and principles of design are utilized separately and in concert to construct three-dimensional forms. Three-dimensional forms will be constructed using a variety of materials.

Upon successful completion of ART 116, the student should be able to:

1. Successfully use a variety of tools, processes, and techniques in the development of three-dimensional ideas about form and space.
2. Successfully apply the visual elements of art and principles of design.
3. Complete the creative problem-solving process from the preliminary stage and exploration through revisions to the final product.
4. List examples of historical and contemporary sculpture.
5. Perform visual communication skills through critique, presentation, and discussion.

ART 120 Introduction to Typography (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 112 with a grade of "C" or higher; ART 115 with a grade of "C" or higher; satisfactory completion of the Typography entrance portfolio review or acceptance into a New Media Arts AS concentration.

Comment: Letter grade and credit/no credit only. ART 120 may not be audited.

ART 120 introduces and applies typography terminology, history, and theory through the exploration of letterforms and word compositions using page layout software.

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

1. Design functional, organized and appealing type compositions through the consideration of page size, grid, whitespace, margins, columns, gutters, visual hierarchy and information chunking.
2. Select appropriate typefaces based on the function, anatomy, personality and history of the type, relative to the nature and goals of the project.
3. Format type with consideration of typeface, size, styles, color, case, alignment, line-length, leading, paragraph spacing, tracking, kerning, along with other typographic considerations.
4. Apply knowledge of the theory, history, and principles of design and animation in the creation new media art.
5. Apply successful problem-solving skills utilizing industry standard applications, technologies, and techniques in the creative and technical production process.
6. Communicate effectively, both visually and verbally, by presenting work, defending design decisions and by participating as an active critic during group critiques.
7. Design visually appealing page layouts that communicate a typographic message clearly and effectively through the implementation of typographic control, composition and page layout software.

ART 123 Introduction to Painting (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 113.

Recommended Preparation: ART 101.

Comment: Course materials for ART 123 will cost approximately \$150.

ART 123 is the beginning painting course on the theory and practice of oil painting. Basic materials and technical procedures will be explored.

Upon successful completion of ART 123, the student should be able to:

1. Demonstrate an effective use of painting materials, procedures and terminology.
2. Define and sensitively apply the visual elements of line, shape, light and shadow, color, texture and space, and the design principles of balance, rhythm, focal points, implied movement and unity to painting projects.
3. Proceduralize the painting process from thumbnail sketches, canvas preparation to the completion of a painting.
4. Develop limited palettes, and explore color harmony and balance within a painting.
5. Demonstrate an understanding of the multiple dimensions of color: hue, value, intensity and temperature.
6. Experience paint as structure and demonstrate an awareness of the plastic quality of paint.

ART 125 Introduction to Graphic Design (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 112 with a grade of "C" or higher; ART 115 with a grade of "C" or higher; satisfactory completion of the Introduction to Graphic Design entrance portfolio review or acceptance into a NMA AS concentration.

Comment: ART 125 may not be audited. Letter grade and credit/no credit grading only.

ART 125 introduces various ways of organizing visual elements in page design and examines the conceptual meaning of the type and image in combination. Structural grid systems and design principles are used to organize visual information using page layout software.

Upon successful completion of ART 125, the student should be able to:

1. Develop strong concepts to communicate a message based on needs and purpose, by exploring the relationship between image, type and meaning.
2. Design page layouts using structural grid systems, modules and design principles to organize visual information such as photo, illustration, typography and white space, using page layout software.
3. Apply knowledge of the theory, history, and principles of design and animation in the creation new media art.
4. Apply successful problem-solving skills utilizing industry standard applications, technologies, and techniques in the creative and technical production process.
5. Communicate effectively, both visually and verbally, by presenting work, defending design decisions and by participating as an active critic during group critiques.
6. Design page layouts that communicate a message effectively by integrating content and meaning with visual form.

ART 126 3D Computer Graphics I (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 112 with a grade of "C" or higher; approval of the 3D Computer Graphics I portfolio entrance review or acceptance into a NMA AS concentration.

Comment: ART 126 may not be audited. Letter grade and credit/no credit grading only.

ART 126 explores introductory level conceptual and technical topics in 3D computer graphics. Autodesk Maya and related applications will be utilized to develop projects which integrate 3D modeling, UV layout, texture mapping, lighting, and rendering.

Upon successful completion of ART 126, the student should be able to:

1. Develop 3D models and related art assets using introductory level technical skills, procedures, and production methodologies.
2. Employ the vocabulary of 3D computer graphics to define creative objectives and evaluate outcomes.
3. Apply knowledge of contemporary industry responses to 3D computer graphics in the development of 3D models and related art assets.
4. Apply knowledge of the theory, history, and principles of design and animation in the creation new media art.
5. Apply successful problem-solving skills utilizing industry standard applications, technologies, and techniques in the creative and technical production process.
6. Communicate effectively, both visually and verbally, by presenting work, defending design decisions and by participating as an active critic during group critiques.
7. Develop 3D content that integrates multiple stages of the CG pipeline, including: 3D modeling, UV layout, texture mapping, lighting, and rendering

ART 127 Graphic Symbolism (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 112 with a grade of "C" or higher; ART 115 with a grade of "C" or higher; satisfactory completion of the Graphic Symbolism entrance portfolio review or acceptance into a NMA AS concentration.

Comment: ART 127 may not be audited.

ART 127 introduces the terminology, history and theory of graphic symbolism and explores shapes and letterforms to create symbols and logos.

Upon successful completion of ART 127, the student should be able to:

1. Design visually appealing graphic symbols and/or logos that are mindful of the history and theory of graphic symbols, the visual elements of design, color theory, and typography.
2. Design functional graphic symbols and/or logos and are distinctive, memorable, appropriate, versatile, timeless, practical, simple in form and conveys an intended message based on research.
3. Design functional graphic symbols and/or marks that are considerate of issues of size, reduction and reproduction.
4. Apply knowledge of the theory, history, and principles of design and animation in the creation new media art.

5. Apply successful problem-solving skills utilizing industry standard applications, technologies, and techniques in the creative and technical production process.
6. Communicate effectively, both visually and verbally, by presenting work, defending design decisions and by participating as an active critic during group critiques.
7. Design visually appealing symbols and logos that communicate a message clearly to intended audience while effectively using vector software.

ART 128 Interface Programming I (3)

6 hours lecture/lab per week

Prerequisite(s): ART 112 with a grade of "C" or higher; satisfactory completion of the Interface Programming portfolio review or acceptance into a New Media Arts AS concentration.

Comment: ART 128 may not be audited. Letter grade and credit/no credit grading only.

ART 128 Interface Programming I provides a foundation of front-end interface programming skills, techniques, and principles necessary to create visually effective, web standard compliant web sites. This course introduces HTML (HyperText Markup Language), CSS (Cascading Style Sheets), and JavaScript to manually convert custom visual interface designs into fully functional, interactive web sites.

Upon successful completion of ART 128, the student should be able to:

1. Apply basic concepts and principles of the front-end interface programming technologies HTML, CSS, and JavaScript in the creation of web-standard compliant web sites.
2. Analyze and evaluate the source code of existing web sites for the use of well-formed, semantic markup, cross-platform/cross-browser compatibility, validation, and accessibility issues.
3. Apply knowledge of the theory, history, and principles of interface design in the creation new media art.
4. Apply successful problem-solving skills utilizing industry standard applications, technologies, and techniques in the creative and technical production process.
5. Communicate effectively, both visually and verbally, by presenting work, defending design decisions, and by participating as an active critic during group critiques.
6. Synthesize the concepts and principles of interface design with interface programming in the creation of web sites that integrates conceptual thinking, technical execution, and aesthetic application.

ART 129 Corporate Identity (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 125 with a grade of a grade of "C" or higher; satisfactory completion of the Corporate Identity entrance portfolio review or acceptance into a New Media Arts AS concentration.

Comment: ART 129 may not be audited. Letter grade and credit/no credit grading only.

ART 129 introduces the concept of creating conceptually and visually unified corporate identity collateral with effective branding and marketing guidelines through the development of print and Web design.

Upon successful completion of ART 129, the student should be able to:

1. Develop strong visual concepts to communicate a brand based on needs and purpose, by exploring effective corporate identity, branding and marketing guidelines.
2. Design collateral materials using structural grid systems, modules and design principles to organize visual information such as photo, illustration, typography and white space, using design software.
3. Apply knowledge of the theory, history, and principles of design and animation in the creation new media art.
4. Apply successful problem-solving skills utilizing industry standard applications, technologies, and techniques in the creative and technical production process.
5. Communicate effectively, both visually and verbally, by presenting work, defending design decisions and by participating as an active critic during group critiques.
6. Produce a unified corporate identity brand through the design of printed and web collateral materials.

ART 155 Information Architecture (3) (Inactive)

6 hours lecture/lab per week

Prerequisite(s): ART 112 with a grade of "C" or higher; approval of the Information Architecture entrance portfolio review or acceptance into a New Media Arts AS concentration.

Comment: Letter grade and credit/no credit only. ART 155 may not be audited.

ART 155 Information Architecture provides an introduction to the conceptual planning and mapping of organizational structures for interactive systems and web sites. Through the creation of client documentation, students go through the early stages of the interface design process by defining meaningful goals and creating visual frameworks designed to improve usability and meet the needs of the target audience.

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

1. Apply basic concepts and principles of information architecture, including conceptual planning, site mapping, and wire-framing, in the creation of client documentation for user interface designs and works of new media art.
2. Communicate effectively, both visually and verbally, by presenting work, defending design decisions and by participating as an active critic during group critiques.

ART 156 Digital Painting (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): Prerequisite(s): ART 112 with a grade of "C" or higher; approval of the Digital Animation portfolio entrance review or acceptance into a New Media Arts AS concentration or per instructor consent.

Comment: Letter grade and credit/no credit grading only. ART 156 may not be audited.

ART 156 explores the fundamental principles and techniques of digital painting. Students learn digital painting techniques as used for personal expression, production design, concept art, matte painting, and texture mapping.

Upon successful completion of ART 156, the student should be able to:

1. Develop paintings employing the digital painting tools, thumbnails, and reference using introductory level technical skills and procedures.
2. Employ the vocabulary of traditional and digital painting to define creative objectives and evaluate outcomes.
3. Apply knowledge of contemporary industry standards in the development of digital painting.
4. Apply knowledge of the theory, history, and principles of design and animation in the creation of new media art.
5. Apply successful problem-solving skills utilizing industry standard applications, technologies, and techniques in the creative and technical production process.
6. Communicate effectively, both visually and verbally, by presenting work, defending design decisions and by participating as an active critic during group critiques.

ART 157 Digital Storytelling (3) KCC AA/DA (Inactive)

3 hours lecture per week

Prerequisite(s): ART 126 with a grade of "C" or higher; approval of the Digital Storytelling entrance portfolio review or acceptance into a NMA AS Animation concentration.

Comment: ART 157 may not be audited.

ART 157 introduces students to the production of animation storyboards and 3D animatics through the analysis of film and cinematography with attention to the special needs of animation. Emphasis will also be placed on developing an aesthetic criteria for evaluation.

Upon successful completion of ART 157, the student should be able to:

1. Examine the role of digital animation in the film genre.
2. Research and analyze the principles of storyboarding devices: staging, composition, and continuity as used in cinematography, particularly in animation, and use these devices in the creation of storyboards.
3. Analyze compositional camera techniques: camera movement, angles, framing, and transitions, and apply these principles in creating 3D animatics in Maya.
4. Analyze effective story development and various animation genres through the analysis of feature films and animations and apply that understanding in creating storyboards.
5. Research effective character development through the analysis of films and animations and apply that information to the creation of character model sheets.
6. Apply the visual elements of line, shape, value, color, texture, space, time, and motion as well as the design principles of balance, rhythm, emphasis, contrast, variation, repetition, and unity in digital projects.

7. Complete the creative problem-solving process from writing a script, visually interpreting the script into storyboards and model sheets, and translating the storyboards into the 3D digital environment with camera moves.
8. Apply appropriate software usage based on industry application.
9. Effectively use the vocabulary and technological processes of film and animation as well as the language of art to aid in the integration of the technological skill with aesthetic criterion.
10. Learn to be experimental by taking risks through the process of exploration during the creative process.
11. Work effectively as a team member to achieve creative decisions.
12. Demonstrate strong group communication skills and the ability to speak clearly during critiques.
13. Write about and defend the conceptual merits of work produced for the course.

ART 158 History of Animation (3) (Inactive)

6 hours lecture/lab per week

Prerequisite(s): ART 112; approval of the History of Animation entrance portfolio review or acceptance into a NMA AS concentration.

Comment: Letter grade and credit/no credit grading only. ART 158 may not be audited.

ART 158 is an in-depth survey of historical developments, styles, techniques, theory and criticism of animation as an art form. A studio component integrates research with design projects.

Upon successful completion of ART 158, the student should be able to:

1. Analyze how ideologies, technologies, and cultures have shaped the history of animation, including the means of production, distribution, and presentation of animated content in both filmic and non-filmic forms.
2. Identify different styles of animation and the technologies used to produce them.
3. Analyze and apply traditional materials and methodologies used in the production of animation.
4. Apply knowledge of the theory, history, and principles of design and animation in the creation of new media art.
5. Apply successful problem-solving skills utilizing industry standard applications, technologies, and techniques in the creative and technical production process.
6. Communicate effectively, both visually and verbally, by presenting work, defending design decisions and by participating as an active critic during group critiques.

ART 159 History of Communication Design (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 112 with a grade of "C" or higher, ART 115 with a grade of "C" or higher; acceptance into a New Media Art concentration or satisfactory completion of the History of Communication Design portfolio review.

Comment: ART 159 may not be audited.

ART 159 is a chronological survey of design history with an emphasis on work from the Victorian Period through the present. International, political, social and technological issues are addressed in relationship to visual arts and design disciplines. A studio component integrates research with design projects.

Upon successful completion of ART 159, the student should be able to:

1. Explore and identify the key periods of communication design.
2. Analyze historical and contemporary communication design styles.
3. Research a design period and present a visual solution based on that period.
4. Apply knowledge of the theory and history, and the elements and principles of design in the creation of new media art.
5. Apply successful problem-solving skills utilizing industry standard applications, technologies, and techniques in the creative and technical production process.
6. Communicate effectively, both visually and verbally, by presenting work, defending design decisions and by participating as an active critic during group critiques.
7. Work effectively as a team member to achieve creative decisions.

ART 189 Ka Unu Pa'a: Introduction to Hawaiian Visual Art & Design (3) KCC AA/DA and KCC AS/AH

6 hours lecture/lab per week

Recommended Preparation: HAW 101.

ART 189 is an integrated beginning studio art course, which offers students the opportunity to understand and express Hawaiian cultural perspectives through contemporary visual art activities.

Upon successful completion of ART 189, the student should be able to:

1. Examine the historical and formal qualities of objects produced by Hawaiians through pre-contact, post-contact, and contemporary times.
2. Create art as a means of contemporary notation, conceptualization and visual organization.
3. Define Hawaiian art, the variety and richness of its art forms and the cultural significance inherent in its production.
4. Demonstrate how the Hawaiian language informs the process of art making and offers insights into the metaphorical nature intrinsic in Hawaiian art.
5. Use various art making techniques and processes to explore personal imagery.
6. Experiment by taking risks through the process of exploration during the creative problem solving process.
7. Complete the creative problem solving process from the preliminary planning stage and exploration through study and revision to the final product.
8. Explain the scope of design in Hawaiian culture, its relationship to Western and Pacific Island design both in historic and contemporary times.

ART 190 (Alpha) Topics in New Media Studies (3) KCC AA/DH

3 hours lecture per week

Comment: ART 190 (Alpha) is repeatable for a maximum of nine credits in a combination of different alpha suffixes. All modules will share core competencies. Letter grade only. ART 190 (Alpha) may not be audited. ART 190 (Alpha) may not be taken credit/no credit.

ART 190 (Alpha) is a topics course that introduces the history, aesthetics, and impact on human communication of multimedia technologies. The topics will update as necessary in response to conceptual and technological developments in the field. Possible topics include: overview of new media arts, history of communication design, history of animation, and history of film and video.

Upon successful completion of ART 190 (Alpha), the student should be able to:

1. Demonstrate an understanding of the history, theory, aesthetics, and current trends of digital multimedia and animation.
2. Translate the aesthetics and techniques of the moving image and sound to multimedia production.
3. Analyze the content of media rich environments with respect to target audience.
4. Explain the impact of digital media on human communication in the context of current social, cultural and political trends.
5. Work effectively as a team member.
6. Navigate and interact with several types of digital multimedia.
7. Demonstrate the ability to work effectively as a team member as well as achieving individual creative decisions.
8. Develop strong group communication skills and the ability to speak clearly during critiques.
9. Effectively write about and defend course work conceptually.

ART 190C Topics in New Media Studies: Core (3) (Inactive)

3 hours lecture per week

Comment: ART 190C is repeatable for a maximum of nine credits in a combination of different alpha suffixes. All modules will share core competencies. Letter grade only. ART 190C may not be audited. ART 190C may not be taken credit/no credit.

ART 190C is a topics course that introduces the history, aesthetics and impact on human communication of multimedia technologies. The topics will update as necessary in response to conceptual and technological developments in the field. Possible topics include: overview of new media arts, history of communication design, history of animation, and history of film and video.

Upon successful completion of ART 190C, the student should be able to:

1. Demonstrate an understanding of the history, theory, aesthetics, and current trends of digital multimedia and animation.
2. Translate the aesthetics and techniques of the moving image and sound to multimedia production.
3. Analyze the content of media rich environments with respect to target audience.
4. Explain the impact of digital media on human communication in the context of current social, cultural and political trends.
5. Work effectively as a team member.
6. Navigate and interact with several types of digital media.
7. Demonstrate the ability to work effectively as a team member as well as achieving individual creative decisions.
8. Develop strong group communication skills and the ability to speak clearly during critiques.
9. Effectively write about and defend course work conceptually.

ART 190H Topics in New Media Studies: Programming for Artists (9) (Inactive)

3 hours lecture per week

Comment: Letter grade only. ART 190M may not be audited. ART 190M may not be taken credit/no credit. ART 190M is repeatable for a maximum of nine credits in a combination of different alpha suffixes. All modules will share core competencies.

ART 190M is a topics course that introduces the history, aesthetics and impact on human communication of multimedia technologies. The topics will update as necessary in response to conceptual and technological developments in the field. Possible topics include: overview of new media arts, history of communication design, history of animation, and history of film and video.

Upon successful completion of ART 190H, the student should be able to:

1. Demonstrate an understanding of the history, theory, aesthetics, and current trends of digital multimedia and animation.
2. Translate the aesthetics and techniques of the moving image and sound to multimedia production.
3. Analyze the content of media rich environments with respect to target audience.
4. Explain the impact of digital media on human communication in the context of current social, cultural and political trends.
5. Work effectively as a team member.
6. Navigate and interact with several types of digital media.
7. Demonstrate the ability to work effectively as a team member as well as achieving individual creative decisions.
8. Develop strong group communication skills and the ability to speak clearly during critiques.
9. Effectively write about and defend course work conceptually.

ART 190M Topics in New Media Studies: History of Film (9) (Inactive)

3 hours lecture per week

Comment: Letter grade only. ART 190M may not be audited. ART 190M may not be taken credit/no credit. ART 190M is repeatable for a maximum of nine credits in a combination of different alpha suffixes. All modules will share core competencies.

ART 190M is a topics course that introduces the history, aesthetics and impact on human communication of multimedia technologies. The topics will update as necessary in response to conceptual and technological developments in the field. Possible topics include: overview of new media arts, history of communication design, history of animation, and history of film and video.

Upon successful completion of ART 190M, the student should be able to:

1. Demonstrate an understanding of the history, theory, aesthetics, and current trends of digital multimedia and animation.
2. Translate the aesthetics and techniques of the moving image and sound to multimedia production.
3. Analyze the content of media rich environments with respect to target audience.
4. Explain the impact of digital media on human communication in the context of current social, cultural and political trends.
5. Work effectively as a team member.
6. Navigate and interact with several types of digital media.
7. Demonstrate the ability to work effectively as a team member as well as achieving individual creative decisions.
8. Develop strong group communication skills and the ability to speak clearly during critiques.
9. Effectively write about and defend course work conceptually.

ART 191 (Alpha) Topics in New Media Design (3) KCC AA/DA

6 hours lecture/lab per week

Comment: ART 191 (Alpha) is repeatable for a maximum of nine credits in a combination of different alpha suffixes. All modules will share core competencies. Letter grade only. ART 191 (Alpha) may not be audited. ART 191 (Alpha) may not be taken credit/no credit.

ART 191 (Alpha) is a topics course that introduces design concepts and practices related to multimedia production. The topics will update as necessary in response to conceptual and technological developments in the field. Possible topics include introduction to interface design, branding and corporate identity, project management, the business of multimedia, and presentation design for multimedia.

Upon successful completion of ART 191 (Alpha), the student should be able to:

1. Apply visual and interface design principles in the development of print and screen-based media.
2. Analyze the content of media rich environments with respect to rhetoric, interface design, visual design and targeted audience.
3. Design presentation materials to convey the developmental stages of multimedia materials.
4. Apply the visual elements of line, shape, value, color, texture, space, time and motion as well as the design principles of balance, rhythm, emphasis, contrast, variation, and unity in the creation of art works.
5. Navigate and interact with several types of digital multimedia.
6. Demonstrate the ability to work effectively as a team member as well as achieving individual creative decisions.

7. Develop strong group communication skills and the ability to speak clearly during critiques.
8. Effectively write about and defend course work conceptually.

ART 191G New Media Arts Design: Design (9) KCC AA/DA (Inactive)

3 hours lecture per week

Comment: Letter grade only. ART 191G may not be audited. ART 191G may not be taken credit/no credit. ART 191G is repeatable for a maximum of nine credits in a combination of different alpha suffixes. All modules will share core competencies.

ART 191G is a topics course that introduces design concepts and practices related to multimedia production. The topics will update as necessary in response to conceptual and technological developments in the field. Possible topics include introduction to interface design, branding and corporate identity, project management, the business of multimedia, and presentation design for multimedia.

Upon successful completion of ART 191G, the student should be able to:

1. Apply visual and interface design principles in the development of print and screen-based media.
2. Analyze the content of media rich environments with respect to rhetoric, interface design, visual design and targeted audience.
3. Design presentation materials to convey the developmental of digital multimedia and animation.
4. Apply the visual elements of line, shape, value, color, texture, space, time and motion as well as the design principles of balance, rhythm, emphasis, contrast, variation, and unity in the creation of art works.
5. Navigate and interact with several types of digital multimedia.
6. Demonstrate the ability to work effectively as a team member as well as achieving individual creative decisions.
7. Develop strong group communication skills and the ability to speak clearly during critiques.
8. Effectively write about and defend course work conceptually.

ART 191J New Media Art Design: Branding (9) KCC AA/DA (Inactive)

3 hours lecture per week

Comment: ART 191J is repeatable for a maximum of nine credits in a combination of different alpha suffixes. All modules will share core competencies. Letter grade only. ART 191G may not be audited. ART 191G may not be taken credit/no credit.

ART 191J is a topics course that introduces design concepts and practices related to multimedia production. The topics will update as necessary in response to conceptual and technological developments in the field. Possible topics include introduction to interface design, branding and corporate identity, project management, the business of multimedia, and presentation design for multimedia.

Upon successful completion of ART 191J, the student should be able to:

1. Apply visual and interface design principles in the development of print and screen-based media.
2. Analyze the content of media rich environments with respect to rhetoric, interface design, visual design and targeted audience.
3. Design presentation materials to convey the developmental of digital multimedia and animation.
4. Apply the visual elements of line, shape, value, color, texture, space, time and motion as well as the design principles of balance, rhythm, emphasis, contrast, variation, and unity in the creation of art works.
5. Navigate and interact with several types of digital multimedia.
6. Demonstrate the ability to work effectively as a team member as well as achieving individual creative decisions.
7. Develop strong group communication skills and the ability to speak clearly during critiques.
8. Effectively write about and defend course work conceptually. Apply visual and interface design principles in the development of print and screen-based media.

ART 191R New Media Art Design: Business (9) KCC AA/DA (Inactive)

3 hours lecture per week

Comment: ART 191R is repeatable for a maximum of nine credits in a combination of different alpha suffixes. All modules will share core competencies. Letter grade only. ART 191R may not be audited. ART 191R may not be taken credit/no credit.

ART 191R is a topics course that introduces design concepts and practices related to multimedia production. The topics will update as necessary in response to conceptual and technological developments in the field. Possible topics include introduction to interface design, branding and corporate identity, project management, the business of multimedia, and presentation design for multimedia.

Upon successful completion of ART 191R, the student should be able to:

1. Apply visual and interface design principles in the development of print and screen-based media.
2. Analyze the content of media rich environments with respect to rhetoric, interface design, visual design and targeted audience.
3. Design presentation materials to convey the developmental of digital multimedia and animation.
4. Apply the visual elements of line, shape, value, color, texture, space, time and motion as well as the design principles of balance, rhythm, emphasis, contrast, variation, and unity in the creation of art works.

5. Navigate and interact with several types of digital multimedia.
6. Demonstrate the ability to work effectively as a team member as well as achieving individual creative decisions.
7. Develop strong group communication skills and the ability to speak clearly during critiques.
8. Effectively write about and defend course work conceptually. Apply visual and interface design principles in the development of print and screen-based media.

ART 192 (Alpha) Topics in New Media Techniques (3) KCC AA/DA

6 hours lecture/lab per week

Comment: ART 192 (Alpha) is repeatable for a maximum of nine credits in a combination of different alpha suffixes. All modules will share core competencies. Letter grade only. ART 192 (Alpha) may not be audited. ART 192 (Alpha) may not be taken credit/no credit.

ART 192 (Alpha) is a topics course that introduces design concepts and practices related to the animation industry. The topics will update as necessary in response to conceptual and technological developments in the field. Possible topics include gaming and real-time computer graphics, digital painting, and digital video and storytelling.

Upon successful completion of ART 192 (Alpha), the student should be able to:

1. Apply visual and design principles in the development of screen-based media.
2. Explore the art making process using contemporary electronic media, including digital graphics, animation, video and sound.
3. Translate the aesthetics and techniques of the moving image and sound to multimedia production.
4. Apply the visual elements of line, shape, value, color, texture, space, time and motion as well as the design principles of balance, rhythm, emphasis, contrast, variation, and unity in the creation of art works.
5. Use analytical thinking skills to understand and be "literate" in the time-based arts to their greater social, political, and cultural contexts.
6. Use multiple applications in the production of digital media.
7. Navigate and interact with several types of digital multimedia.
8. Demonstrate the ability to work effectively as a team member as well as achieving individual creative decisions.
9. Develop strong group communication skills and the ability to speak clearly during critiques.
10. Effectively write about and defend course work conceptually.

ART 192D New Media Arts Tech: Maya 1 Modeling (9) (Inactive)

3 hours lecture per week

Comment: Letter grade only. ART 192D may not be audited. ART 192D may not be taken credit/no credit. ART 192D is repeatable for a maximum of nine credits in a combination of different alpha suffixes. All modules will share core competencies.

ART 192D is a topics course that introduces design concepts and practices related to the animation industry. The topics will update as necessary in response to conceptual and technological developments in the field. Possible topics include gaming and real-time computer graphics, digital painting, and digital video and storytelling.

Upon successful completion of ART 192D, the student should be able to:

1. Apply visual and design principles in the development of screen-based media.
2. Explore the art making process using contemporary electronic media, including digital graphics, animation, video and sound.
3. Translate the aesthetics and techniques of the moving image and sound to multimedia production.
4. Apply the visual elements of line, shape, value, color, texture, space, time and motion as well as the design principles of balance, rhythm, emphasis, contrast, variation, and unity in the creation of art works.
5. Use analytical thinking skills to understand and be literate in the time-based arts to their greater social, political, and cultural contexts.
6. Use multiple applications in the production of digital media.
7. Navigate and interact with several types of digital multimedia.
8. Demonstrate the ability to work effectively as a team member as well as achieving individual creative decisions.
9. Develop strong group communication skills and the ability to speak clearly during critiques.
10. Effectively write about and defend course work conceptually.

ART 192M NMA Tech: After Effects (9) (Inactive)

3 hours lecture per week

Comment: Letter grade only. ART 192M may not be audited. ART 192M may not be taken credit/no credit. ART 192M is repeatable for a maximum of nine credits in a combination of different alpha suffixes. All modules will share core competencies.

ART 192M is a topics course that introduces design concepts and practices related to the animation industry. The topics will update as necessary in response to conceptual and technological developments in the field. Possible topics include gaming and real-time computer graphics, digital painting, and digital video and storytelling.

Upon successful completion of ART 192M, the student should be able to:

1. Apply visual and design principles in the development of screen-based media.
2. Explore the art making process using contemporary electronic media, including digital graphics, animation, video and sound.
3. Translate the aesthetics and techniques of the moving image and sound to multimedia production.
4. Apply the visual elements of line, shape, value, color, texture, space, time and motion as well as the design principles of balance, rhythm, emphasis, contrast, variation, and unity in the creation of art works.
5. Use analytical thinking skills to understand and be literate in the time-based arts to their greater social, political, and cultural contexts.
6. Use multiple applications in the production of digital media.
7. Navigate and interact with several types of digital multimedia.
8. Demonstrate the ability to work effectively as a team member as well as achieving individual creative decisions.
9. Develop strong group communication skills and the ability to speak clearly during critiques.
10. Effectively write about and defend course work conceptually.

ART 192N NMA Tech: Maya 2 Animation (9) (Inactive)

3 hours lecture per week

Comment: Letter grade only. ART 192N may not be audited. ART 192N may not be taken credit/no credit. ART 192N is repeatable for a maximum of nine credits in a combination of different alpha suffixes. All modules will share core competencies.

ART 192N is a topics course that introduces design concepts and practices related to the animation industry. The topics will update as necessary in response to conceptual and technological developments in the field. Possible topics include gaming and real-time computer graphics, digital painting, and digital video and storytelling.

Upon successful completion of ART 192N, the student should be able to:

1. Apply visual and design principles in the development of screen-based media.
2. Explore the art making process using contemporary electronic media, including digital graphics, animation, video and sound.
3. Translate the aesthetics and techniques of the moving image and sound to multimedia production.
4. Apply the visual elements of line, shape, value, color, texture, space, time and motion as well as the design principles of balance, rhythm, emphasis, contrast, variation, and unity in the creation of art works.
5. Use analytical thinking skills to understand and be literate in the time-based arts to their greater social, political, and cultural contexts.
6. Use multiple applications in the production of digital media.
7. Navigate and interact with several types of digital multimedia.
8. Demonstrate the ability to work effectively as a team member as well as achieving individual creative decisions.
9. Develop strong group communication skills and the ability to speak clearly during critiques.
10. Effectively write about and defend course work conceptually.

ART 192P New Media Arts Technology: Maya 3 Character Animation (9) (Inactive)

3 hours lecture per week

Comment: Letter grade only. ART 192P may not be audited. ART 192P may not be taken credit/no credit. ART 192P is repeatable for a maximum of nine credits in a combination of different alpha suffixes. All modules will share core competencies.

ART 192P is a topics course that introduces design concepts and practices related to the animation industry. The topics will update as necessary in response to conceptual and technological developments in the field. Possible topics include gaming and real-time computer graphics, digital painting, and digital video and storytelling.

Upon successful completion of ART 192P, the student should be able to:

1. Apply visual and design principles in the development of screen-based media.
2. Explore the art making process using contemporary electronic media, including digital graphics, animation, video and sound.
3. Translate the aesthetics and techniques of the moving image and sound to multimedia production.
4. Apply the visual elements of line, shape, value, color, texture, space, time and motion as well as the design principles of balance, rhythm, emphasis, contrast, variation, and unity in the creation of art works.

5. Use analytical thinking skills to understand and be literate in the time-based arts to their greater social, political, and cultural contexts.
6. Use multiple applications in the production of digital media.
7. Navigate and interact with several types of digital multimedia.
8. Demonstrate the ability to work effectively as a team member as well as achieving individual creative decisions.
9. Develop strong group communication skills and the ability to speak clearly during critiques.
10. Effectively write about and defend course work conceptually.

ART 192Q NMA Tech: Gaming & Graphics (9) (Inactive)

3 hours lecture per week

Comment: Letter grade only. ART 192Q may not be audited. ART 192Q may not be taken credit/no credit. ART 192Q is repeatable for a maximum of nine credits in a combination of different alpha suffixes. All modules will share core competencies.

ART 192Q is a topics course that introduces design concepts and practices related to the animation industry. The topics will update as necessary in response to conceptual and technological developments in the field. Possible topics include gaming and real-time computer graphics, digital painting, and digital video and storytelling.

Upon successful completion of ART 192Q, the student should be able to:

1. Apply visual and design principles in the development of screen-based media.
2. Explore the art making process using contemporary electronic media, including digital graphics, animation, video and sound.
3. Translate the aesthetics and techniques of the moving image and sound to multimedia production.
4. Apply the visual elements of line, shape, value, color, texture, space, time and motion as well as the design principles of balance, rhythm, emphasis, contrast, variation, and unity in the creation of art works.
5. Use analytical thinking skills to understand and be literate in the time-based arts to their greater social, political, and cultural contexts.
6. Use multiple applications in the production of digital media.
7. Navigate and interact with several types of digital multimedia.
8. Demonstrate the ability to work effectively as a team member as well as achieving individual creative decisions.
9. Develop strong group communication skills and the ability to speak clearly during critiques.
10. Effectively write about and defend course work conceptually.

ART 192R NMA Tech: Digital Painting (3) (Inactive)

3 hours lecture per week

Comment: ART 192R is repeatable for a maximum of nine credits in a combination of different alpha suffixes. All modules will share core competencies. ART 192R may not be audited. ART 192R may not be taken credit/no credit.

ART 192R is a topics course that introduces design concepts and practices related to the animation industry. The topics will update as necessary in response to conceptual and technological developments in the field. Possible topics include gaming and real-time computer graphics, digital painting, and digital video and storytelling.

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

1. Apply visual and design principles in the development of screen-based media.
2. Explore the art making process using contemporary electronic media, including digital graphics, animation, video and sound.
3. Translate the aesthetics and techniques of the moving image and sound to multimedia production.
4. Apply the visual elements of line, shape, value, color, texture, space, time and motion as well as the design principles of balance, rhythm, emphasis, contrast, variation, and unity in the creation of art works.
5. Use analytical thinking skills to understand and be literate in the time-based arts to their greater social, political, and cultural contexts.
6. Use multiple applications in the production of digital media.
7. Navigate and interact with several types of digital multimedia.
8. Demonstrate the ability to work effectively as a team member as well as achieving individual creative decisions.
9. Develop strong group communication skills and the ability to speak clearly during critiques.
10. Effectively write about and defend course work conceptually.

ART 195 Stained Glass Design and Fabrication (3) KCC AA/DA Summer (Inactive)

6 hours lecture/lab per week

Recommended Preparation: One of the following, ART 111, ART 113, ART 114, ART 115 or ART 123.

Comment: ART 195 is repeatable for a maximum of six credits. Instructor's permission is required for a student to repeat this course. ART 195 is offered during the summer only. Basic hand tools are provided. The student will need to purchase any specialized hand tools, glass material, lead, and solder as needed (\$125 on up depending on the quality of glass and size of the projects). The student will need to purchase art supplies (approximately \$35).

ART 195 is an introductory course in the design and fabrication of stained glass as a fine art medium. The course explores the physical properties of light and color while engaging the student in a step by step method for constructing leaded glass projects.

ART 195 is an introductory course for students who are considering the marketing of their work to designers, architects, and the general public. This class is ideal for those students who wish to know how to construct work for architectural settings or to make autonomous panels for display in the home, gallery or in commercial/liturgical applications.

Upon successful completion of ART 195, the student should be able to:

1. Plan, design and fabricate a series of leaded stained glass panels using the traditional methods of construction: cartoon and pattern making, scoring and cutting glass, glazing the glass into lead came, soldering lead joints, waterproofing, and cleaning.
2. Choose glass that is both affordable and appropriate to the unique design considerations of each work.
3. Solve problems inherent in making any large and small flat glass construction, from beginning to end.
4. Discriminate quality works of art made by using the traditional stained glass method by using the knowledge gained in making personal custom glass panels, and by looking at a wide variety of glass work in liturgical, commercial and residential settings in and around Honolulu.
5. Use appropriately glass terminology and identify glass designers and the historical glass in architectural settings in Honolulu.
6. Use appropriate glass terminology and be able to identify glass designers work and the historical glass in Honolulu in Architectural settings.

THE 200 LEVEL STUDIO COURSES in photography, drawing, figure drawing, painting, ceramics, visual studies and sculpture (ART 201, 207, 212, 213, 214, 223, 243, 244, 253) are intended primarily for ART majors but are also open to other students. They build on skills and concepts learned in ART 101, 113, 114, 115 and 116.

ART 201 Expanded Arts (3) KCC AA/DA (Inactive)

6 hours lecture/lab per week

Prerequisite(s): ART 101; one 100-level 2D studio art class; one 100-level 3D studio art class.

Comment: Letter grade and credit/no credit only. ART 201 may not be audited. ART 201 is repeatable for maximum of six credits. ART 201 is currently inactive.

ART 201 addresses contemporary issues and technology through critical examination of arts activity in cultural contexts and studio exploration interrelating various media and notational systems.

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

1. Identify the relationship of the meaning of an artwork to its medium of expression.
2. Translate a media-specific artwork into other media and/or notational systems.
3. Use analytical thinking skills to discuss, verbally or in writing, contemporary artworks in their greater social, political, and cultural contexts.
4. Define the art-making process using contemporary art media, including computer graphics.
5. Complete the creative problem-solving process, from planning and divergent thinking to implementation and evaluation.

ART 202 Digital Imaging (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 112 with a grade of "C" or higher.

Comment: ART 202 may not be audited.

ART 202 builds upon the foundation level technical and conceptual digital art skills introduced in ART 112 Introduction to Digital Arts. Through lessons, demonstrations, and hands-on-exercises, this course aims to develop intermediate skills in digital imaging concepts and techniques including image capture, manipulation, and output. Emphasis will be placed on the creative process and developing a conceptual and aesthetic criteria for evaluation.

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

1. Apply basic concepts and principles of digital imaging and manipulation in the creation of digital works of new media art.
2. Utilize industry standard digital imaging software techniques and technologies with digital camera equipment to capture, adjust, manipulate, and composite digital content and imagery in the creation of print and time-based works of new media art.
3. Apply knowledge of the theory, history, and principles of interface design in the creation new media art.
4. Apply successful problem-solving skills utilizing industry standard applications, technologies, and techniques in the creative and technical production process.
5. Communicate effectively, both visually and verbally, by presenting work, defending design decisions, and by participating as an active critic during group critiques.
6. Synthesize the concepts and principles of digital imaging, digital photography, digital printing, and motion graphics in the creation of works of new media art that integrate conceptual thinking, technical execution, and aesthetic application.

ART 207 Intermediate Photography: Techniques and Aesthetics of Photography (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 107 or consent of instructor.

Comment: Letter grade only. ART 207 may not be audited. ART 207 is repeatable up to six credits. Course supplies will cost approximately \$150.00.

ART 207 focuses on black and white photography emphasizing communication and self-expression through lectures, demonstration and projects.

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

1. Conceptualize an idea and translate it photographically into a visual form.
2. Use different black and white films and development procedures to convey and express different photographic aesthetics.
3. Express ideas, feelings and/or concepts through refined photographic techniques.
4. Produce photographic prints that require proficient skill in darkroom techniques.
5. Apply the visual elements of line, shape, value, texture, space and motion, and the design principles of balance, rhythm, dominance, contrast, variation, and unity to photography projects.
6. Complete the creative problem-solving process from planning and discovery to implementation and evaluation.
7. Experiment by taking risks through the process of exploration and revision during the creative problem solving process.
8. Demonstrate strong communication skills and speak clearly during critiques.

ART 209 Image in Motion Studio (3) KCC AA/DA (Inactive)

6 hours lecture/lab per week

Prerequisite(s): ART 107; ART 112 with a grade of "B" or higher; ART 190M with a grade of "B" or higher or instructor consent.

Comment: ART 209 is repeatable once for a maximum of six credits.

ART 209 provides students with the basic theory, practice, and techniques for digital video with sequential digitized imagery and synchronized sound.

Upon successful completion of ART 209, the student should be able to:

1. Identify the genres, techniques and aesthetics of the moving image in film and video as it relates to the aesthetics of multimedia.
2. Translate the aesthetics and techniques of the moving image and sound to the electronic media.
3. Use analytical thinking skills to understand and be "literate" in the time-based arts to their greater social, political, and cultural contexts.
4. Explore the art making process using contemporary electronic media, including computer graphics and sound.
5. Complete the creative problem-solving process, from planning and divergent thinking to implementation and evaluation.

ART 212 Digital Animation (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 112 with a grade of "C" or higher; approval of the Digital Animation portfolio entrance review or acceptance into a NMA AS concentration.

Comment: ART 212 may not be audited.

ART 212 explores the fundamental principles and techniques of 3D computer animation. Students learn to create convincing motion by creating several short animations which explore animation principles and character development. Autodesk Maya software is used for instruction and assignments.

Upon successful completion of ART 212, the student should be able to:

1. Develop character behavior exercises employing the principles of animation, thumbnails, and storyboards using introductory level technical skills and procedures.
2. Employ the vocabulary of traditional and 3D computer animation to define creative objectives and evaluate outcomes.
3. Apply knowledge of contemporary industry standards in the development of 3D character animation workflow.
4. Apply knowledge of the theory, history, and principles of design and animation in the creation of new media art.
5. Apply successful problem-solving skills utilizing industry standard applications, technologies, and techniques in the creative and technical production process.
6. Communicate effectively, both visually and verbally, by presenting work, defending design decisions and by participating as an active critic during group critiques.
7. Develop a 3D character animation that integrates the mechanics and emotion of animation, lighting, and rendering.

ART 213 Intermediate Drawing (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 113 or instructor consent.

Recommended Preparation: ART 101 and ART 270.

Comment: Letter grade and credit/no credit only. ART 213 may not be audited. ART 213 is repeatable for a maximum of six credits. ART 213 is offered in the spring and fall semesters only. Course supplies for ART 213 will cost approximately \$75.00.

ART 213 is a continuation and development of drawing ideas and skills introduced in ART 113. A variety of materials, techniques and concepts are explored, particularly pertaining to drawing concepts unique to the 20th century.

Upon successful completion of ART 213, the student should be able to:

1. Show a developed proficiency in the use of a variety of drawing materials, techniques and concepts, particularly pertaining to drawing concepts unique to the 20th century.
2. Integrate the dynamic nature of the picture plane with the representational aspects of drawing.
3. Develop skills in drawing as a descriptive language for greater personal expression.
4. Experience drawing as a way of seeing involving all the faculties of the mind: perception (observation, sensation), intellect (analysis, organization, synthesis), intuition and emotion.
5. Demonstrate an increased familiarity with the language of art, the basic vocabulary of drawing: line, shape, value, color, form and space; and to organize these elements and their relationships.
6. Focus on the process.

ART 214 Introduction to Life Drawing (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 113 or consent of instructor.

Recommended Preparation: ART 213.

Comment: Letter grade and credit/no credit only. ART 214 may not be audited. ART 214 is repeatable for maximum of six credits. Course supplies for ART 214 will cost approximately \$75.00.

ART 214 is an investigation of the figure concerning anatomical construction, light, space, diagrammatic analysis, and thematic content through the process of drawing.

Upon successful completion of ART 214, the student should be able to:

1. Draw the human figure accurately based on anatomical construction.
2. Apply the visual elements of line, shape, volume, mass, light and space, and the design elements of balance, rhythm, movement and dominance to the drawing process.
3. Develop proficiency in the use of a variety of drawing materials and techniques, including diagrammatic analysis.
4. Draw the human figure expressively.

ART 222 Digital Multimedia (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 202, with a grade of "C" or higher and approval of the Digital Multimedia entrance portfolio review or acceptance into a NMA AS concentration.

Comment: ART 222 may not be audited.

ART 222 provides studio experience in time-based multimedia concepts and techniques including digital video editing, motion graphic design, sound design, multimedia authoring, and online video delivery. Students go through the full creative process of pre-production, production, and post-production of digital multimedia works of art.

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

1. Apply basic concepts and principles of video editing, motion graphics, and narrative storytelling in the creation of time-based works of digital multimedia.
2. Shoot video, edit video, add sound, animate custom graphics, author media, and deliver video content online using a combination of industry standard software applications.
3. Apply knowledge of the theory, history, and principles of interface design in the creation new media art.
4. Apply successful problem-solving skills utilizing industry standard applications, technologies, and techniques in the creative and technical production process.
5. Communicate effectively, both visually and verbally, by presenting work, defending design decisions, and by participating as an active critic during group critiques.
6. Synthesize the principles of time-based multimedia using the individual elements of image, text, and sound in the creation of digital works of art that communicate conceptual ideas, technical execution, and aesthetic application.

Intermediate Painting (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 123 or instructor consent.

Recommended Preparation: ART 270.

Comment: Course supplies for ART 223 will cost approximately \$150.00. ART 223 may not be audited. ART 223 is repeatable for a maximum of six credits.

ART 223 is a survey of late 19th and early 20th century studio painting practice emphasizing developments in light notation, cubism, surrealism and expressionism.

Upon successful completion of ART 223, the student should be able to:

1. Develop a working knowledge of late 19th and early 20th century studio painting practice emphasizing developments in light notation, cubism and surrealism and expressionism.
2. Demonstrate an understanding of all aspects of color mixing, including structuring a color palette through sensitively perceiving value, temperature and intensity.
3. Demonstrate an understanding of the architectonics structure of painting, including the dynamic organization of pattern, two and three dimensional space and rhythmic demands of the flat picture plane.
4. Demonstrate an understanding of the abstraction process.
5. Exemplify trusting one's own decisions, insights and perceptions during the creative problem-solving process.
6. Develop language skills in critical evaluation of paintings.
7. Begin the search for an original and personal direction in painting.

ART 224 Painting from Life (3) KCC AA/DA (Inactive)

6 hours lecture/lab per week

Prerequisite(s): ART 123; credit or concurrent enrollment in ART 214, or instructor consent.

Comment: ART 224 is repeatable for a maximum of six credits.

ART 224 is a survey of the figurative tradition of painting, using the model as the primary subject matter. This course is an intensive studio experience of painting from the model.

Upon successful completion of ART 224, the student should be able to:

1. Create artworks that demonstrate a working knowledge of the figurative tradition of painting from the Renaissance to the present.
2. Paint the human figure accurately and expressively.
3. Apply the visual elements of line, shape, light and shadow, color, texture, and space, and the design principles of balance, rhythm, focal points, implied movement and unity to figure painting projects.
4. Execute the painting process from painting sketches, canvas preparation to the completion of a large-scale painting.
5. Develop limited palettes, and explore color harmony and balance within a painting.
6. Create artworks that demonstrate a working knowledge of the architectonic structure of painting, including the dynamic organization of pattern, two and three dimensional space and rhythmic demands of the flat picture plane.
7. Demonstrate risk-taking, insight and originality in the creative problem-solving process.
8. Demonstrate analytic and expressive language skills in the critical evaluation of paintings, verbally and in writing.

ART 225 Painting/Water-Based Media (3) KCC AA/DA (Inactive)

6 hours lecture/lab per week

Prerequisite(s): ART 111, ART 113 or instructor consent.

Comment: ART 225 is currently inactive.

ART 225 offers an introduction to water-based media. Traditional transparent color, gouache, and acrylic painting will be explored.

Upon successful completion of ART 225, the student should be able to:

1. Distinguish and become familiar with the techniques associated with all three water-based techniques. In addition, apply color using different techniques, wet on wet, wet on dry, texture transfer and resist techniques.
2. Expand knowledge of water-based paint and color mixing. Explore color groupings (color analogy, colors in simultaneous contrast, and limited palettes).
3. Successfully complete a series of 6-8 finished paintings that are related thematically.
4. Demonstrate creative problem solving through the process of discovery and application of techniques taught.
5. Develop an attitude of risk-taking and be willing to accept failure in order to achieve success; learning from mistakes is part of the creative process.
6. Begin the search for an original and personal vision.
7. Show, by completion of elective and/or required courses, the educational background necessary for more specific professional and personal growth.
8. Understanding of self and one's place in the world.
9. Understanding of aesthetics of the human experience and the need for life-long learning.

ART 226 3D Computer Graphics II (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 202 with a grade of "C" or higher; ART 212 with a grade of "C" or higher; ART 126 with a grade of "C" or higher; approval of the 3D Computer Graphics II entrance portfolio review or acceptance into a NMA AS concentration.

Comment: Letter grade and credit/no credit only. ART 226 may not be audited.

ART 226 explores intermediate level conceptual and technical topics in 3D computer graphics, including: character design, character modeling, high-detail digital sculpting, character setup, surfacing, and animation.

Upon successful completion of ART 226, the student should be able to:

1. Develop 3D models, animations, and related art assets using intermediate level technical skills, procedures, and production methodologies.
2. Employ appropriate strategies to develop 3D models suited to the needs of character setup and animation.
3. Apply knowledge of the theory, history, and principles of design and animation in the creation new media art.

4. Apply successful problem-solving skills utilizing industry standard applications, technologies, and techniques in the creative and technical production process.
5. Communicate effectively, both visually and verbally, by presenting work, defending design decisions and by participating as an active critic during group critiques.
6. Develop 3D content that integrates multiple stages of the computer graphics pipeline, including: 3D modeling, UV layout, high-detail sculpting, surfacing, character setup, animation, lighting, and rendering.

ART 229 Interface Design I (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 125 with a grade of "C" or higher;; satisfactory completion of the Graphic Design I portfolio review or acceptance into a NMA AS concentration.

Recommended Preparation: Credit or concurrent enrollment in ART 128

Comment: ART 229 may not be audited.

ART 229 Interface Design I provides a foundation of interface design skills, techniques, and principles necessary to design visually effective, user-friendly web sites. Through lessons, demonstrations, and hands-on projects, this course explores how the fundamental elements and principles of graphic design are applied through the design process for creating interactive interfaces. Students go through the analysis, information architecture, conceptual planning, and visual layout designing stages of the web design process and document their findings through client documentation and presentations.

Upon successful completion of ART 229, the student should be able to:

1. Apply basic concepts and principles of interface design, user experience design, and information architecture in the creation of client-based interactive applications and web sites.
2. Utilize industry standard graphics editing software to design the content structure, informational hierarchy, navigation, user workflow, and visual layout for interactive client-based interfaces.
3. Apply knowledge of the theory, history, and principles of interface design in the creation new media art.
4. Apply successful problem-solving skills utilizing industry standard applications, technologies, and techniques in the creative and technical production process.
5. Communicate effectively, both visually and verbally, by presenting work, defending design decisions, and by participating as an active critic during group critiques.
6. Synthesize the concepts and principles of graphic design with interface and user experience design in the creation of interactive interfaces that integrate conceptual thinking, technical execution, and aesthetic application.

ART 243 Intermediate Ceramics: Hand Building (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 105 or consent of instructor.

Recommended Preparation: Qualification for MATH 24.

Comment: ART 243 is repeatable once for a maximum of six credits. Course materials and supplies will cost approximately \$100.00.

ART 243 focuses on development of sculptural and vessel concepts using hand building techniques.

Upon successful completion of ART 243, the student should be able to:

1. Successfully apply the three basic hand-building techniques and the potential of each as structural and decorative elements.
2. Apply an awareness of the varieties of materials and techniques of the glazing and firing processes.
3. Use innovative and inventive problem-solving, through creative decision making and insightful articulation of finished ceramic vessels and sculptural forms.
4. Exhibit an ability to generate creative ideas through three-dimensional visualization techniques.
5. Apply color and color theory as it relates to three-dimensional form in the use of glazes and oxides.
6. Utilize drawing as a tool for conceptualization and documentation of personal imagery and technical investigation of the ceramic process.
7. Exhibit an awareness of the visual elements and the design principles while creating ceramic vessels and sculptural forms.
8. Articulate the concepts and intent of a completed piece.

ART 244 Intermediate Ceramics: Wheel Throwing (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 105 or consent of instructor.

Recommended Preparation: Qualification for MATH 24.

Comment: ART 244 is repeatable once for a maximum of six credits. Course materials and supplies will cost approximately \$100.00.

ART 244 focuses on development of vessel and sculptural concepts using wheel throwing techniques.

Upon successful completion of ART 244, the student should be able to:

1. Successfully apply through completed projects, a basic proficiency in wheel throwing techniques.
2. Employ the skillful use of clay bodies in oxidation and reduction firing.
3. Exhibit an awareness of the visual elements and the design principles while creating ceramic vessels and sculptural forms.
4. Use innovative and inventive problem-solving strategies through creative processes.
5. Exhibit an ability to generate creative ideas through three-dimensional visualization techniques.
6. Utilize drawing as a tool for conceptualization and documentation of personal imagery and technical investigation of the ceramic process.
7. Exhibit an ability to articulate insightfully, the concepts and intent of a finished ceramic object.
8. Apply an awareness of color and color theory as it relates to glazing.

ART 245 Intermediate Life Drawing (3-6) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 113; ART 214, or instructor consent.

Recommended Preparation: ART 270.

Comment: Course supplies for ART 245 will cost approximately \$75.00. ART 245 may not be audited. ART 245 is repeatable for a maximum of six credits.

ART 245 focuses on further investigations of the human figure that address anatomical and diagrammatic construction, light, space, and thematic content.

Upon successful completion of ART 245, the student should be able to:

1. Draw the human figure accurately with an improved level of performance in descriptive drawing.
2. Demonstrate a working knowledge of the skeletal and musculature systems of the human figure.
3. Demonstrate critical thinking in analyzing meaning and thematic content in the figurative tradition of drawings by past and modern masters.
4. Work with and think independently about utilization of the human figure in advanced level courses, including advanced life drawing and animation studies.

ART 246 3D Computer Graphics III (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): Approval of the 3D Computer Graphics III entrance portfolio review or acceptance into a NMA AS concentration.

Comment: Letter grade and credit/no credit only. ART 246 may not be audited.

ART 246 explores advanced conceptual and technical topics in 3D computer graphics. Students will utilize Autodesk Maya and related applications to design, model, surface, rig, animate, and render complex computer generated characters.

Upon successful completion of ART 246, the student should be able to:

1. Develop 3D models, character rigs, animations, and related art assets using advanced level technical skills, procedures, and production methodologies.
2. Employ appropriate modeling strategies to develop organic 3D character models.
3. Employ character setup tools to develop feature-rich character rigs suitable for animation.
4. Apply knowledge of the theory, history, and principles of design and animation in the creation new media art.
5. Apply successful problem-solving skills utilizing industry standard applications, technologies, and techniques in the creative and technical production process.
6. Communicate effectively, both visually and verbally, by presenting work, defending design decisions and by participating as an active critic during group critiques.
7. Develop 3D content that reflects contemporary industry standards for 3D characters in filmic and non-filmic media.

ART 247 Lighting and Rendering (3) (Inactive)

6 hours lecture/lab per week

Prerequisite(s): ART 112 with a grade of "C" or higher; approval of the Lighting and Rendering entrance portfolio review or acceptance into a NMA AS concentration.

ART 247 explores ways to use lighting, texturing, and rendering to enhance mood and character in the 3D digital environment. Emphasis will be placed on developing an aesthetic criteria for evaluation.

Upon successful completion of ART 247, the student should be able to:

1. Apply the concepts and techniques of cinematography, photography, and traditional visual arts in the context of 3D lighting and rendering through the creation of 3D works of art in a wide range of styles from photo-realistic to painterly to cartoon-style.
2. Communicate effectively, both visually and verbally, by presenting work, defending design decisions and by participating as an active critic during group critiques.

ART 248 Digital Post-Production (3) KCC AA/DA (Inactive)

6 hours lecture/lab per week

Prerequisite(s): ART 226 with a grade of "C" or higher; approval of the Digital Post-Production entrance portfolio review or acceptance into a New Media Arts AS concentration.

Comment: Letter grade and credit/no credit only. ART 248 may not be audited. ART 248 is currently inactive.

ART 248 covers the theory and art of video and audio sound design and editing for various output formats. Emphasis will also be placed on developing aesthetic criteria for evaluation purposes.

Upon successful completion of ART 248, the student should be able to:

1. Use non-linear editing techniques to enhance, pace, and set the mood for animation projects with seamless transitions.
2. Analyze the aesthetics of sound design as part of the visual medium.
3. Analyze and demonstrate the technical issues of sound: acquisition, manipulation, and phrasing and use them in conjunction with image synchronization.
4. Effectively use the vocabulary and technological processes of digital post-production as well as the language of art to aid in the integration of the technological skill with an aesthetic criterion.
5. Analyze and apply compression technology for preparing animation for the web.
6. Use problem-solving strategies to complete the creative process from concept development through revisions to final output.
7. Properly use the tools for storing, searching, retrieving, and transmitting digital information.
8. Apply the visual elements of line, shape, value, color, texture, space, time, and motion as well as the design principles of balance, rhythm, emphasis, contrast, variation, repetition, and unity in digital projects.
9. Work effectively as a team member to achieve creative decisions.
10. Demonstrate strong group communication skills and the ability to speak clearly during critiques.
11. Write about and defend the conceptual merits of work produced for the course.

ART 249 Interface Design II (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 128 with a grade of "C" or higher; ART 229 with a grade of "C" or higher; satisfactory completion of the Interface Design II entrance portfolio review or acceptance into a New Media Arts AS concentration.

Comment: ART 249 may not be audited.

ART 249 integrates the foundation level visual interface design skills introduced in ART 229 Interface Design I with the technical interface programming skills introduced in ART 128 Interface Programming I. Students go through the full creative design process for interaction design of analyzing, planning, designing, coding, testing, and launching a custom designed web standard compliant HTML/CSS static web site for a proposed client. Students document their findings through client documentation and defend their design decisions via presentations and critiques.

Upon successful completion of ART 249, the student should be able to:

1. Apply intermediate level and advanced concepts and principles of interface design and interface programming in the creation of client-based interactive applications.
2. Utilize industry standard graphics editing software and web standard compliant markup and styling to create visually effective interactive client-based interfaces.
3. Apply knowledge of the theory, history, and principles of interface design in the creation new media art.
4. Apply successful problem-solving skills utilizing industry standard applications, technologies, and techniques in the creative and technical production process.

5. Communicate effectively, both visually and verbally, by presenting work, defending design decisions, and by participating as an active critic during group critiques.
6. Synthesize the concepts and principles of graphic design, interface design, and interface programming in the creation of interactive interfaces that integrate conceptual thinking, technical execution, and aesthetic application.

ART 253 Figure Modeling (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 116 or instructor consent.

ART 253 focuses on modeling the human figure in clay, with emphasis on the basic skeletal structure and muscles in relation to surface modulation, proportion, volume and gesture.

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

1. Successfully use a variety of tools, processes, and techniques in the development of three-dimensional figure and portrait modeling, mold-making, fabrication, and the casting process and materials.
2. Successfully apply the visual elements of art and principles of design.
3. Complete the creative problem solving process from the preliminary planning stage and exploration through revisions to the final product.
4. Effectively write about and defend the conceptual merits of work produced for the course.
5. Apply an ability to articulate the concepts and intent of a finished sculpture.

ART 256 Digital Compositing (3) KCC AA/DA (Inactive)

6 hours lecture/lab per week

Prerequisite(s): ART 226 with a grade of "C" or higher; approval of the Digital Compositing entrance portfolio review or acceptance into a NMA AS concentration.

Comment: Letter grade and credit/no credit only. ART 256 may not be audited. ART 256 is currently inactive.

ART 256 covers the theory and art of digitally combining 2D and 3D source images to produce an integrated result. Emphasis will also be placed on developing aesthetic criteria for evaluation purposes.

Upon successful completion of ART 256, the student should be able to:

1. Analyze both the technical and aesthetic issues of compositing.
2. Demonstrate the skills to create the digital composite and the artistic eye to critically evaluate the final composition.
3. Apply the concepts of digital compositing: image manipulation, color correction, tracking, compositing operators, mattes, and matte extraction to work effectively with 2D, 3D, and live action imagery.
4. Use the technical vocabulary of digital compositing as well as an increased familiarity with the language of art to aid in the integration of the technological skill with an aesthetic criterion.
5. Demonstrate the skill to match color and lighting, to perceive camera angles and film grain in order to match a backplate.
6. Use problem-solving strategies to complete the creative process from concept development through revisions to final output.
7. Properly use the tools for storing, searching, retrieving, and transmitting digital information.
8. Apply the visual elements of line, shape, value, color, texture, space, time, and motion as well as the design principles of balance, rhythm, emphasis, contrast, variation, repetition, and unity in digital projects.
9. Use various techniques and develop skill with media and application.
10. Work effectively as a team member to achieve creative decisions.
11. Demonstrate strong group communication skills and the ability to speak clearly during critiques.
12. Write about and defend the conceptual merits of work produced for the course.

ART 257 Motion Graphic Design (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 202 with a grade of "C" or higher; approval of the Motion Graphic Design portfolio review or acceptance into a New Media Arts AS concentration.

Comment: ART 257 may not be audited.

ART 257 introduces the basic principles of animation and motion graphics through the creation of time-based works of art. Building upon a foundation of skills in digital art and graphic design, students go through the full creative process of planning, designing, and animating motion graphics that integrate image, text, and audio.

Upon successful completion of ART 257, the student should be able to:

1. Apply basic concepts and principles of graphic design, computer animation, and narrative storytelling in the creation of time-based works of motion graphics.
2. Utilize industry standard technologies and techniques to animate the basic elements of motion graphic design including image, typography, and sound to deliver time-based media content for the web, tv, and film.
3. Apply knowledge of the theory, history, and principles of interface design in the creation new media art.
4. Apply successful problem-solving skills utilizing industry standard applications, technologies, and techniques in the creative and technical production process.
5. Communicate effectively, both visually and verbally, by presenting work, defending design decisions, and by participating as an active critic during group critiques.
6. Synthesize the principles of motion graphic design using the individual elements of image, text, and sound in the creation of time-based digital works of art that communicate conceptual ideas, technical execution, and aesthetic application.

ART 258 Interface Programming II (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 128 with a grade of "C" or higher; approval of the Interface Programming II portfolio review or acceptance into a New Media Arts AS concentration.

Recommended Preparation: A minimum of one year of high school algebra, or its equivalent, is recommended as a background to succeed in this course.

Comment: Letter grade and credit/no credit only. ART 258 may not be audited.

ART 258 Interface Programming II builds upon the foundation level HTML, CSS, and Javascript concepts introduced in ART 128 Interface Programming I. Through lessons, demonstrations, and hands-on-exercise, this course aims to develop intermediate skills in contemporary interface programming practices. Weekly topics will address emerging and popular interface programming techniques and technologies.

Upon successful completion of ART 258, the student should be able to:

1. Apply intermediate level and advanced concepts and principles of interface programming in the creation of interactive interfaces and applications.
2. Utilize emerging and contemporary markup, styling, and scripting technologies to create effective interactive client-based interfaces.
3. Apply knowledge of the theory, history, and principles of interface design in the creation new media art.
4. Apply successful problem-solving skills utilizing industry standard applications, technologies, and techniques in the creative and technical production process.
5. Communicate effectively, both visually and verbally, by presenting work, defending design decisions, and by participating as an active critic during group critiques.
6. Synthesize the concepts and principles of interface programming with emergent technologies in the creation of interactive interfaces that integrate conceptual thinking, technical execution, and aesthetic application.

ART 259 Gaming and Real-time Computer Graphics (3) KCC AA/DA (Inactive)

3 hours lecture per week

Prerequisite(s): ART 226 with a grade of "C" or higher; approval of the Gaming and Real-time entrance portfolio review or acceptance into a NMA AS concentration.

Comment: Letter grade and credit/no credit only. ART 259 may not be audited. ART 259 is currently inactive.

ART 259 is a studio experience in gaming and real-time computer graphics techniques. Emphasis will also be placed on developing aesthetic criteria for evaluation purposes.

Upon successful completion of ART 259, the student should be able to:

1. Discuss and create relevant contemporary responses to gaming and real-time computer graphics.
2. Effectively use the vocabulary and technological processes of gaming and real-time computer graphics.
3. Analyze interactive architectures and their relationship to conventional time-based media.
4. Use modern production methodologies of the Video Game Industry in creating individual projects.
5. Utilize game technology to realize personal interactive artworks.
6. Complete the process from planning stage through revisions to a proposed project using design outlines.
7. Create storyboards, production designs, and model sheets as part of the developmental process.
8. Use problem-solving strategies to complete the creative process from concept development through revisions to final output.
9. Properly use the tools for storing, searching, retrieving, and transmitting digital information.
10. Apply the visual elements of line, shape, value, color, texture, space, time, and motion as well as the design principles of balance, rhythm, emphasis, contrast, variation, repetition, and unity in digital projects.

11. Work effectively as a team member to achieve creative decisions.
12. Demonstrate strong group communication skills and the ability to speak clearly during critiques.
13. Write about and defend the conceptual merits of work produced for the course.

ART 260 Gallery and Exhibit Design (3) KCC AA/DA (Inactive)

6 hours lecture/lab per week

Recommended Preparation: ART 105, ART 106, ART 113, ART 114, or ART 115.

Comment: ART 260 is currently inactive.

ART 260 includes design application and presentation of visual art and cultural artifacts for exhibits on campus and other related venues. The course offers intensive hands on experience of all aspects of exhibit design, planning to installation. ART 260 is an intermediate course for students considering gallery and museum work, or for those art students who wish to know how to best display and plan for personal future exhibits.

Upon successful completion of ART 260, the student should be able to:

1. Integrate design principles and visual elements into an applied cohesive end result, exhibits that are thoughtfully presented, pleasing to look at and easy to follow.
2. Work with a variety of professional and student artist and art media, assisting with visual problem solving and finding display solutions to work being presented.
3. Describe contemporary art issues, art vocabulary, explain ideas and content being presented in the contemporary Honolulu art scene.
4. Learn to work as a member of a team to find the best end result.
5. Troubleshoot problems in large and small exhibits, from beginning to end.
6. Demonstrate basic preparations skills, proper tools, equipment, and supplies typically found in the majority of public and private art venues in the state and on the mainland.

ART 266 Typography (3) KCC AA/DA (Inactive)

6 hours lecture/lab per week

Prerequisite(s): ART 112 with a grade of "C" or higher; ART 115 with a grade of "C" or higher; satisfactory completion of the Typography portfolio review or acceptance into a New Media Arts AS concentration.

Comment: Letter grade and credit/no credit only. ART 266 may not be audited. ART 266 is currently inactive.

ART 266 explores letterforms and word compositions in the context of designing with type. Projects and lectures include traditional terms and classifications through contemporary digital typesetting technology.

Upon successful completion of ART 266, the student should be able to:

1. Demonstrate relevant contemporary responses to typography.
2. Examine the impact of typography in visual communication.
3. Analyze basic terms and classifications of typography through the anatomy of letters and type families.
4. Identify type specimens and demonstrate an understanding of appropriate usage.
5. Use typography in page design.
6. Create typographic compositions that convey an informed design aesthetic using both traditional hand-skills and digital typesetting technology.
7. Comprehend and successfully apply the visual elements of line, shape, value, color, texture, time, and the design principles of balance, rhythm, emphasis, contrast, variation, repetition, and unity to typographic design assignments.
8. Use problem-solving strategies to complete the creative process from concept development through revisions to final output.
9. Work effectively as an active class member to achieve creative decisions.
10. Communicate effectively in groups and during critiques.
11. Write about and defend the conceptual merits of work produced for the course.

ART 269 (Alpha) Study Abroad (1-3) KCC AA/DA Summer

30 hours lecture/lab per credit

Prerequisite(s): Appropriate introductory studio art or art history course, or consent of instructor.

Recommended Preparation: ART 113 or ART 270.

Comment: ART 269 is offered in the summer semester only.

ART 269 (Alpha) is an on-site study of the art/architecture of a designated location(s), using lectures and discussions and/or an art studio medium as a tool to analyze, understand and appreciate the development of this region's art/architecture.

Upon successful completion of ART 269, the student should be able to:

1. Contrast and compare, through writing and a studio art medium, the peoples and culture of the designated location(s) visited.
2. Analyze, define and compare the development of the art and/or architecture of the designated location(s) visited.
3. Use group discussions, essays and examinations, and /or a visual studio process as a tool to analyze, and appraise the form and structure of the art/architecture studied.

ART 270 Introduction to Western Art (3) KCC AA/DH

3 hours lecture per week

Recommended Preparation: ART 101 or HIST 151.

ART 270 focuses on major developments in Western art from prehistory to present.

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

1. Investigate and evaluate the understanding that art is a visible manifestation of cultural values, mirror of "reality" of its time period.
2. Show a knowledge of major historical and cultural trends of Western art, including knowledge of various materials, techniques, and art forms.
3. Examine and evaluate the present by comparing and contrasting it with the past.
4. Analyze style both descriptively and comparatively.
5. Demonstrate a knowledge of the diffusion of trends and styles from one country to another over space and time.
6. Incorporate writing as a tool for analyzing art forms.

ART 273 History of Japanese Cinema (3) KCC AA/DH (Inactive)

3 hours lecture per week

Prerequisite(s): Qualification for ESL 100 or ENG 100 or consent of instructor.

Recommended Preparation: ART 109, ASAN 100. Knowledge of Japanese is not required.

Comment: ART 273 is cross-listed as ASAN 273.

ART 273 is an introductory course focusing on the history and aesthetics of Japanese film. This course will examine the major issues and trends in Japanese films by looking at the contributions of its most significant filmmakers as well as the recent trend of "anime" films.

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

1. Describe the various genres, sociology and aesthetics of Japanese film.
2. Assess the impact of Japanese film on human communication in the context of current social, cultural and economic trends, both globally and locally.
3. Identify the major trends in Japanese film and their historical developments.
4. Demonstrate strong verbal communication and writing skills.
5. Use the vocabulary of the moving image as it pertains to Japanese films.

ART 280 Introduction to Eastern Art (3) KCC AA/DA

3 hours lecture per week

Recommended Preparation: ART 101 or HIST 151.

ART 280 focuses on major developments in arts of Asia.

Upon successful completion of ART 280, the student should be able to:

1. Apply an awareness that art is a visible manifestation of cultural values and as a "child of its time."
2. Show a knowledge of major historical and cultural trends of Eastern art, including knowledge of various materials, techniques, and art forms.
3. Apply an awareness of the present by comparing and contrasting it with the past.
4. Apply a knowledge of the diffusion of trends and styles from one country to another over space and time.
5. Analyze style both descriptively and comparatively.
6. Incorporate writing as a tool for analyzing art forms.

ART 284 Animation Studio (3) KCC AA/DA

3 hours lecture per week

Prerequisite(s): ART 126 with a grade of "C" or higher; ART 212 with a grade of "C" or higher; approval of the Animation Studio portfolio review or acceptance into a NMA AS concentration.

Recommended Preparation: A minimum of one year of high school algebra, or its equivalent, is recommended as a background to succeed in ART 284.

Comment: Letter grade and credit/no credit grading only. ART 284 may not be audited. ART 284 is repeatable up to a maximum of 6 credits.

ART 284 explores contemporary topics in animation and new media art in an advanced studio environment. Through the creation of large-scale projects, students will explore targeted areas of the CG pipeline, developing work that synthesizes animation principles, topics, skills, and techniques.

Upon successful completion of ART 284, the student should be able to:

1. Through the creation of a large scale new media art project, apply advanced concepts and principles of 3D computer graphics technologies.
2. Develop project concepts, plan production schedules, conduct research, and execute all iterative steps to meet project milestones and achieve creative objectives.
3. Apply theoretical and historically relevant principles of animation in the creation of new media art.
4. Apply successful problem-solving skills and make informed decisions while utilizing industry standard applications, technologies, and techniques throughout the full creative process and CG pipeline.
5. Communicate effectively, both visually and verbally, by presenting work, defending design decisions and by participating as an active critic during group critiques.
6. Synthesize the concepts, principles, skills, and techniques of 3D computer graphics and animation in the creation of a large-scale project that integrates multiple stages of the CG pipeline along with conceptual thinking, technical execution, and aesthetic application.

ART 285 Interface Design Studio (3) KCC AA/DA

3 hours lecture per week

Prerequisite(s): ART 128 with a grade of "C" or higher; ART 229 with a grade of "C" or higher; approval of the Interface Design Studio portfolio review or acceptance into a NMA AS concentration.

Recommended Preparation: A minimum of one year of high school algebra, or its equivalent, is recommended as a background to succeed in ART 285.

Comment: ART 285 may not be audited. ART 285 is repeatable up to a maximum of 6 credits.

ART 285 explores contemporary topics in interface design and new media art in an advanced studio environment. Through the creation of large-scale projects, students explore in depth the full design process of researching, planning, designing, producing, and displaying work that synthesizes interface design principles, topics, skills, and techniques.

Upon successful completion of ART 285, the student should be able to:

1. Through the creation of a large scale new media art project, apply advanced concepts and principles of graphic design and interface design technologies.
2. Develop conceptual project ideas, plan a full production schedule, and execute all iterative steps and phases of the full design process by meeting project milestones and deadlines.
3. Apply theoretical and historically relevant principles of graphic design and interface design in the creation of new media art.
4. Apply successful problem-solving skills and make informed design decisions while utilizing industry standard applications, technologies, and techniques throughout the full creative and technical design process.

5. Communicate effectively, both visually and verbally, by presenting work, defending design decisions and by participating as an active critic during group critiques.
6. Synthesize the concepts, principles, skills, and techniques of interface design in the creation of a large-scale project that integrates conceptual thinking, technical execution, and aesthetic application.

ART 288 Kaomi Pohaku `Ia: Intermediate Hawaiian Two-Dimensional Art (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 189 or consent of instructor.

Recommended Preparation: HAW 101, HAW 102 and MATH 24.

Comment: Course supplies and materials will cost approximately \$150.00.

ART 288 studio art offers students an exploration of the principles and values in Kanaka Maoli two-dimensional visual design through the centuries of its development in Hawai'i.

Upon successful completion of ART 288, the student should be able to:

1. Apply an awareness of mo'olelo in Hawaiian culture and recognize its two-dimensional visual equivalents in Hawaiian art and design.
2. Exhibit an awareness of Hawaiian two-dimensional art and design as a manifestation of a Hawaiian interpretation of one's place in the family, community and Hawaiian nation.
3. Apply the importance and interconnectedness between Hawaiian two-dimensional art and design and the Hawaiian language, its use, syntax and symbolism.
4. Complete the creative problem solving process from the preliminary planning stage and exploration through study and revision to the final product.
5. Skillfully utilize various two-dimensional art-making techniques and processes to express personal imagery.
6. Use strong communication skills and speak clearly during critiques.

ART 289 I Kai 'o Kahua - Intermediate Hawaiian Three-Dimensional Art (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 189 or consent of instructor.

Recommended Preparation: HAW 101, HAW 102 and MATH 24.

Comment: Course supplies and materials will cost approximately \$150.00.

ART 289 studio art offers students an exploration of the principles and values in Kanaka Maoli three-dimensional visual design through centuries of its development in Hawai'i.

Upon successful completion of ART 289, the student should be able to:

1. Apply an awareness of mo'olelo in Hawaiian culture and recognize its three-dimensional visual equivalents in Hawaiian art and design.
2. Exhibit an awareness of Hawaiian three-dimensional art and design as a manifestation of a Hawaiian interpretation of one's place in the family, community and Hawaiian nation.
3. Apply the importance and interconnectedness between Hawaiian three-dimensional art and design and the Hawaiian language, its use, syntax and symbolism.
4. Complete the creative problem solving process from the preliminary planning stage and exploration through study and revision to the final product.
5. Skillfully utilize various three-dimensional art-making techniques and processes to express personal imagery.
6. Use strong communication skills and speak clearly during critiques.

ART 290 The Arts of Africa, Native Americas, and the Pacific (3) KCC AA/DH

3 hours lecture per week

Recommended Preparation: ART 101 or HIST 151.

ART 290 focuses on formal and contextual study of art from selected areas in Africa, the Pacific and Native Americas.

Upon successful completion of ART 290, the student should be able to:

1. Apply an awareness of art as a visible manifestation of cultural values and cultural identities. Be better able to define one's own cultural identity.
2. Show a knowledge of cultural trends in art making to include the application of various materials, techniques and art forms.

3. Show an awareness of the basic overlapping themes as to why tribal societies produce art to include creation, myth and genealogy, the importance of gender, ancestors, status and display, the roles of fertility, shamen and funerals.
4. Apply a knowledge of the present day role of art by comparing or contrasting its function in the past.
5. Show an awareness of the interactive roles which society, religion, politics and urbanization have played in the art making process.
6. Critically examine the impact of western contact, colonization, decolonization and a global economy on the visual arts.
7. Apply critical thinking and inquiry skills to the analysis and processing of information.
8. Incorporate writing as a tool for analyzing art forms.

ART 293 New Media Arts Internship (2-6) KCC AA/DA

3 hours seminar, 55 hours field experience per credit

Prerequisite(s): Satisfactory completion of the Internship entrance portfolio review or acceptance into a NMA AS concentration.

Comment: ART 293 may not be audited. ART 293 is repeatable for a maximum of six credits.

ART 293 provides supervised work experience in multimedia production with mentorship by a professional in the field. This variable credit course enables students to apply the knowledge and skills acquired in the classroom to the work environment.

Upon successful completion of ART 293, the student should be able to:

1. Develop skills and support materials for procurement of internship in the field of New Media.
2. Apply knowledge of the theory, history, and principles of design and animation in the creation new media art.
3. Apply successful problem-solving skills utilizing industry standard applications, technologies, and techniques in the creative and technical production process.
4. Develop skills and support materials for procurement of internship in the field of New Media.
5. Apply knowledge of the theory, history, and principles of design and animation in the creation new media art.
6. Apply successful problem-solving skills utilizing industry standard applications, technologies, and techniques in the creative and technical production process.
7. Communicate effectively, both visually and verbally, by presenting work, defending design decisions, and by participating as an active critic during group critiques.
8. Supervised and/or mentored field experience in multimedia production.

ART 294 New Media Arts Practicum (3)

6 hours lecture/lab per week

Prerequisite(s): ART 202 with a grade of "C" or higher; satisfactory completion of the New Media Arts Practicum entrance portfolio review or acceptance into a NMA AS concentration.

Comment: ART 294 may not be audited.

ART 294 provides an on-campus environment where advanced students in the NMA program can engage in real production activity. Students will gain experience in a supervised on-campus work environment by producing work products including but not limited to 2D and 3D animation and /or motion graphic projects, interface design projects, student publications, works for hire for non-profit and profit organizations, and/or works for hire for the community college system. ART 294 will operate in a manner similar to business and industry and students will be expected to work in teams carrying out all necessary production tasks within real production deadlines. The students will be enrolled in a Practicum class to provide structure to the learning experience.

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

1. Understand the basic principles of task organization and time management as they apply to the multimedia production.
2. Develop skills and support materials for procurement of employment or college transfer in the field of New Media.
3. Apply knowledge of the theory, history, and principles of design and animation in the creation new media art.
4. Apply successful problem-solving skills utilizing industry standard applications, technologies, and techniques in the creative and technical production process.
5. Communicate effectively, both visually and verbally, by presenting work, defending design decisions, and by participating as an active critic during group critiques.
6. Work effectively as a team member to design and produce a short animation.

ART 295 Design Portfolio (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 249 with a grade of a grade of "C" or higher; ART 258 with a grade of a grade of "C" or higher; satisfactory completion of the Design Portfolio entrance portfolio review or acceptance into a NMA AS concentration.

Comment: ART 295 may not be audited.

ART 295 guides students through the process of editing, compiling, and devising a strategy to focus their work to best market their skills through an interactive digital portfolio, hard copy portfolio, and application materials through a unified presentation. Industry and transfer issues will be covered to better prepare students for future career goals.

Upon successful completion of ART 295, the student should be able to:

1. Edit, compile and devise a strategy to focus and market multi-media work in a unified presentation.
2. Develop skills and support materials for procurement of employment or college transfer in the field of New Media.
3. Apply knowledge of the theory, history, and principles of design and animation in the creation new media art.
4. Apply successful problem-solving skills utilizing industry standard applications, technologies, and techniques in the creative and technical production process.
5. Communicate effectively, both visually and verbally, by presenting work, defending design decisions, and by participating as an active critic during group critiques.
6. Design an interactive digital portfolio and hard copy portfolio of personal multi-media work.

ART 296 Demo Reel Development (3) KCC AA/DA

6 hours lecture/lab per week

Prerequisite(s): ART 246 with a grade of "C" or higher; approval of the Demo Reel Development entrance portfolio review or acceptance into a NMA AS concentration.

Comment: ART 296 may not be audited.

ART 296 guides students through the process of compiling a demo reel that is representative of student interest and skill for entry into industry, professional schools, or baccalaureate programs. Students will devise a strategy to edit, package, and market their work including a DVD, website, resume and related promotional materials.

Upon successful completion of ART 296, the student should be able to:

1. Organize art and animation into a portfolio that reflects clear aesthetic considerations and an awareness of industry standards.
2. Identify appropriate entry level positions and describe relevant educational, professional, and technical requirements.
3. Write well-structured supporting materials including a resume and cover letter.
4. Apply knowledge of the theory, history, and principles of design and animation in the creation new media art.
5. Apply successful problem-solving skills utilizing industry standard applications, technologies, and techniques in the creative and technical production process.
6. Communicate effectively, both visually and verbally, by presenting work, defending design decisions and by participating as an active critic during group critiques.

ASIAN STUDIES

ASAN 100 Asian Perspectives (3) KCC AA/DS and KCC AS/AH or KCC AS/SS

3 hours lecture per week

Prerequisite(s): Qualification for ENG 100.

ASAN 100 examines contemporary Asia. Students will explore systems of values and their expression, history, social and political institutions, and current issues of South, Southeast, and East Asia. This course will focus on change and continuity within Asia and Asia's interrelationship with the rest of the world.

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

1. Express in writing or speaking, components of traditional and contemporary Asian political, social, economic and cultural patterns and institutions.
2. Discuss the geography of Asia and interrelationships with the rest of the world.
3. Analyze and describe contemporary issues and perspectives of Asia.

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4. List and describe Asian cultural traditions, lifestyles, aesthetic expressions and their contemporary relevance.
5. Contrast and compare current trends of change in Asia and their relevance for the region and the world in the 21st century.

ASAN 273 History of Japanese Cinema (3) KCC AA/DH (Inactive)

3 hours lecture per week

Prerequisite(s): Qualification for ESL 100 or ENG 100 or consent of instructor.

Recommended Preparation: ART 109, ASAN 100. Knowledge of Japanese is not required.

Comment: ASAN 273 is cross-listed as ART 273.

ASAN 273 is an introductory course focusing on the history and aesthetics of Japanese film. This course will examine the major issues and trends in Japanese films by looking at the contributions of its most significant filmmakers as well as the recent trend of “anime” films.

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

1. Describe the various genres, sociology and aesthetics of Japanese film.
2. Assess the impact of Japanese film on human communication in the context of current social, cultural and economic trends, both globally and locally.
3. Identify the major trends in Japanese film and their historical developments.
4. Demonstrate strong verbal communication and writing skills.
5. Use the vocabulary of the moving image as it pertains to Japanese films.

ASTRONOMY

ASTR 110 Survey of Astronomy (3) KCC AA/DP and KCC AS/NS

3 hours lecture per week

Prerequisite(s): MATH 25

Recommended Preparation: PHYS 100, PHYS 122 or high school physics.

ASTR 110 is a survey of astronomy and astronomical measurement techniques with emphasis on the structure, evolution and dynamics of the physical universe.

Upon successful completion of ASTR 110, the student should be able to:

1. Explain how scientists use both qualitative and quantitative analysis methods to investigate how the universe works.
2. Identify the basic laws of physics which govern the movements and workings of the planets, stars, and galaxies.
3. Identify the instruments and methods astronomers use to investigate the physical universe.
4. Explain the nature, characteristics, and distribution of various forms of matter in the physical universe.
5. List the current theories of the origin of life in the physical universe.
6. Define the theories of the origin and evolution of the planets, stars, galaxies, and the universe itself.

ASTR 280 Evolution of the Universe (3) KCC AA/DP and KCC AS/NS (Inactive)

3 hours lecture per week

Prerequisite(s): ASTR 110; MATH 25.

Recommended Preparation: ENG 100.

ASTR 280 is an introductory course, with limited mathematical rigor, pertaining to the study of phenomena on a galactic scale. Topics that will be discussed are the history of cosmology and how our perceptions of the universe have changed, stellar evolution and exotic remnants, galactic formation, dark matter, and the inflationary universe. Modern problems dealing with current research topics will also be discussed.

Upon successful completion of ASTR 280, the student should be able to:

1. Explain the Copernican ideal and how it pertains to modeling the universe.
2. Understand the special theory of relativity and its effects: time dilation, mass dilation, and space contraction.
3. Explain the general theory of relativity and its effect: Gravity.
4. Explain how the Planck scale limits our knowledge of the initiating mechanisms for the current universe.
5. Discuss theory on how we believe our galaxy formed.
6. Discuss theory on how we believe some of the more exotic galaxies formed.
7. Explain Hubble's constant, how it is measured, and its implications: the age of the universe.

8. Discuss the problem of dark matter, its nature, and implications for the large scale structure of the universe.
9. Explain the modern inflationary model of the universe.

BIOCHEMISTRY

BIOC 241 Fundamentals of Biochemistry (3) KCC AA/DP

3 hours lecture per week

Prerequisite(s): MATH 25 or equivalent.

Recommended Preparation: High school science.

BIOC 241 focuses on the fundamentals of general, inorganic, and bioorganic chemistry as they apply to living systems.

Upon successful completion of BIOC 241, the student should be able to:

1. Use the metric system and scientific notation.
2. Understand modern theories of atomic structure and radioactivity.
3. Understand the periodic table and how it is used to predict chemical reactivity.
4. Understand modern concepts of chemical bonding.
5. Write chemical formulas and names.
6. Use kinetic molecular theory to explain chemical phenomena.
7. Perform calculations using the mole concept.
8. Write and balance chemical equations.
9. Perform calculations in stoichiometry.
10. Understand the concept of equilibrium.
11. Understand acid-base theory and pH.
12. Understand solution chemistry and the behavior of dissolved substances.
13. Name the basic types of organic molecules.
14. Explain the physical and chemical properties of hydrocarbons.
15. Explain the physical and chemical properties of the major organic functional groups.

BIOC 244 Essentials of Biochemistry (3) KCC AA/DP and KCC AS/NS

3 hours lecture per week

Prerequisite(s): BIOC 241, CHEM 151 or CHEM 161.

BIOC 244 focuses on chemical principles and concepts of living systems. The composition, function, and transformation of biological substances in animals, plants and micro-organisms. Sufficient organic chemistry is provided for understanding of these principles.

Upon successful completion of BIOC 244, the student should be able to:

1. Distinguish between the 3 major types of chemical bonds and give examples.
2. Draw Lewis electron-dot formulae for molecules.
3. Predict bond angles for molecules.
4. Describe how molecules bond by way of overlapping orbitals (Valance Bond Theory).
5. Be able to draw pictures of and name 20 common organic functional groups.
6. Explain why simple structural formula drawings and electron-dot formulae don't always accurately describe the geometry of molecule.
7. Draw structural diagrams and condensed formulas for 16 different types of organic compounds. The 16 types are: alkanes, cycloalkanes, alkenes, alkynes, aromatic, alcohols, ethers, thiols, phenols, aldehydes, ketones, acids, esters, amides, anhydrides, and amines.
8. Name molecules using the IUPAC system from the 16 major classes of compounds having been shown the condensed formula.
9. Draw all structural isomers of a molecule having been shown its formula.
10. Distinguish between structural, geometric, and optical isomers.
11. Distinguish between the physical and chemical properties of the 16 important types of organic compounds.
12. Draw the products of a chemical reaction given the reacting organic molecule and the chemical reagents.
13. Explain by word and drawings the resonance structures of benzene and other aromatic compounds.
14. Explain how the presence of one or more asymmetric carbons leads to optical activity.
15. Draw the optical isomer(s) of a given molecule.
16. Explain the terms racemate and racemic mixture.
17. Explain how optical isomerism operates in the biological world-especially with respect to enzymes.

18. Predict the products of an oxidation-reduction reaction starting with primary and secondary alcohols, aldehydes, and ketones.
19. Show with chemical reactions how the Tollens and Benedicts Tests distinguish aldehydes and ketones.
20. Draw the formula of a fat.
21. Distinguish between saturated and unsaturated fatty acids. Show with a diagram how a soap cleans grease.
22. Distinguish between the relative reactivities of esters, amides, and anhydrides.
23. Show how a claisen condensation reaction occurs between 2 ester molecules.
24. Show how an aldol condensation reaction occurs between 2 reactants. Distinguish between primary, secondary, and tertiary amines.
25. Define an acid and a base.
26. Describe the pH scale.
27. Calculate the pH of a solution of a: weak acid, strong acid, weak base, strong base and buffer
28. Calculate the pH of a buffer using the Henderson-Hasselbalch Equation.
29. Distinguish between carbohydrates, proteins and fats.
30. Draw both the straight chain and cyclic structures of glucose.
31. Describe the bonding between sugar molecules in disaccharides and polysaccharides.
32. Distinguish between essential and non-essential amino acids.
33. Draw a peptide bond. Show the chemical reaction for how one forms.
34. Distinguish between primary, secondary, tertiary and quarternary structure in proteins.
35. Distinguish between peptides, polypeptides, and proteins.
36. Describe how a catalyst works.
37. Show with a drawing why enzymes catalyze only very specific chemical reactions. Relate this to optical activity.
38. Show how lipids function as cell membranes. Explain why they exclude water.
39. Show by drawings the overview of the following metabolic pathways: glycolysis, Krebs Cycle, glycogenesis, glycogenolysis, gluconeogenesis, hexose monophosphate shunt, fatty acid oxidation spiral, fatty acid synthesis, transamination, oxidative phosphorylation and oxidative deamination.
40. Explain why and how ATP is a source of such high energy in the body.
41. Explain how ATP can be used to drive chemical reactions which have a positive (unfavorable) free energy.
42. Be able to draw all activation steps for the following: synthesis of fatty acids, breakdown (oxidation) of fatty acids and formation of acetyl coenzyme-A before entering the Krebs Cycle.

BIOLOGY

BIOL 101 Introduction to Science: Biological Sciences (3) KCC AA/DB and KCC AS/NS

3 hours lecture per week

Recommended Preparation: CHEM 100 or higher level chemistry course.

BIOL 101 introduces students to the characteristics of science, historical development of scientific concepts, and interaction of society with science. BIOL 101 is illustrated by topics from the biological sciences.

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

1. Appreciate the complexities and interrelationship in nature.
2. Understand major biological concepts including evolution, classification, cell structure and function, genetics, energy acquisition and utilization, human biology and ecology.
3. Understand the scientific process, its characteristics, its limitations, and its place in society.
4. Make informal decision on biologically-related issues.

BIOL 101L Introduction to Science: Biological Sciences Laboratory (1) KCC AA/DY

3 hours lab per week

Prerequisite(s): Credit or concurrent enrollment in BIOL 101.

Recommended Preparation: CHEM 100 or higher level chemistry course.

BIOL 101L includes laboratory experiments illustrating topics in the biological sciences.

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

1. List the sequence of steps followed in the scientific methods and understand the logic and significance of each step.
2. Describe the many applications of the scientific method to everyday life.
3. Demonstrate the proper techniques and procedures for microscopy, magnification, scientific illustrations, dissection, genetics, sampling techniques, and other pertinent biological laboratory experiments.

BIOL 124 Environment and Ecology (3) KCC AA/DB and KCC AS/NS

3 hours lecture per week

Prerequisite(s): A grade of "C" or higher in ENG 22, or qualification for ENG 100 or ESL 100.

BIOL 124 examines the relationship between living things, including humans, and their environment. The course introduces major concepts of ecology and relates these concepts to environmental issues. Topics include the structure and function of ecosystems, evolutionary processes, population biology, extinction, sustainability and global climate change. Emphasis is placed on Hawaiian environment and ecology and the diversity of native Hawaiian species.

Upon successful completion of BIOL 124 the student should be able to:

1. Describe the biological and physical principles of ecology including ecosystem energetics, species relationships, and population growth.
2. Identify current ecological and environmental issues and threats to human societies.
3. Identify Hawai'i's major ecosystems and list factors that threaten the long term persistence of those ecosystems and compare Hawai'i's ecology and environment, including evolutionary history, to other areas around the world.
4. Research, evaluate and present scientific information as relevant to ecological and environmental issues.
5. Apply ecological principles to problem-solving approaches to current human environmental issues, including sustainability in human societies.

BIOL 124L Environment and Ecology Lab (1) KCC AA/DY

3 hours lab per week

Prerequisite(s): Credit or concurrent enrollment in BIOL 124.

BIOL 124L is a laboratory to accompany BIOL 124 Environment and Ecology. The course includes laboratory and computer exercises, field trips and research projects to examine the relationship between living things, including humans, and their environment. Emphasis is placed on Hawaiian environment and ecology and the diversity of native Hawaiian species.

Upon successful completion of BIOL 124L the student should be able to:

1. Describe the applications of the scientific method to ecological questions and everyday life.
2. Demonstrate critical thinking and logical reasoning through the use of scientific methods and research procedures to investigate questions related to ecology and environmental issues.
3. Apply scientific concepts to environmental issues including population growth, global climate change and introduced species.
4. Research, evaluate and present scientific information as relevant to ecological and environmental issues.

BIOL 130 Anatomy and Physiology (4) KCC AA/DB and KCC AS/NS

4 hours lecture per week

Recommended Preparation: CHEM 100 or higher or biochemistry course; a college level biology or zoology course.

BIOL 130 focuses on the structure and function of the human body which includes a study of its gross anatomy, microanatomy, physiology, pathology, and pathophysiology.

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

1. Describe the structural and functional relationships of the body as a whole, its systems, and its organs.
2. Analyze the structure and function of the cell and its interactions with the environment.
3. Discuss the structure of the skeletal and muscular organs and relate to locomotion and support.
4. Describe the ultrastructure of skeletal muscle and the mechanism of muscular contraction.
5. Describe the anatomy and physiology of the endocrine system, and relate hormonal regulation to the pathophysiology of the body.
6. Describe the role of the nervous system in functional control of the body, describe the nerve impulse mechanism, explain the role of the autonomic nervous system in homeostatic maintenance, and analyze the integration of sensation.
7. Discuss the anatomical structures and components of the cardiovascular and lymphatic systems, and explain cardiovascular and immune physiology.
8. Describe the anatomical structures of the respiratory system and explain pulmonary physiology.
9. Describe the anatomy of the digestive system, and analyze the physiological changes of the digestive process.
10. Describe the anatomy of the urinary system, and explain how the urinary organs function in the removal of cellular wastes from the blood and transport the wastes from the body.
11. Explain the role of fluids, the movement of ions, and acid-base balance in maintaining the homeostasis of the body.
12. Describe the anatomical structures of the reproductive system and their functions, including the human sexual response.

BIOL 130L Anatomy and Physiology Laboratory (1) KCC AA/DY

3 hours lab per week

Recommended Preparation: Credit or concurrent enrollment in BIOL 130.

BIOL 130L focuses on gross and microscopic anatomy of the human body with special emphasis upon the skeleton, muscles, heart and blood vessels, and the nervous system.

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

1. Identify the anatomical structures of the muscular, skeletal, nervous, hormonal, circulatory, respiratory, digestive, urinary, and reproductive systems.
2. Describe the position and structural relationships of the anatomical components of the muscular, skeletal, nervous, hormonal, circulatory, respiratory, digestive, urinary and reproductive systems.

BIOL 171 Introduction to Biology I (3) KCC AA/DB

3 hours lecture per week

Prerequisite(s): Credit or concurrent enrollment in CHEM 161.

Recommended Preparation: BIOC 241, BIOL 101, BIOL 124, CHEM 100 (or concurrent), and/or ZOOL 200. It is strongly recommended to take BIOL 171L concurrently with BIOL 171.

BIOL 171 is the first semester of an introductory biology course appropriate for all life science majors. Topics covered include: cell structure, chemistry, growth and reproduction; DNA replication, transcription and translation; gene regulation, genetics, evolution, viruses, and bacteria.

Upon successful completion of BIOL 171, the student should be able to:

1. Describe the fundamental biology of the cell, including cell anatomy, biochemical composition, cellular metabolism, respiration and photosynthesis, communication, growth and reproduction.
2. Describe the fundamentals of Mendelian genetics, the chromosomal and molecular basis of heredity and apply these concepts to the mechanisms of evolution.
3. Describe the process of DNA replication and DNA transcription and translation from gene to protein, including gene regulation and apply these processes to the reproduction and metabolism of the cell.
4. Describe the principles of evolution through natural selection, the principles of descent with modification, the mechanisms involved in the evolution of populations and the origin of species.
5. Describe the history of life on Earth and the evolutionary relatedness of life on Earth through morphological and molecular phylogenies.
6. Describe the fundamental structure and function of viruses and bacteria.

BIOL 171L Introduction to Biology I Lab (1) KCC AA/DY

3 hours lab per week

Prerequisite(s): Credit or concurrent enrollment in BIOL 171

Recommended Preparation: BIOC 241, BIOL 101L, BIOL 124L, CHEM 100L (or concurrent), and/or ZOOL 200L. It is strongly recommended to take BIOL 171L concurrently with BIOL 171.

Comment: Letter grade and credit/no credit only. BIOL 171L may not be audited.

BIOL 171L accompanies the BIOL 171 lecture course. Topics covered include: scientific method, biological molecules, enzyme kinetics, proper technique of compound and stereo microscopes, respirometry, photosynthesis, cultivation of bacteria, molecular biology, meiosis and mitosis in plant and animal cells, principles of Mendelian genetics, population genetics, evolution.

Upon successful completion of BIOL 171L, the student should be able to:

1. Demonstrate proper use of common lab equipment such as compound and stereo microscopes, respirometer, micropipettors, centrifuges, laboratory glassware, spectrophotometer.
2. Apply the scientific method to design and conduct experiments, generate, test and analyze hypotheses, and construct formal lab reports.
3. Properly construct and interpret data tables, graphs and scientific illustrations.
4. Demonstrate proper laboratory safety procedures and execute proper lab protocol.

BIOL 172 Introduction to Biology II (3) KCC AA/DB

3 hours lecture per week

Prerequisite(s): BIOL 171 or instructor consent.

Recommended Preparation: It is strongly recommended to take BIOL 172L concurrently with BIOL 172.

BIOL 172 is the second semester of an introductory biology course appropriate for all life science majors. Topics covered include: Anatomy and physiology of plants and animals, systematics of plants and animals, ecology of populations and communities, and ecosystem function.

Upon successful completion of BIOL 172, the student should be able to:

1. Describe the fundamental anatomy and physiology of protists, fungus and plants.
2. Describe the fundamental anatomy and physiology of animals.
3. Describe the relationship between animal form and function in terms of evolutionary history.
4. Describe the relationship between plant form and function in terms of evolutionary history.
5. Describe ecology, population biology, community ecology, and ecosystems ecology.

BIOL 172L Introduction to Biology II Lab (1) KCC AA/DY

3 hour lab per week

Prerequisite: Credit or concurrent enrollment in BIOL 172.

Recommended Preparation: It is strongly recommended to take BIOL 172L concurrently with BIOL 172.

Comment: Letter grade and credit/no credit only. BIOL 172L may not be audited.

BIOL 172L accompanies the BIOL 172 lecture course. Topics covered include: Protist and Fungus form and function; plant anatomy, reproduction and form and function; diversity of animal form and function and vertebrate anatomy, and ecology.

Upon successful completion of BIOL 172L, the student should be able to:

1. Demonstrate proper use of common lab equipment such as compound and stereo microscopes, and dissection techniques.
2. Apply the scientific method to design and conduct experiments, generate, test and analyze hypotheses, and construct formal lab reports.
3. Properly construct and interpret data tables, graphs and scientific illustrations.
4. Demonstrate proper laboratory safety procedures and execute proper lab protocol.
5. Demonstrate proper use of field equipment and sampling methods including transect tapes, quadrats, water quality and environmental monitoring devices, and other field gear.

BIOL 265 Ecology and Evolutionary Biology (3) KCC AA/DB

3 hours lecture per week

Prerequisite(s): BIOL 172.

Comment: BIOL 265 may not be audited.

BIOL 265 is an introduction to the underlying principles of ecology and evolution. Unique communities that have evolved in Hawai'i are included in the course.

Upon successful completion of BIOL 265, the student should be able to:

1. Apply the appropriate terminology when describing, explaining, and applying ecological theory.
2. Summarize abiotic environmental features including climate, soil and geographical structure.
3. Identify the biological and physical structures of ecosystems, major biogeochemical cycles, and energy flow.
4. Examine the basic principles of population dynamics including birth and mortality rates, population growth models, life history strategies, competition and carrying capacity.
5. Define the interactions within communities including interspecific competition, predation, and mutualism.
6. Describe the evolutionary adaptations of organisms to their environment.
7. Give examples of evolutionary principles that produced unique island communities.
8. Evaluate the impact of habitat alteration and destruction, loss of biodiversity, and effects of alien species.
9. Interpret and produce tabular and graphical representations of information, including tables, graphs, and maps.
10. Locate and critique the value of printed and online resources.
11. Evaluate the consequences of population growth, increased resource use and pollution on global ecosystems.

BIOL 265L Ecology and Evolutionary Biology Lab (1) KCC AA/DY

3 hours lab per week

Prerequisite(s): BIOL 172; credit or concurrent enrollment in BIOL 265.

Comment: BIOL 265L may not be audited.

BIOL 265L is a laboratory that accompanies BIOL 265 and emphasizes investigation of local environments.

Upon successful completion of BIOL 265L, the student should be able to:

1. Use correctly the standard field and laboratory techniques and equipment of environmental assessment.
2. Design and carry out experiments that test hypotheses about environmental questions.
3. Record observations, make interpretations, synthesize results of assessment of ecological phenomena and effectively communicate findings.
4. Summarize the roles of different organisms in an ecosystem.
5. Distinguish between transient and dynamic flows of energy and nutrients in the environment.
6. Evaluate and describe populations in terms of abundance and spatial distribution.
7. Identify current environmental problems in Hawai'i.
8. Explain and give examples of the problems associated with the introduction of alien species into Hawai'i.

BIOL 275 Cell and Molecular Biology (3) KCC AA/DB

3 hours lecture per week

Prerequisite(s): BIOL 171; BIOL 171L; CHEM 272; CHEM 272L or instructor consent

Recommended Preparation: Concurrent enrollment in BIOL 275L.

BIOL 275 is a course in cell and molecular biology for life science majors. This course is designed to give the student a fundamental understanding of the structure and biochemistry of eucaryotic and procaryotic cells. The course also covers the basic principles of molecular biology and includes modern advances in biotechnology, recombinant DNA technology and bioinformatics.

Upon successful completion of BIOL 275, the student should be able to:

1. Describe, in detail, the organization of life at the cellular and subcellular levels and explain the experiments that developed this knowledge.
2. Describe the theories explaining the development of eucaryotes and the evolution of multicellular organisms.
3. Describe the structure and function of biological membranes and the processes that occur at cell surfaces and explain the experiments that developed this knowledge.
4. Describe the molecular structures and the biochemistry of the cytoskeleton, intracellular traffic and motility and explain the experiments that developed this knowledge.
5. Describe the basic processes involved in intracellular and intercellular signaling and how these processes impact the cell cycle and cancer theory. Explain the experiments that developed this knowledge.
6. Describe the fundamental principles of molecular biology and molecular genetics as they relate to the inheritance of genetic traits; the structure, replication and repair of DNA; and the transcription, processing and translation of RNA. Explain the experiments that developed this knowledge.
7. Describe the fundamental principles of molecular biology and molecular genetics as they relate to biotechnology; the laboratory manipulation of DNA, RNA and proteins; and the ethical issues surrounding such research and applications.
8. Describe, in detailed and specific terms, the fundamental processes that occur in respiration and photosynthesis.

BIOL 275L Cell and Molecular Biology Lab (2) KCC AA/DY

4 hours lecture/lab per week

Prerequisite(s): BIOL 171; BIOL 171L; BIOL 172; BIOL 172L; CHEM 272; credit or concurrent enrollment in BIOL 275; or instructor consent.

Comment: BIOL 275L is cross-listed as MICR 240.

BIOL 275L is a lecture/laboratory in cell and molecular biology for life science majors. This course is taken either concurrently or after BIOL 275. Through lectures and laboratory exercises, students will acquire a fundamental understanding of the biochemistry of the cell. Students will also acquire competence in tissue culture and experience with modern advances in biotechnology and recombinant DNA technology.

Upon successful completion of BIOL 275L the student should be able to:

1. Prepare media and buffers needed for the culture of animal, plant and microalgae cells.
2. Demonstrate proficiency in the specialized sterilization and quality control procedures used in a tissue culture laboratory.

3. Demonstrate proficiency in routine cell culture protocols such as feeding schedules and medium supplements, subcultivation procedures, cell enumeration and viability testing, cryopreservation, and the detection and disposition of contaminated cultures.
4. Demonstrate knowledge of the basic principles of protein chemistry by applying these principles in the designing and reporting of experiments utilizing enzymatic reactions, electrophoresis and immunoassays.
5. Demonstrate knowledge of the basic principles of DNA structure, function, and chemistry by applying these principles in the designing and reporting of experiments utilizing DNA extraction and purification, electrophoresis, restriction enzyme analysis, DNA amplification, sequencing, and sequence analysis using standard bioinformatics databases and analysis protocols.
6. Describe in detail the organization of life at the cellular and subcellular levels.
7. Describe the structure and function of biological membranes and demonstrate an understanding of the processes which occur at the cell surface.
8. Describe in detailed and specific terms the fundamental catabolic and anabolic metabolic processes that occur at the cellular level.
9. Describe and experimentally manipulate the cytoskeleton particularly as it relates to intracellular traffic, cytokinesis and cell motility.
10. Describe and experimentally manipulate the basic processes involved in cell signaling and the cell cycle and define the role of these processes in cell differentiation and in cancer.
11. Describe the theories explaining the development of eukaryotes and the evolution of multicellular organisms.
12. Describe and debate the ethical issues surrounding existing and proposed research and applications using living cells.

BOTANY

BOT 101 General Botany (3) KCC AA/DB and KCC AS/NS

3 hours lecture per week

Recommended Preparation: ENG 100.

BOT 101 discusses growth, functions and evolution of plants, their relations to the environment and particularly to humans and their activities.

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

1. Demonstrate knowledge of the important biological concepts and theories (as cell theory, energy flow, photosynthesis, growth, reproduction, etc) and recognize that they may be explained in terms of the natural laws of physics and chemistry.
2. Know the unique anatomical characteristics of major plant groups and relate these structures to the functions they perform.
3. Demonstrate the basic knowledge of plant genetics and evolution of floral structures in terms of ecology and morphology.
4. Develop a balanced and pragmatic knowledge in Botany.

BOT 101L General Botany Laboratory (1) KCC AA/DY

3 hours lab per week

Prerequisite(s): Credit or concurrent enrollment in BOT 101.

Recommended Preparation: ENG 100.

BOT 101L focuses on laboratory observations and experiments illustrating basic principles of plant biology.

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

1. Cultivate responsibility and mutual respect for each other, especially during the discussions.
2. Demonstrate the ability of critical thinking and logical reasoning through the use of the scientific method.
3. Work independently or in groups in the laboratory by performing observations, drawings, dissections and behavioral objectives.

BOT 105 Ethnobotany (3) KCC AA/DS and KCC AS/SS

3 hours lecture per week

BOT 105 is an introduction to plants and their influence upon the culture of Hawai`i and the Pacific. In BOT 105 the uses of cultivated and wild plants of the world are described.

Upon successful completion of BOT 105, the student should be able to:

1. Demonstrate the knowledge of habits, habitats, reproductions and interactions of plants and their environments.
2. Identify the role and influence played by plants on the culture of Hawai`i and Pacific.
3. Demonstrate a knowledge of the economic importance and ecology of cultivated as well as the wild plants in the world.
4. Understand and appreciate the complete dependence of all living things on plants.

BOT 130 Plants in the Hawaiian Environment (3) KCC AA/DB and KCC AS/NS

3 hours lecture per week

Recommended Preparation: ENG 100.

BOT 130 is an introduction to the plant species and communities of the Hawaiian ecosystems. It discusses the plant's evolution, ecology and economic values to humans. It also includes the observation and systematics of native and introduced flora.

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

1. Describe the geologic history of the Hawaiian islands.
2. Describe the arrival and establishment of native and introduced species.
3. Compare the major Hawaiian ecosystems.
4. Compare/contrast variations of plant parts and functions..
5. Recognize common native and introduced plant species.
6. Examine the ecology and economic values of plant species.
7. Examine the effects of humans on the flora of the Hawaiian islands.

BOT 130L Plants in the Hawaiian Environment Laboratory (1) KCC AA/DY

3 hours lab per week

Prerequisite(s): Credit or concurrent enrollment in BOT 130.

BOT 130L focuses on observations of plant species, populations and communities as they interact with their environment through field survey methodologies and field trips. Students will become familiar with the taxonomy and ecology of native and introduced species.

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

1. Demonstrate the ability of critical thinking and logical reasoning through the use of scientific method.
2. Work independently or in groups in the laboratory by performing observations, dissections and completing behavioral objectives of each laboratory exercise.
3. Identify and characterize major plant families, species and economic plants.
4. Explain the effects of environmental factors on plant adaptation, dispersal and distribution.

BOT 201 Plant Evolutionary Diversity (3) KCC AA/DB

3 hours lecture per week

Prerequisite(s): BOT 101 or consent of instructor.

Corequisite(s): BOT 201L.

Recommended Preparation: ENG 100.

BOT 201 discusses evolutionary trends in the plant world, including reproductive, morphological and life history adaptations by algae, fungi and vascular plants.

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

1. Explain the role of evolution in plant diversity.
2. Distinguish between morphological and anatomical diversity among algae, fungi and plants.
3. Use the systematic botany to classify and name various species of algae, fungi and plants.
4. Describe the ecological niches of algae, fungi and plants.

BOT 201L Plant Evolutionary Diversity Laboratory (1) KCC AA/DY

3 hours lab per week

Corequisite(s): BOT 201.

Comment: Letter grade or credit/no credit; BOT 201L may not be audited.

BOT 201L applies the principles discussed in BOT 201 through laboratory experiences in the lab setting and out in the field or natural ecosystem.

Upon successful completion of BOT 201L the student should be able to:

1. Identify and classify representative species of algae, fungi and vascular plants.
2. Sketch, classify and describe the various species of algae, fungi and vascular plants investigated in the laboratory.
3. Prepare a scientific laboratory report with appropriate annotations.

4. Prepare herbarium specimens of appropriate species.
5. Apply the observational and experimental techniques and methodologies employed in the natural sciences.

BUSINESS

BUS 100 Using Mathematics to Solve Business Problems (3) KCC AA/FS and KCC AS/ML

3 hours lecture per week

Prerequisite(s): A grade of "A" in MATH 24, or a grade of "C" or higher in MATH 25, or a grade of "C" or higher in MATH 81, or tested placement at MATH 100 or higher level math; qualification for ENG 22 or ESOL 94.

BUS 100 is a survey of important elementary concepts in algebra, logical structure, numeration systems, and probability and statistics designed to acquaint students with examples of mathematical reasoning, and to develop their capacity to engage in logical thinking and to read critically the technical information with which our society abounds. The intent of this course is to present a broad knowledge of mathematical topics to assist students in exercising sound judgment in making personal and business decisions.

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

1. Analyze deductive arguments using elementary symbolic logic.
2. Explore general methods for determining probabilities.
3. Use statistical measures of central tendency and dispersion.
4. Find mean, median, mode, and standard deviation.
5. Use financial formulas as models. Derive effective yield, future value, mortgage payments. Describe the difference between compound interest savings accounts and annuities.
6. Use exponential models to explore growth and decay.

BUS 120 Principles of Business (3)

3 hours lecture per week

BUS 120 surveys the fundamentals of the American business enterprise. The course examines the foundations and responsibilities of accounting, business, management, finance, marketing, and the business environment.

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

1. Identify the impact of external factors on business decisions relative to the accomplishment of the mission and objectives of an organization.
2. Define the various forms of business ownership to determine their appropriateness relative to an organization's resources, goals, and objectives.
3. Identify various business functions and practices and explain their impact on the successful operation of a business.
4. Describe the impact of business decisions on the external environment.

BUS 250 Applied Math in Business (3) KCC AA/FS and KCC AS/ML

3 hours lecture per week

Prerequisite(s): Qualification for MATH 135.

Recommended Preparation: Qualification for ENG 100 or ESL 100; ICS 100 or ICS 101.

BUS 250 covers the algebra and geometry of linear, quadratic, exponential, and logarithmic functions as applied to the mathematics of finance – annuities, perpetuities, present value. BUS 250 also covers derivatives, graphical analysis, and mathematical models as applied to business, with selected coverage of algebra, geometry, and calculus emphasizing business applications and decision making.

Upon successful completion of BUS 250, the student should be able to:

1. Solve linear, quadratic, exponential and logarithmic equations – with applications to business like solving for interest rate(s) and solving for various terms of investment.
2. Describe the derivative of a function, and apply rules for differentiation.
3. Apply derivatives in curve sketching with applications to business as in solving for marginal revenue/cost, marginal tax rate, minimum cost, and maximum profit.
4. Calculate present and future values (PV and FV) of simple and compound interest.
5. Apply formulas for interest to solve problems involving installment buying and credit card purchases.

6. Apply formulas for interest to solve problems involving debt consolidation and rescheduling of debt payments.
7. Apply formulas for interest to solve problems involving issuing and discounting promissory notes, and government/corporate bonds.
8. Solve for PV, FV, payment, interest, and duration of ordinary/due simple annuities, general annuities, deferred annuities, sinking funds, and constant growth annuities.
9. Solve for PV, payment, and interest rate for ordinary and due perpetuities.
10. Describe the various types of mortgage loans; use amortization schedules, and calculate the various components of mortgage payment(s).
11. Apply amortization tables to calculate the various components of mortgage payments(s), and refinancing options.
12. Master the use of financial calculator(s) and Excel® to formulate, analyze, and interpret mathematical models in business, and to develop models to solve time value of money (TVM) problems.

BUSINESS LAW

BLAW 200 Legal Environment of Business (3)

3 hours lecture per week

BLAW 200 is an introduction to the legal environment of business with particular emphasis on contracts, agency, partnership, corporations, Uniform Commercial Code, government regulation, and ethics.

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

1. Summarize the American system of justice and jurisprudence, and its evolution, and effectively use its concepts, terminology, and procedures.
2. Explain how laws are made, implemented, interpreted and enforced by the three branches of government at the national, state and local levels.
3. Examine, explain and apply basic principles of law, including contracts, torts, real and personal property, business organizations, agency, employment, products and consumer protection, environmental law, bankruptcy, anti-trust, etc.
4. Discuss how business and legal disputes arise and are avoided and/or resolved, including informal processes and alternative dispute resolution.
5. Participate in ethical decision-making, taking into account various legal, business and ethical approaches, philosophies and codes.

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 K_w .
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 acidbase theory.

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

3 hours lab per week

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

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

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

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.
4. Balance chemical equations.
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, Graham'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.

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

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

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

5 hours lecture/lab per week

Prerequisite(s): A grade of "C" or higher in CHEM 162; credit or concurrent enrollment in CHEM 272.

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

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

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 which 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.
4. Meet a number of practical writing needs. Can write short simple letters. Content involves personal preference, daily routine, everyday events, and other topics grounded in personal experience. Evidence of control of the syntax of non-complex sentences. Can create a collection of sentences on a given topic.
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.
10. Understand aspects of Chinese culture.
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: 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: 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: 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: 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.
10. Document and record client activities accurately.
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: 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: 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, poeiling, smoke-roasting and spit-roasting.
15. Roast meats, poultry, and fish to the correct doneness to develop the best flavor and texture in the finished dish.
16. Evaluate the quality of roasted items.
17. Define and describe the barbecue process.
18. Select and prepare meats and seasonings and barbecue them to the appropriate doneness.
19. Evaluate the quality of barbecued items.
20. Define and describe the process of grilling and broiling.
21. Grill and broil foods to the proper doneness.
22. Evaluate the quality of grilled and broiled items.
23. Define and describe the processes of braising and stewing, noting the similarities and differences.
24. Braise and stew foods to the proper doneness.

25. Evaluate the quality of braised and stewed items.
26. Define and describe the process of shallow-poaching.
27. Prepare shallow-poached foods properly and produce a sauce that incorporates the cooking liquid.
28. Evaluate the quality of shallow-poached items.
29. Define poaching and simmering and correctly identify the temperature range at which each occurs.
30. Poach and simmer foods to the proper doneness.
31. Evaluate the quality of poached and simmered foods.
32. Define and describe the boiling and steaming process.
33. Prepare boiled and steamed foods to the proper doneness.
34. Evaluate the quality of boiled and steamed items.
35. Utilize standard weights and measures to demonstrate proper scaling and measurement techniques.
36. Identify and use herbs, spices, oils and vinegar, condiments, marinades and rubs.
37. Evaluate the quality of herbs, spices, oils, vinegar, condiments, marinades, and rubs.
38. Perform basic fabrication tasks with meat, poultry, seafood and variety meats.
39. Using the basic cooking methods, prepare meat, seafood, poultry, and variety meats to the proper doneness.
40. Evaluate the quality of prepared meats, seafood, poultry, and variety meats.
41. Define stock and describe its uses.
42. Identify different types of stocks.
43. List the basic ingredients needed for making stocks.
44. Describe the functions of the ingredients.
45. Describe the process of making stocks.
46. Prepare a variety of stocks.
47. Evaluate the quality of a properly made stock.
48. Define, describe and explain the purpose of sauces.
49. Identify and prepare the grand sauces.
50. Prepare a variety of non-grand/classical sauces.
51. List the basic ingredients needed for making grand and non-grand sauces.
52. Describe the functions of the ingredients in sauces.
53. Evaluate the quality of a properly made sauce.
54. Define and describe soup and identify its two basic categories.
55. Prepare a variety of soups from each category.
56. Describe the process of making each category of soup.
57. Evaluate the quality of a properly made soup.
58. Identify a variety of fruits, vegetables, starches, legumes and grains.
59. Prepare a variety of fruits, vegetables, starches, legumes and grains using the basic cooking methods.
60. Evaluate the quality of prepared fruits, vegetables, starches, legumes and grains.
61. Define salad dressing and describe its purposes.
62. Identify, define, and describe the types of salad dressings.
63. Prepare a variety of salad dressings and evaluate the quality of each.
64. Identify a variety of common salad greens.
65. Prepare and dress greens for a salad.
66. Evaluate the quality of properly prepared and dressed green salad.
67. Identify, describe, and prepare a variety of composed salads.
68. Evaluate the quality of composed salads.
69. Identify, and describe the purpose of the elements of a sandwich.
70. Prepare a variety of hot and cold sandwiches.
71. Evaluate the quality of sandwiches.
72. Identify and prepare a variety of breakfast meats.
73. Evaluate the quality of prepared breakfast meats.
74. Describe a variety of preparation techniques used in egg cookery.
75. Cook eggs using a variety of preparation techniques.
76. Evaluate the quality of prepared eggs.
77. Identify and prepare a variety of breakfast batter products.
78. Evaluate the quality of prepared breakfast batter products.

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

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, poeeling, smoke-roasting and spit-roasting.
15. Roast meats, poultry, and fish to the correct doneness to develop the best flavor and texture in the finished dish.
16. Evaluate the quality of roasted items.
17. Define and describe the barbecue process.
18. Select and prepare meats and seasonings and barbecue them to the appropriate doneness.
19. Evaluate the quality of barbecued items.
20. Define and describe the process of grilling and broiling.
21. Grill and broil foods to the proper doneness.
22. Evaluate the quality of grilled and broiled items.
23. Define and describe the processes of braising and stewing, noting the similarities and differences.
24. Braise and stew foods to the proper doneness.
25. Evaluate the quality of braised and stewed items.
26. Define and describe the process of shallow-poaching.
27. Prepare shallow-poached foods properly and produce a sauce that incorporates the cooking liquid.
28. Evaluate the quality of shallow-poached items.
29. Define poaching and simmering and correctly identify the temperature range at which each occurs.
30. Poach and simmer foods to the proper doneness.
31. Evaluate the quality of poached and simmered foods.
32. Define and describe the boiling and steaming process.
33. Prepare boiled and steamed foods to the proper doneness.
34. Evaluate the quality of boiled and steamed items.
35. Utilize standard weights and measures to demonstrate proper scaling and measurement techniques.
36. Identify and use herbs, spices, oils and vinegar, condiments, marinades and rubs.
37. Evaluate the quality of herbs, spices, oils, vinegar, condiments, marinades, and rubs.
38. Perform basic fabrication tasks with meat, poultry, seafood and variety meats.
39. Using the basic cooking methods, prepare meat, seafood, poultry, and variety meats to the proper doneness.

40. Evaluate the quality of prepared meats, seafood, poultry, and variety meats.
41. Define stock and describe its uses.
42. Identify different types of stocks.
43. List the basic ingredients needed for making stocks.
44. Describe the functions of the ingredients.
45. Describe the process of making stocks.
46. Prepare a variety of stocks.
47. Evaluate the quality of a properly made stock.
48. Define, describe and explain the purpose of sauces.
49. Identify and prepare the grand sauces.
50. Prepare a variety of non-grand/classical sauces.
51. List the basic ingredients needed for making grand and non-grand sauces.
52. Describe the functions of the ingredients in sauces.
53. Evaluate the quality of a properly made sauce.
54. Define and describe soup and identify its two basic categories.
55. Prepare a variety of soups from each category.
56. Describe the process of making each category of soup.
57. Evaluate the quality of a properly made soup.
58. Identify a variety of fruits, vegetables, starches, legumes and grains.
59. Prepare a variety of fruits, vegetables, starches, legumes and grains using the basic cooking methods.
60. Evaluate the quality of prepared fruits, vegetables, starches, legumes and grains.
61. Define salad dressing and describe its purposes.
62. Identify, define, and describe the types of salad dressings.
63. Prepare a variety of salad dressings and evaluate the quality of each.
64. Identify a variety of common salad greens.
65. Prepare and dress greens for a salad.
66. Evaluate the quality of properly prepared and dressed green salad.
67. Identify, describe, and prepare a variety of composed salads.
68. Evaluate the quality of composed salads.
69. Identify, and describe the purpose of the elements of a sandwich.
70. Prepare a variety of hot and cold sandwiches.
71. Evaluate the quality of sandwiches.
72. Identify and prepare a variety of breakfast meats.
73. Evaluate the quality of prepared breakfast meats.
74. Describe a variety of preparation techniques used in egg cookery.
75. Cook eggs using a variety of preparation techniques.
76. Evaluate the quality of prepared eggs.
77. Identify and prepare a variety of breakfast batter products.
78. Evaluate the quality of prepared breakfast batter products.

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

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.
28. Define and describe pate choux, its uses, method of preparation, baking and finishing.
29. Prepare a variety of pate choux products.
30. Evaluate the quality of prepared pate choux products.
31. Define and describe meringues, its various types, uses, and methods of preparation.
32. Prepare a variety of meringues.
33. Evaluate the quality of prepared meringues.
34. Define and describe creams, custards, puddings and related sauces.
35. Describe the various types of uses of and preparation methods of various creams, custards, puddings and related sauces.
36. Prepare a variety of creams, custards, puddings and related sauces.
37. Evaluate the quality of prepared creams, custards, puddings and related sauces.
38. Define and describe the various types, uses, and methods of preparation of dessert sauces.
39. Prepare a variety of dessert sauces.
40. Evaluate the quality of prepared dessert sauces.
41. Discuss the application of mixes and other value added products.
42. Define and describe a variety of fillings and toppings for pastries and baked goods.
43. Discuss methods of preparation and finishing techniques for various fillings and toppings.
44. Prepare a variety of fillings and toppings for pastries and baked goods.
45. Demonstrate the presentations of baked goods and desserts.

46. Evaluate the quality of presentations of baked goods and desserts.
47. Discuss nutritional concerns as they apply to baking.
48. Discuss recipe modification to create more nutritionally beneficial baked goods and desserts.

Within this CULN 150 course, the following student learning outcomes will have been introduced, practiced or demonstrated:

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: 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.
13. Describe proper maintenance and cleaning procedures for automatic ware washing machines.
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-appropriated 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.
16. Maintain supporting internal control records for the preparation of monthly financial report.
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.
26. Perform inventories.
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: 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: 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.
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/couverture and their uses.
10. Demonstrate the technique and skill used for tempering chocolate/couverture, controlling critical temperature zones, using seed and tablage methods.
11. Demonstrate the technique and skill used for warm chocolate spraying.
12. Demonstrate techniques and skills used in creating a nougatine centerpiece, using the proper sequential procedures that include caramelization of sugar and almonds, shaping, cutting, assembling, and decorating.
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 as 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 and 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 and 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 and 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 and 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 cardiac, hypertension, and diabetic diseases, and assess the long-term affect 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

4.5 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 understanding of 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) KCC AA/DA

1.5 hours lecture, 3 hours lecture/lab per week

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:

1. Demonstrate greater technical proficiency and range of varied body motion, flexibility, strength, and coordination.
2. Demonstrate greater comprehension and articulation of movement vocabulary and concepts.
3. Demonstrate proficiency of muscle memory and kinesthetic awareness by/through combining specific dance/movement patterns.
4. Show further comprehension of alignment, centering and balance.
5. Demonstrate greater comprehension of the creative process by exploring movement through structured improvisation.
6. 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 elastometric 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 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.
6. Explain the acidogenic theory of dental caries.

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.
12. Cite the Consumer-Patient Radiation Health and Safety Act of 1981.

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.