

University of Hawai'i
Windward Community College

Course Catalog 2011 – 2013
(Revised June 2012)



UNIVERSITY of HAWAII*
WINDWARD
COMMUNITY COLLEGE



Academic Calendar 2012 – 2013

2012 Fall Semester

April 9	Fall 2012 Registration Begins
July 20	Payment Deadline for Fall 2012 Tuition/Fee
August 1	Priority Deadline for Fall 2012 Admissions Application
August 14	Faculty Duty Day
August 17	Holiday: Statehood Day
August 20	Fall Term Begins
August 20-24	Late Registration (\$30 late fee) and Add/Drop Period (\$5 in-person fee)
August 24	Last Day for 100% Tuition Refund
August 24	Last Day for 100% Student Fees Refund (complete withdrawal from ALL classes)
September 3	Holiday: Labor Day
September 10	Last Day to Withdraw Without "W" grade and 50% Refund ¹
October 29	Last Day to Withdraw With "W" grade
October 29	Last Day to Change to CR/NC Option, Audit, and Spring/Summer 2012 Make-Up "I" Grade
November 6	Holiday: Election Day
November 12	Holiday: Veterans' Day
November 22	Holiday: Thanksgiving Day
November 23	Non-Instructional: Thanksgiving Recess
December 6	Last Day of Instruction and Last Day to Certify/Apply for Fall 2012 Graduation
December 10-13	Exam Period
December 14	End of Fall Semester
December 18	Grades Due (by 4 p.m.)

2013 Spring Semester

November 12	Spring 2013 Registration Begins
December 7	Payment Deadline for Spring 2013 Tuition/Fee
December 1	Priority Deadline for Spring 2013 Admissions Application
January 7	Spring Term Begins
January 7-11	Late Registration (\$30 late fee) and Add/Drop Period (\$5 in-person fee)
January 11	Last Day for 100% Tuition Refund ¹
January 11	Day for 100% Student Fees Refund (complete withdrawal from ALL classes)
January 21	Holiday: Martin Luther King Jr. Day
January 28	Last Day to Withdraw Without "W" grade and 50% Refund
February 18	Holiday: Presidents' Day
March 1	Non-Instructional: Excellence in Education
March 21	Last Day to Withdraw With "W" grade
March 21	Last Day to Change to CR/NC Option, Audit, and Fall 2012 Make-Up "I" Grade
March 25-29	Non-Instructional: Spring Recess
March 26	Holiday: Prince Kuhio Day
March 29	Holiday: Good Friday
April 15	Commencement Program Deadline
May 1	Last Day of Instruction and Last Day to Certify/Apply for Spring 2013 Graduation
May 6-9	Exam Period
May 10	End of Spring Semester
May 11	Commencement
May 13	Last Faculty Duty Day
May 14	Grades Due (by 4 p.m.)

*drop, withdrawal, and refund dates are based on semester-length classes. For non-semester length dates, refer to online Class Availability via MyUH. D

Important Phone Numbers and Web Pages

To make an appointment for academic advising, counseling, graduation, placement test scores, registration, etc.

Academic Advising and Counseling

235-7413
Hale 'Ākoakoa 212
windward.hawaii.edu/Counseling_Advising

Admissions and Records

235-7432
Hale Alaka'i 112
windward.hawaii.edu/Admissions_Records

Business Office (Cashier)

235-7411
Hale Alaka'i 114
windward.hawaii.edu/Business_Office

Bookstore

235-7418
Hale 'Ākoakoa 160
windward.hawaii.edu/Bookstore

Disability Services

235-7448
Hale 'Ākoakoa 213
windward.hawaii.edu/Disabilities

Financial Aid

235-7457
Hale Alaka'i 107
windward.hawaii.edu/Financial_Aid

Library

235-7436
Hale La'akea
windward.hawaii.edu/Library

Placement Testing

235-7498
windward.hawaii.edu/Testing_Center

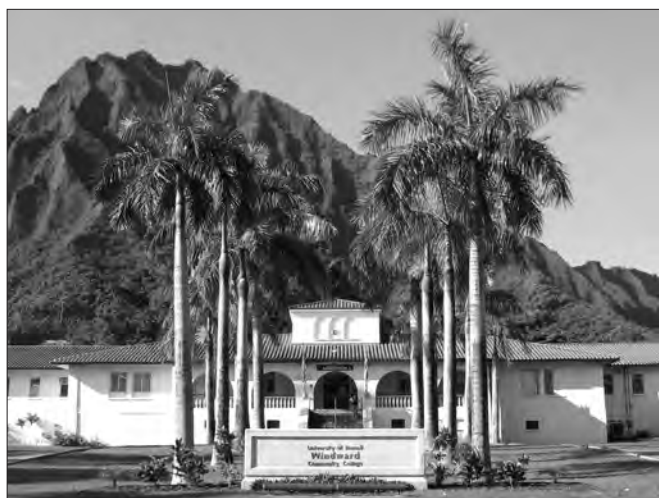
TRiO Student Services

235-7487
Hale Na'auao 146
windward.hawaii.edu/TRiO



UNIVERSITY of HAWAII
WINDWARD
 COMMUNITY COLLEGE

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University of Hawai'i System Windward Community College

45-720 Kea'ahala Road
 Kāne'ohe, HI 96744
 Telephone: 808-235-7400
 Fax: 808-247-5362

windward.hawaii.edu

This catalog provides general information about Windward Community College, its programs and services, and summarizes those major policies and procedures relevant to the student. The information contained in this catalog is not necessarily complete. For further information, students should consult with the appropriate unit. This catalog was prepared to provide information and does not constitute a contract. The College reserves the right to, without prior notice, change or delete, supplement or otherwise amend at any time the information, requirements, and policies contained in this catalog or other documents.

Hearing impaired individuals desiring information may contact the College by using the Telecommunication Device for the Deaf (TTY) relay service at 808-643-8833.

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University of Hawai'i Board of Regents

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Windward Community College Administration

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 Ardis Eschenberg
 Vice Chancellor of Student Affairs
 Clifford Togo
 Vice Chancellor of Administrative Affairs
 Kristine Korey-Smith
 Interim Director of Career & Community
 Education

**Chancellor Douglas Dykstra**

Aloha,

Welcome to the Windward community's own college, a campus of superlative beauty set before the backdrop of the majestic Ko'olau Mountain range. I am honored and privileged to serve as Chancellor of a college that I trust you will find as friendly and engaging as I have. Its values, vision and purpose bespeak a campus community that will take you from where you are and place you on a path to where you want to be.

Our faculty and staff are dedicated, friendly and supportive to help you proceed to your goals. The range of credit and non-credit courses and programs, as well as the campus facilities and services to the community make this a gemstone of educational and cultural life for our Windward district communities. Our range of programs will prepare you to transfer to a four-year college, help you to accentuate a field of specialization and/or prepare you for immediate employment. Our campus and our facilities provide the space to learn, to grow, and to network in an atmosphere that invites intellectual, cultural and social growth.

We are close to your home with a deep and abiding respect for our environment and our cultural roots in Hawai'i. I am confident that we will progress together in an educational atmosphere that emphasizes growth whether your destiny is here at home or beyond our immediate community.

Warmest Aloha,

Douglas Dykstra
 Chancellor

The College



Hale Ākoakoa, the campus center, houses the Ka Piko Center, student lounge, bookstore, academic counseling, cafe and meeting rooms.

Windward Community College is one of seven public community colleges in Hawai'i governed by the Board of Regents of the University of Hawai'i. The College is located in Kāne'ohe on the island of O'ahu. It opened in the fall of 1972 with an enrollment of 525 students and had a Fall 2010 enrollment of 2,625 students. The College offers both liberal arts and vocational education programs.

Accreditation

Windward Community College is accredited by the Accrediting Commission for Community and Junior Colleges, Western Association of Schools and Colleges.

The Mission of Windward Community College

Windward Community College offers innovative programs in the arts and sciences and opportunities to gain knowledge and understanding of Hawai'i and its unique heritage. With a special commitment to support the access and educational needs of Native Hawaiians, we provide O'ahu's Ko'olau region and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment—inspiring students to excellence.

Vision for Windward Community College

Ka Malamalama o ke Ko'olau - "Enlightening Ko'olau"

Students and community members will be enriched by "the light of knowledge" through quality programs and be able to lead full, productive lives in a rapidly changing world.

Core Values of Windward Community College

The college and its mission, goals and actions are guided by core values that reflect the Hawaiian culture.

Na'auao - Learning

Student-centered learning environment
Excellence in academics and workforce training
Creativity and critical thinking
Intellectual freedom
Lifelong Learning
Global Awareness

Ho'okomo - Access

"Open-door" admissions policy
Excellence in financial aid service
Need-centered education
Diverse approaches to learning
Disability sensitivity
Educational outreach to communities

Laulima - Collaboration

Shared accomplishments
Shared governance
Service to community
Campus and community engagement
Experiential learning

Ho'ihl - Respect

Cultural awareness and aloha
Student voice
'Ohana-style inclusiveness
LGBTI Safe Zones

Mea Hou - Innovation

Creative use of research and technology
Positive transformation in student learning, curriculum, and campus growth

Mālama 'āina - Sustainability

Stewardship of our interrelated natural resources
Conservation awareness

Windward Community College is further committed to the mission of the Community Colleges of the University of Hawai'i:

- To broaden access to post-secondary education in Hawai'i by providing open-door opportunities for students to enter quality educational programs within their own communities.
- To specialize in the effective teaching of remedial/developmental education, general education, and other

introductory liberal arts, pre-professional, and selected baccalaureate courses and programs.

- To provide the trained workforce needed by the State, by offering occupational, technical, and professional courses and programs which both prepare students for immediate employment and career advancement.
- To provide opportunities for personal enrichment, occupational upgrading, and career mobility through credit and non-credit courses and activities.
- To contribute to and stimulate the cultural and intellectual life of the community by providing a forum for the discussion of ideas; by providing leadership, knowledge, problem-solving skills, and general informational services; and by providing opportunities for community members to develop their creativity and appreciate the creative endeavors of others. (University of Hawai'i Community Colleges, Strategic Plan, 2002-2010, November 2002)

Nondiscrimination and Affirmative Action

It is the policy of the University of Hawai'i to comply with Federal and State laws which prohibit discrimination in University programs and activities, including but not necessarily limited to the following laws which cover students and applicants for admission to the University: Title VI of the Civil Rights Act of 1964 as amended (race, color, national origin); Age Discrimination Act of 1975 (age); Titles VII and VIII of the Public Health Service Act as amended (sex); Title IX of the Education Amendments of 1972 (sex, blindness, severely impaired vision); Section 504 of the Rehabilitation Act of 1973 (disability); and to comply with Federal and State laws which mandate affirmative action and/or prohibit discrimination in employment (including, but not limited to, hiring, firing, upgrading, salaries, benefits, training, and other terms, conditions, and privileges of employment): Title VII of the Civil Rights Act of 1964 as amended (race, color, national origin, religion, sex, pregnancy); Executive Order 11246 as amended (race, color, national origin, religion, sex); Equal Pay Act of 1963 as amended by Title IX of the Education Amendments of 1972 (sex); Age Discrimination in Employment Act of 1967 (ages 4070); Section 402 of the Vietnam Era Veteran's Readjustment Assistance Act of 1974 (veteran's status); Section 503 and 504 of the Rehabilitation Act of 1973 (disability); Hawai'i Revised Statutes, Chapter 76, 78, 378 (race, sex, sexual orientation, age, religion, color, ancestry, political affiliation, disability, marital status, arrest and court record). The UH Community Colleges strive to promote full realization of equal opportunity through a positive, continuing program including Titles I-IV of the Americans with Disabilities Act (ADA) P.L.101336. Accordingly, vocational education opportunities will be offered without regard to race, color, national origin, sex or disability. American citizens or immigrants with limited English proficiency skills will not be denied admission to vocational education programs. In addition, employees and applicants for employment are protected under Title IX and Section 504.

The College

As an integral part of its Policy on Nondiscrimination and Affirmative Action, the Office of the President, University of Hawai'i hereby declares and reaffirms its commitment to the University's pursuit of equal education and employment opportunity and further declares that any harassment of students or employees on the basis of sex is prohibited and will not be tolerated. Complaints of this nature will be handled by Ann Lemke, WCC's Section 504 Coordinator.

Individuals designated to coordinate the University of Hawai'i Community Colleges' nondiscrimination and affirmative action programs are:

Ann Lemke, Section 504 Coordinator
808-235-7448

Karen Cho, EEO/AA Title IX Coordinator
808-235-7404

Windward Community College
45-720 Kea'ahala Road, Kāne'ohe, HI 96744

Discrimination Complaints

Students, employees, or applicants for admission or employment who believe that they have been discriminated against on the basis of race, sex, age, religion, color, ancestry, sexual orientation, national origin, disability, marital status, veteran's status or arrest and court record may file a complaint with Karen Cho, 808-235-7404, Hale Alaka'i 120, EEO/AA coordinator. The EEO/AA coordinator will explain the available avenues of recourse and direct the person to the appropriate person or office.

The process of addressing allegations of discrimination are described in the CCCM No. 2210, UH Community College Procedure and Guidelines, Relating to Complaints of Discrimination and in campus Section 504 /ADA Grievance Procedure.

Students may also file complaints of discrimination with the Office for Civil Rights, 915 Second Avenue, Room 3310, Seattle, WA 98174-1099. Phone: 206-220-7920 FAX: 206-220-7887.

Windward Community College Security

Windward Community College is firmly committed to providing a safe and secure campus environment. Policies and procedures are designed to ensure that every possible precautionary measure is taken to protect persons and property. However, students need to be aware that preventive efforts on their part can effectively reduce their chances of becoming a victim. It is the intent of the WCC Safety and Security Office to promote awareness of the current programs that exist at WCC to provide for everyone's safety and well-being.

- Security and Emergency procedures can be found on the WCC website's main page
- WCC is monitored by CCTV cameras in most of the outdoor areas of the Campus and some of the indoor areas.

- There are seven "Blue" Emergency Phones that are positioned throughout the campus. These phones are a direct connection to campus security.
- WCC also has an "Emergency Notification System" via e-mail, text, and emergency PA (loudspeaker) system. Students, faculty and staff are encouraged to sign up to receive these notifications through the UH Alert System or review and update information. This can be done online by visiting <http://www.hawaii.edu/alert>.
- The Campus Security unit is under the supervision of the WCC Safety and Security Manager who is responsible for providing security services for the campus. The Campus Security function is located in Hale Alaka'i 125.
- Contract security guards are on duty 24-hours a day, 7 days a week, which includes all holidays.
- Campus security guards conduct vehicle and foot patrols on campus. They are responsible to monitor the campus and provide basic security services such as the enforcement of federal, state and local laws, and rules and regulations of WCC.

Campus Security performs the full range of public safety services dealing with incident reports; campus investigations, medical and fire emergencies; traffic accidents; enforcement of laws regulating the use of alcohol, drugs and weapons, inspection of lighting and shrubbery; and all other situations requiring Campus Security assistance. Campus Security Officers are trained in areas such as emergency first-aid, CPR, report writing, investigative skills, and crowd control by experts from federal, state, and local law enforcement agencies.

The WCC Safety and Security Manager maintains a close working relationship with all law enforcement agencies within the State utilizing their resources and expertise as needed. Whenever appropriate, meetings are held with these external agencies and crime-related information reports and statistics are exchanged. The WCC Safety and Security Manager can be contacted at 808-235-7343.

Federal Campus Sex Crimes Prevention Act

"The release of relevant information that is necessary to protect the public shall be accomplished by public access to a file containing the relevant information on each registered sex offender, a copy of which shall be provided for inspection upon request at the Hawai'i criminal justice data center and at one or more designated police stations in each county, between the hours of 8 a.m. and 4:30 p.m. on weekdays excluding holidays. The chief of police and the attorney general shall provide the relevant information on sex offenders upon payment of reasonable fees. Relevant information on each registered sex offender may also be released from an electronic database maintained by the respective law enforcement agencies that is accessible to users through an interactive computer-based system."

Smoking

In accordance with the State's No Smoking Act, Act 108, SLH 1976 and Act 245, SLH 1987, Federal Drug-free Schools and Communities Act of 1989 and Drug Free Workplace Act of 1988, and the University smoking policy (effective January, 2003), smoking is prohibited in the following areas:

- All interior spaces, including courtyards, terraces, stairways, ramps, patios, and lanais.
- Within 20 feet of building entrances/exits, air intake vents, and windows not air-conditioned.
- Within 50 feet of designated pick-up and drop-off points.
- Any other area designated as a non-smoking area by the College's administration.

Illegal Drugs and Alcohol

In conformance with the existing law, University faculty, staff and students are not permitted to manufacture, distribute, possess, use, dispense or be under the influence of illegal drugs and/or alcohol as prohibited by State and Federal law, at University sponsored or approved events or on University property or in buildings used by the University for education, research or recreational programs. Consistent with its mission, the University will cooperate with law enforcement agencies responsible for enforcing laws related to the use of illegal drugs and alcohol. Students found in violation shall be subject to the provisions of the student conduct code. Faculty and staff found in violation are subject to disciplinary action as provided in collective bargaining agreements, University policy, and other applicable State laws and rules.

The University recognizes that substance abuse is a complex problem that is not easily resolved solely by personal effort and may require professional assistance and/or treatment. Students, faculty and staff members with substance abuse problems are encouraged to take advantage of available diagnostic, referral, counseling and prevention services. The University will not excuse misconduct by employees and students whose judgment is impaired due to substance abuse.

The purchase, possession or consumption of alcoholic beverages is regulated by state law. Students are expected to know and abide by state law and by University rules and regulations governing the use and consumption of alcoholic beverages on campus. Students are referred to Board of Regents policy, executive policies and campus guidelines regulating the use and consumption of alcoholic beverages on campus.

Students are not permitted to be under the influence of, possess, manufacture, distribute, or sell illicit drugs, as prohibited by state law, at University sponsored or approved events, on University property or in buildings used by the University for its educational or recreational programs. Reasonable suspicion of possession or use of illegal drugs and substances on campus may subject the students involved to investigation.

Sanctions which may be imposed on violators of the alcohol and drug related sections of the Student Conduct Code include disciplinary warning, probation, suspension, expulsion, or rescission of grades or degree. Copies of the full text of the Code are available in the Office of the Dean of Student Affairs.

School sponsored activities on campus that involve either the serving or selling of alcoholic beverages must be in compliance with applicable College/University policies and State laws.

Copies of policies governing the possession, consumption, serving and sale of alcoholic beverages on the University of Hawai'i Windward Community College campus are available in the Office of Student Affairs.

Lethal Weapons

Firearms, spear guns, and bows and arrows are prohibited on campus except with specific prior permission of the Chancellor.

Sexual Assault Policy

As required by the Higher Education Amendments of 1992, the College has a Sexual Assault Prevention Policy which explains the College's Sexual Assault Program presented to promote awareness of rape, acquaintance rape and other sex offenses and the procedures for reporting offenses. A copy of the Sexual Assault Policy can be obtained from the Office of Student Affairs, Hale 'Ākoakoa 202.

Sexual Harassment Policy

It is the policy of the College to provide a safe and comfortable learning and working environment for students and employees. Sexual harassment is a form of discrimination that can undermine the foundation of trust and mutual respect that must prevail if the University is to fulfill its educational mission. Sexual harassment will not be tolerated in any part of the University's programs and activities. Sanctions will be imposed on members of the University community who violate this policy. Disciplinary actions against employees will be subject to the collective bargaining agreements. For more information and/or copies of the procedure for the Sexual Assault Prevention Program, please contact the campus' sexual harassment officers at the Office of Administrative Services in Hale Alaka'i 120.

Academic Rights and Freedoms of Students

Windward Community College embraces those aspects of academic freedom that guarantee the freedom to teach and the freedom to learn. Free inquiry and free expression for both students and faculty are indispensable and inseparable. As members of the academic community, students are encouraged to develop a capacity for critical judgment and to engage in a sustained and independent search for truth.

The College

Office of International Programs and Services

Windward Community College participates in a variety of international programs. The Vice Chancellor of Academic Affairs, Richard Fulton may be contacted at 808-235-7443 for information concerning specific programs. The chairperson of the International Education Committee, Professor Toshihiko Ikagawa serves as liaison with foreign higher education institutions and with the UH and UHCC International Education Committees, which provide information on study abroad programs, and supports and recruits international students.

Articulated Transfer Programs

WCC has a program-to-program articulation with UH-Hilo for Astronomy and Geology, which spells out the requirements for WCC students who wish to earn a BS degree in either discipline from UH-Hilo. For more information on which WCC classes will transfer directly into the Astronomy BS degree program at UH-Hilo contact Dr. Joseph Ciotti at 808-236-9111 or the Office of Academic Affairs at 808-235-7442. For more information on which WCC classes will transfer directly into the Geology BA and BS degree programs at UH-Hilo contact Dr. Floyd McCoy at 808-236-9115 or the Office of Academic Affairs at 808-235-7422.

Office of Career & Community Education

Windward Community College seeks to improve the quality of life and provide direct educational assistance to individuals, businesses, and special interest groups. OCCE provides services for individual communities and the general public by making available a variety of instructional, cultural, recreational, and career/workforce services in which the institution has special competence or the community has special needs. OCCE also coordinates campus and off-campus programs for senior citizens.

The College offers non-credit instructional opportunities on and off-campus in Windward O'ahu. Persons who are interested in seminars or courses should contact the Office of Career & Community Education at 808-235-7433.

Advisory Committees

Windward Community College has invited a number of community leaders in business, industry, and the professions to advise the staff in the development of curricula in accordance with requirements in their fields. Consultations with these leaders relate to course content, selection of training equipment, the nature and extent of employment needs, and evaluation of the effectiveness of the curriculum. New advisory committees are formed as new needs and programs are identified.

Agriculture Advisory Committee

Daryl Cazinha	Andy Kaufman
Robert Lillie	Kevin Eckert
Al Kakazu	Ross Shiroma

Hawaiian Studies Advisory Committee

Aaron Sala	Emalia Keohokalole
Roy Fujimoto	Lani Ma'a Lapilio, Esq.
Mark Hamasaki	Hirini Moko Mead, PhD
Kelikokauaikakai Hoe	Fred Kalani Meinecke
Rubellite Kawena Johnson	Meleanna Aluli Meyer
Dennis Kauahi	Peter Kalawai'a Moore, PhD
Adrian Kealoha Keohokalole	Robert Suggs, PhD

Pacific Center for Environmental Studies Advisory / Fundraising Committee

Todd Barnes	Kevin Kennedy
Bruce Coppa	Jo-Ann Leong
Eric Guinther	Mike Polkinghorn
Hal Hammett	Howard West

Veterinary Studies Advisory Committee

Eric Ako, DVM and Executive Vice President of the Hawai'i Veterinary Medical Association and The Pet Doctor	Stacie Kissel, Veterinary Assistant
Arlene Buchholtz, DMV, MPH	Cathy Todd, Practice Manager, Kāne'ohe VCA
Mark Caspers, DVM, Feather and Fur	Ross Langston, Program Coordinator and Natural Sciences Instructor, Windward Community College
Ashley Stokes, DVM, Ph.D UH-Mānoa Animal Sciences Program	Peggy Regentine, Information and Computer Sciences Instructor, Windward Community College
Dr. Jan Chouljian, DVM	Patti Chong, Counselor, Student Affairs, Windward Community College
Shannon Nakamura, Veterinary Technician, Feather and Fur	Carla Rogers, Counselor, Student Affairs, Windward Community College
Lisel Coles, Office Manager, Haiku Veterinary Clinic	
Sam Craddock, Veterinary Technician/Interim Director, AS in Veterinary Technology, Windward Community College	

Windward Community College Ambassadors

Jane H. Campbell	Otome M. Myers
Hallett H. Hammatt, PhD	Raymond C. Sanborn
Ian Y. Kitajima	Jerry St. James
Joel Kurosaki	Carol St. James
Sandra S. Kurosaki	Geal F. Talbert
Tom Masterson	Nancy T. Taylor
David S. McClain, PhD	Richard S. Towill
Wendie M. McClain	Crystal K. Towill
Waynella McNeil	Catherine Wilson, PhD

Admission Information

Admission Eligibility

Windward Community College welcomes part-time and full-time students who desire to attend college and can benefit from the educational program offered. Windward Community College is open to any U.S. high school graduate or equivalent (e.g. GED) or person 18 years of age (prior to the start of the semester) or older.

A special early admissions program (Early Admit or Running Start) for high school junior/senior students with outstanding academic records may be accommodated on a space available basis as an unclassified status. The Running Start program allows public high school students to attend college while earning both high school and college credits. In addition to the University of Hawai'i System Application form, students must apply (via Special Early Admissions/Running Start application) through their high school counselor. To continue enrollment at Windward Community College, students are required to re-apply to the college each semester.

The enrollment of non-residents and international students is governed by the Board of Regents policy.

Application Deadlines

Deadlines for filing applications for priority admissions are August 1 for Fall Semester, December 1 for Spring Semester, and May 1 for Summer Term. Late applications will be accepted (late registration fee may be assessed), though some programs/classes have limited openings. Applicants are advised to file their application as early as possible.

General Admissions Requirements

Application

Complete and submit the University of Hawai'i System Application Form by the application deadline. Applications are available at Windward Community College Admissions and Records Office or from any Hawai'i high school counselor, or on our website at windward.hawaii.edu.

Students who missed (stopped-out) for a semester or more (Fall/Spring) must complete a new application for the semester they wish to re-enter.

Placement Testing

Placement testing in math and English is required if a student wishes to register in math and English courses or any course with a math/English prerequisite. Test results will indicate the level at which to start at Windward Community College. The placement tests are for placement purposes only and are not admission tests. There is no charge for initial placement testing. Test scores and prerequisite courses are valid for two years. A picture ID and UH ID number are required. Contact The Testing Center in Hale Alaka'i 106 or visit windward.hawaii.edu/placement_tests for more information.

Transfer students who have completed college-level courses in math and English are not required to take the placement tests.

Proof of completed courses (e.g. copy of transcript or grade report) will be required to be provided to the counselor prior registration.

Health Clearances

In compliance with Hawai'i State Department of Health regulations (Hawai'i Administrative Rules, Chapter 11-157), applicants must submit proof of health clearances for tuberculosis (TB) and MMR (Measles, Mumps, Rubella vaccine) prior to registration to the Admissions and Records Office.

Orientation Session

All new and transfer students are encouraged to attend an Orientation session conducted by our counselors. At this meeting, students receive information on how to select classes and how to register, as well as information on campus services, facilities, and activities. Contact Student Affairs in Hale 'Ākoakoa 232.

Admission of International Students

Windward Community College is authorized under federal law to enroll non-immigrant students. International students must comply with all regulations of U.S. Department of Homeland Security and the University of Hawai'i policies and procedures.

The application process should start at least five months prior to the deadline in order to successfully complete the application on time. Once all documents are received, if accepted, a letter of acceptance and an I-20 form will be sent to the international student. The student will need to use the I-20 form to apply for a student visa through the U.S. Embassy or Consulate of the country. Also, there is a Student and Exchange Visitor Information System (SEVIS) fee payable to the Department of Homeland Security (DHS).

Step 1 - Take the Test of English as Foreign Language (TOEFL website ets.org)

- Score must be within 2 years prior to the start of the semester
- Minimum score must be 500 (paper-based), 173 (computer-based), or 61 (internet-based)
- Score must be sent directly by Educational Testing Services to WCC Admissions and Records Office (#4976)

Step 2 - Submit University of Hawai'i System Application Form

- Download the UH System Application Form
- Include non-refundable payment of non-resident application fee of \$25.00 US dollars (do not send cash)
- Must be accepted in an approved classified degree program at WCC

(Continued)

Admission Information

Step 3 - Submit University of Hawai'i Supplementary Information Form for Undergraduate International Applicants

- Download the UH Supplementary Form for international students
- The form includes an affidavit of financial support that shows sponsorship and/or financial support in US dollars for tuition, books/supplies, and living costs for the duration of study (refer to supplementary application for estimated cost of attendance)
- Include Sponsor's bank statement, must be within the last 6 months

Step 4 - Submit Transcripts

- Official high school (secondary) transcripts showing evidence of successful completion of schooling equivalent to 12 years of US education sent directly by the high school to WCC Admissions and Records Office (must include graduation date)
- Official college (post secondary) transcripts must be sent directly by college to WCC Admissions and Records Office
- All transcripts must be in English or accompanied by an English translation that has been certified by either a school official or a U.S. consular official

Step 5 - Meet the Deadline

- All documents stated above must be submitted to WCC Admissions and Records Office by the deadline:
 - Fall Semester is June 1
 - Spring Semester is November 1
 - Summer Semester not accepting applications

Step 6 - Submit Health Examination and Immunization prior to registration

- Must provide a certificate of tuberculosis examination dated within 12 months prior to the start of the semester with date administered and reading of Mantoux skin test (PPD) and measurement in millimeters of indurations
- Must provide record of immunization containing two doses of measles with at least one of the two being Measles-Mumps-Rubella (MMR) vaccine OR a blood test showing laboratory evidence of immunity to MMR (student born before 1957 is exempt from MMR requirement)
- TB/MMR records must be signed or stamped by U.S. licensed provider

Step 7 - Obtain Health Insurance/Medical Health Insurance prior to registration

- Provide proof of having purchased a valid, up-to-date medical health insurance

- (To protect international students against the high cost of unanticipated health care expenses resulting from accidents or illness)

Step 8 - Once accepted, register at least full-time status (12 credits) at WCC

Residency Regulations for Tuition Purposes

Students who do not qualify as bona fide residents of the State of Hawai'i, according to the University of Hawai'i rules and regulations in effect at the time they register, must pay the non-resident tuition. An official determination of residency status will be made prior to enrollment. Applicants may be required to provide documentation to verify residency status.

Once classified as a non-resident, a student continues to be so classified during his/her term at the college until he/she can present clear and convincing evidence to the residency officer that proves otherwise prior to the first day of the term.

For additional information or interpretation, contact the residency officer in the Admissions and Records Office. Some of the more pertinent University residency regulations:

Definition of Hawai'i Residency

1. A student is deemed a resident of the State of Hawai'i for tuition purposes if the student (19* or older) or the student (under 19*) and his/her parents or legal guardian have:
2. Demonstrated intent to permanently reside in Hawai'i (see below for evidences);
3. Been physically present in Hawai'i for the 12 consecutive months prior to the first day of instruction, and subsequent to the demonstration of intent to make Hawai'i his/her legal residency; and
4. The student, whether adult or minor, has not been claimed as a dependent for tax purposes for at least 12 consecutive months prior to the first day of instruction by his/her parents or legal guardians who are not legal residents of Hawai'i.

To demonstrate the intent to make Hawai'i your legal residency, the following evidence apply:

- A. Filing Hawai'i resident personal income tax return.
- B. Voting/registering to vote in the State of Hawai'i.

Other evidence, such as permanent employment and ownership or continuous leasing of a dwelling in Hawai'i may apply, but no single act is sufficient to establish residency in the State of Hawai'i.

Other legal factors in making a residency determination include:

- A. The 12 months of continuous residence in Hawai'i shall begin on the date upon which the first overt action (see evidences) is taken to make Hawai'i the permanent residence.

Admission Information

Residence will be lost if it is interrupted during the 12 months immediately preceding the first day of instruction.

- B. Residency in Hawai'i and residency in another place cannot be held simultaneously.
- C. Presence in Hawai'i primarily to attend an institution of higher learning does not create resident status. A non-resident student enrolled for 6 credits or more during any term within the 12-month period is presumed to be in Hawai'i primarily to attend college. Such periods of enrollment cannot be applied toward the physical presence requirement.
- D. The residency of unmarried students who are minors follows that of the parents or legal guardian. Marriage emancipates a minor.
- E. Resident status, once acquired, will be lost by future voluntary action of the resident inconsistent with such status. However, Hawai'i residency will not be lost solely because of absence from the State while a member of the United States Armed Forces, while engaged in navigation, or while a student at any institution of learning, provided that Hawai'i is claimed and maintained as the person's legal residence.

*The age of majority is 18 years. However, a person between the ages of 18 and 19, unless emancipated, cannot claim residency solely on the basis of himself/herself because he/she does not have the minimum 12 months residency which commences on his/her 18th birthday. Therefore, the applicant must claim a portion of the required 12 months on the basis of his/her parent or legal guardian.

Board of Regents Exemptions for Non-residents

- 1. Non-residents may be allowed to pay resident tuition if they qualify as one of the following:
 - A. United States military personnel and their authorized dependents (as defined by the Armed Services) during the period such personnel are stationed in Hawai'i on active duty.
 - B. Members of the Hawai'i National Guard and Hawai'i-based Reserves.
 - C. Full-time employees of the University of Hawai'i and their spouses and legal dependents (as defined under Internal Revenue Service rules).
 - D. East-West Center student grantees pursuing baccalaureate or advanced degrees.
 - E. Hawaiians, descendents of the aboriginal peoples that inhabited the Hawaiian Islands and exercised sovereignty in the Hawaiian Islands in 1778.
- 2. Citizens of an eligible Pacific island district, commonwealth, territory, or insular jurisdiction, state, or nation that does not provide public institutions that grant baccalaureate degrees may be allowed to pay 150% of the resident tuition.

These currently include the following:

American Samoa	Niue
Commonwealth of the Northern Marianas	Republic of Palau
Cook Islands	Republic of the Marshall Islands
Federated States of Micronesia	Solomon Islands
Futuna	Tokelau
Kiribati	Tonga
Nauru	Tuvalu
New Caledonia	Vanuatu
	Wallis

Misrepresentation

A student or prospective student who provides incorrect information on any form or document intended for use in determination of residency status for tuition purposes will be subject to the requirements and/or disciplinary measures provided for in the rules and regulations governing residency status.

Appeal Process

Residency decisions may be appealed by the deadline. Contact the residency officer in the Admissions and Records Office for information on how to initiate an appeal.

Veterans Administration

Windward Community College is a State-approved school for veterans' benefits. Information regarding eligibility, entitlement and types of training authorized may be obtained from the Veterans Administration Regional Office. The Admissions and Records Office is responsible for VA enrollment certification. VA enrollment certification will not be processed if the student has a financial obligation to the University of Hawai'i. VA students must have their prior credits from another college/ training evaluated for possible transferring of credits into the college to avoid delay in VA enrollment certification.

Change of Address

Students are responsible for keeping the Admissions and Records Office informed of their current address (e.g. mailing, permanent). All international students' permanent addresses must be their home country.

Change of Major

Students who wish to change their major must submit the Student Record Changes form to the Admissions and Records Office in Hale Alaka'i 112. The new program/major is effective the following semester once school begins.

Financial Information



WCC astronomy students learn to observe the planets through the Lanihuli Observatory's 16" optical telescope.

Resident Tuition: \$97/credit
Non-Resident Tuition: \$290/credit

For Summer 2012 and later, see College website for most current information about tuition and fees.

Credit Courses

All tuition and fee charges at University of Hawai'i campuses are subject to change in accordance with requirements of state law and/or action by the Board of Regents or the University administration.

Non-Credit Courses

Tuition and fees vary, depending on the length of the course. Contact the Office of Continuing Education for detailed information.

Fees

Dishonored Check Fee

A \$25 service charge is assessed for checks which were made out to the University of Hawai'i and returned for any cause.

Late Registration Fee

A \$30 for Fall/Spring and \$10 for summer additional fee is charged for registration during or after the late registration period.

Add/Drop Fee

A \$5 fee is charged for every schedule change made in person during or after the late registration period. Additional tuition and fees may be applicable when adding a class. There is no fee charged for adding/dropping courses online.

Graduation Fee

A \$15 fee (\$15 extra for a Hawaiian Language diploma) is payable at the time of application for graduation. Diplomas and certificates will not be processed without this payment.

Transcript Fee

A \$5 fee is charged for each transcript that is sent outside of the University of Hawai'i System, for student copies, or for UH non-admission purposes. Rush requests are \$15 per copy for 24-hour processing. Additional postage fees are charged for a transcript that is sent outside of the United States.

Financial Information



Palikū Theatre with sculpture by Bud Spindt.

Non-Resident Application Fee

A \$25 nonrefundable, nontransferable fee is charged for all non resident applicants (except for members of the U.S. Armed Forces or dependents of such members, stationed in Hawai'i, on active military duty).

Educational Record Fee

A \$2 fee is charged for a copy of each educational record (e.g. fee statement).

Printing Fee

A minimum fee of \$.09 per page is charged to print on the public printers in the Library.

Payments

Login to MyUH, select Academic Services and the Review My Charges/Make an Online Payment page that displays the current amount you owe. A bill will not be mailed to you. ONLY FULL

PAYMENT IS ACCEPTED. If you are receiving a tuition waiver or scholarship, check with your home campus financial aid office or the awarding department before making payment. You may pay by cash, personal check, money order, cashier's check, or via MyUH using MasterCard, Visa or JCB. Payment plan is also available. For more information, go to myuhinfo.hawaii.edu and click on View Payment Plan Information.

It is the responsibility of students to pay their tuition/fees or drop their courses by the deadline that may cause a financial obligation. Not doing so will lead to a financial debt, that if not paid, will be sent to a collection agency. Refer to Financial Obligations to the University policy.

Refunds

You must first formally withdraw from your class(es) online or in person. If you are eligible for a tuition refund, allow a minimum of 6 weeks to process. Refer to the Academic Calendar or Schedule of Classes for refund dates.

Tuition

If you withdraw from the College or any of your courses, you may be eligible for a tuition refund. The amount of refund is determined by the date of official withdrawal.

Activity Fees

If a complete withdrawal from all courses is made before the end of the late registration period, you will receive a 100% refund of the Student Activity fee (\$1/credit to \$10 maximum) and Board of Publication fee (\$1/credit to \$10 maximum).

Cancelled Classes

A 100% tuition/fees refund is made available to a student if classes are cancelled by the College and the student does not reenroll in other classes.

Financial Obligations to the University

Students who have not satisfactorily adjusted their financial obligations to any part of the University of Hawai'i System (such as tuition and fees, traffic violations, parking tickets, unreturned library books, library fines, other fines, locker fees, laboratory breakage charges, transcript fees, loans past due, rental payments, etc.) may be denied grades, transcripts, diplomas and registration, including adds/drops and other entitlement services (e.g. Enrollment Verification, VA Enrollment Certification).

A copy of the "Rules and Regulations Governing Delinquent Financial Obligations Owed the University of Hawai'i," promulgated by the Board of Regents, is on file in the Office of the Vice Chancellor of Student Affairs.

Financial Aid Information

Windward Community College offers financial aid to students who seek help in funding their cost of education. These expenses may include tuition charges, student fees, books, supplies, living expenses, personal expenses and childcare costs. The WCC Financial Aid Office administers federal, state and institutional aid programs in the form of grants, student loans, scholarships, and employment opportunities. Students applying for financial aid at WCC should submit a FAFSA (Free Application for Federal Student Aid) each year. The FAFSA priority filing date is April 1st and is used to calculate a student's financial need. Additional financial aid information and forms are available on the Financial Aid Office homepage at http://windward.hawaii.edu/Financial_Aid/.

Basic Financial Aid Eligibility Requirements

- Enrolled in an eligible degree or certificate program at WCC. The programs eligible for financial aid at WCC are Associate of Arts (Liberal Arts), Plant Landscaping and Veterinary Assisting.
- Have a high school diploma or a GED.
- Be either a U.S. citizen or an eligible non-citizen (i.e. permanent resident alien.)
- Continuing WCC students must be meeting satisfactory academic progress requirements towards their degree objective.
- Males between the ages of 18 and 25 years old must register with the Selective Service or prove exemption from registering.
- Must not owe a repayment on a federal grant or be in default on a student loan.

Federal Financial Aid Programs

The Federal Pell Grant

The Federal Pell Grant is based on demonstrated need and is awarded to students who have not earned a bachelor's degree. This grant does not have to be repaid. As of July 1, 2012, the duration of eligibility to receive a Pell Grant in a lifetime is reduced from the equivalent of 18 full-time semesters to the equivalent of 12 full-time semesters.

The Federal Supplemental Educational Opportunity Grant (SEOG)

The Federal Supplemental Educational Opportunity Grant (SEOG) is based on exceptional financial need and is awarded to students who are enrolled at least half-time. This grant does not have to be repaid and funds are limited.

The Federal Work-Study Program

The Federal Work-Study Program is based on financial need and offers students the opportunity to earn their financial aid award through part-time employment on campus. Work hours are scheduled around a student's class hours and it's a great opportunity to gain valuable work experience while attending school.

The Federal Perkins Loan

The Federal Perkins Loan is a fixed, low-interest rate (5%) student loan. The school is the lender for this type of loan program. Interest accrual and repayment does not begin until 9 months after the student ceases to be enrolled at least half-time.

The Federal Direct Subsidized Stafford Loan

The Federal Direct Subsidized Stafford Loan is made to the student and is based on financial need. There is no interest accrual while the student is enrolled in school at least half-time. A fixed interest rate not greater than 6.8% will be assigned to the loan at the point the student enters repayment. The maximum award is based on a student's class standing - \$3,500 per year for a first-year student and \$4,500 per year for a second-year student. Repayment begins 6 months after the student ceases to be enrolled at least half-time.

This Federal Direct Unsubsidized Stafford Loan is made to the student and has a fixed interest rate of 6.8%. The maximum award is based on a student's dependency, status, level of need, and class standing. The maximum award is \$9,500 per year for a first-year student and \$10,500 per year for a second-year student. Repayment begins 6 months after the student ceases to be enrolled at least half-time.

The Federal Direct Parent Loan for Undergraduate Students (PLUS loan)

The Federal Direct Parent Loan for Undergraduate Students (PLUS loan) has a fixed interest rate of 7.9% and is made to a parent of dependent undergraduate students. The loan amount is based on the student's cost of attendance minus any aid awarded to the student. Repayment of this loan begins 60 days after the funds are disbursed.

State Financial Aid Programs

The UH Opportunity Grant

The UH Opportunity Grant is based on financial need based and at least half-time enrollment. Funds are limited.

The Native Hawaiian Tuition Waiver and Second Century Scholars Grant

The Native Hawaiian Tuition Waiver and Second Century Scholars Grant awards are based on Native Hawaiian ancestry, financial need and at least half-time enrollment. Funds are limited.

The State of Hawai'i Higher Education Loan

The State of Hawai'i Higher Education Loan (available only within the University of Hawai'i System) is a fixed, low-interest rate (5%) student loan for State of Hawai'i residents. The school is the lender for this type of loan program. Interest accrual and repayment does not begin until 9 months after the student ceases to be enrolled at least half-time. This type of loan has deferment and cancellation benefits.

Scholarships

The UH Centennial Scholarship

The UH Centennial Scholarship is for incoming full-time freshman who will graduate from a Hawai'i high school. The student must have a cumulative high school GPA of at least 3.8 or higher or a combined score of 1800 on the three-part SAT Reasoning Test (or ACT equivalent).

The State of Hawai'i B Plus Scholarship

The State of Hawai'i B Plus Scholarship is for students who demonstrate financial need and graduated from a public Hawai'i high school. The student must have a cumulative high school GPA of at least 3.0 or higher, completion of certain high school courses and a senior project.

Other scholarships available through the WCC Financial Aid Office are noted on the WCC Financial Aid office homepage at http://windward.hawaii.edu/Financial_Aid/Scholarships.php and on the scholarship board located in the hallway of the Hale Alaka'i building fronting Room 107 throughout the year.

FAFSA Application Process

Students applying for financial aid at WCC should submit a FAFSA (Free Application for Federal Student Aid) online each year. The FAFSA priority filing date is April 1st.

To apply, please follow the steps below:

1. You (and possibly your parent – if you are dependent for FAFSA purposes) will need to create a FAFSA PIN number at www.pin.ed.gov. The PIN will allow you to submit a FAFSA electronically.
2. File your FAFSA electronically at www.fafsa.gov. Please be sure to list WCC on your FAFSA, otherwise, we will not receive your results. WCC's FAFSA Federal School Code is 010390. You may need financial data (tax return and asset information) to complete the FAFSA. If you have any questions or would like to schedule an appointment, please contact our office at (808) 235-7449 or e-mail at wccfao@hawaii.edu.
3. Upon receipt of your FAFSA results, the WCC Financial Aid Office will inform you through your MyUH e-mail on the MyUH Portal if additional information is required to complete your application for awarding.
4. Upon determination of your financial aid eligibility, the WCC Financial Aid Office will inform you of your "official" financial aid award(s) through your MyUH e-mail and on your MyUH Portal of your award status and any additional information regarding your financial aid award.

Financial Aid Satisfactory Academic Progress Policy (SAP)

Federal regulations require that financial aid recipients at Windward Community College (WCC) maintain satisfactory academic progress (SAP) toward the achievement of an eligible degree or certificate. A student's academic progress is evaluated at the conclusion of each spring term.

Minimum Standards for Financial Aid Satisfactory Academic Progress

- Students must be enrolled in an eligible degree or certificate program at WCC. The programs eligible for financial aid at WCC are Associate in Arts (Liberal Arts), Plant Landscaping and Veterinary Assisting.
- Students must maintain a cumulative grade point average (GPA) of at least 2.0.
- Students must successfully complete (pass) at least 67% of all credits attempted. (Example: A student attempts 48 credits to date at WCC and successfully completes 36 credits with a 2.5 cumulative GPA. This student is making satisfactory academic progress by meeting both the minimum 2.0 GPA requirement and the 67% credit completion requirement. By completing 36 of 48 credits, the student has a 75% credit completion rate (36 divided by 48).)

Timeframe of Eligibility

- Students must complete their educational objectives within a reasonable period of time. Financial aid recipients will be allowed to attempt 150% of the number of credit hours required to complete their degree or certificate. (Example: An Associate in Arts (AA) degree at WCC requires the completion of 60 credit hours. A student is eligible to receive financial aid for a maximum of 90 (60 x 150%) credit hours attempted while pursuing an AA degree at WCC.)
- The following WCC grades will be considered as credits attempted but not successfully completed: F, W, N, NC, I/F, I/N, I/NC.
- A student's entire academic history will be taken into account, including periods of enrollment at WCC in which financial aid was not received.
- Applicable credit(s) accepted in transfer from another institution will be counted towards the maximum timeframe.
- Students may receive funding for repeating a course that has been successfully completed with a "C" grade or higher only once.
- A student is allowed 30 remedial English and Math credits that are not counted towards the maximum timeframe.

Financial Aid Information

Financial Aid Suspension

Students who do not meet the cumulative 2.0 GPA and/or the 67% completion rate of total credits attempted (pace) will be suspended from financial aid eligibility at WCC. Financial aid suspension means that the student is not eligible to receive financial aid at WCC until minimum SAP standards are met. It will be the student's responsibility to secure other financial resources during this suspension period. Students on Financial Aid Suspension will be notified in writing of their status.

Reinstatement

Students on financial aid suspension may regain their aid eligibility at their own expense by earning sufficient grade points and credits to meet minimum SAP standards of a cumulative GPA of 2.0 and a 67% credit completion rate (pace).

Appeal of Financial Aid Suspension

Students who are suspended from financial aid at WCC may appeal their suspension if they have experienced mitigating circumstances that prevented them from meeting the minimum SAP standards. A Satisfactory Academic Progress Appeal Form (available at the Financial Aid Office) must be submitted to the Financial Aid Office explaining the specific reasons which contributed to the students lack of progress (accident, illness, death of immediate family member, etc.) and the measures being taken to ensure future satisfactory academic progress. An appointment must be scheduled with the WCC Financial Aid Office to complete and file an SAP appeal.

The Financial Aid Office will review the appeal to determine whether or not the student will be placed on financial aid probation and help to form an academic plan with the student that is necessary for continued aid eligibility. Students will be notified in writing of their appeal status.

Financial Aid Probation

When an SAP appeal is approved, an academic plan will be established with the student and the student will be placed on financial aid probation. While on financial aid probation, the student will be eligible for aid but must meet the specific minimum standards of their academic plan each term. Students who successfully attain a cumulative GPA of 2.0 and a cumulative credit completion rate of 67% of their attempted credits while on probation will be removed from probation status.

Students on financial aid probation who do not meet the specific minimum standards noted in their academic plan will be placed in financial aid suspension status and will not be eligible for financial aid at WCC.

Withdrawal and Refund Policy for Financial Aid Recipients

Financial aid recipients are advised to contact the Financial Aid Office prior to withdrawing from class(es) at the College for it may result in the repayment of all or part of the aid awarded to the student. In the event a financial aid recipient completely withdraws from the College, any refund due to unearned tuition and fees will be applied to the financial aid program(s) from which the student benefited. The order of financial aid programs to which the refund will be applied is available at the Financial Aid Office.

For inquiries on financial aid, please call 808-235-7449, visit the Financial Aid Office in Hale Alaka'i 107, or log onto our website at http://windward.hawaii.edu/Financial_Aid/.

Centers for Learning



The new Library Learning Commons will open in Fall 2012.

General Student Resources

Ka Piko

Ka Piko encompasses the college's Study, Career, and Writing Centers. The Study Center offers academic advising, tutoring services, and supplemental instruction with student peer mentors. The Center also provides free access to computers, printing, and a quiet place to study. Students are encouraged to visit Hale 'Ākoakoa 232 Lounge or call 808-235-7454 for further information. As of Fall 2012, Ka Piko will be located in Hale La'ākea, the new Library Learning Commons.

The Career Center is a one-stop for career exploration and employment assistance. Support is provided in resume reviews, interview preparation, and job search. Students are invited to discover a possible major and career through assessments and counseling. Visit the Center in Hale 'Ākoakoa 130 or call 808-235-7327.

The Writing Center invites Windward Community College on-campus students, distance education students, and members of the community to consult with the Writing Center staff at various stages of the writing process (brainstorming, drafting, revising) to assist with their writing needs. Students should visit Hale 'Ākoakoa 132 or e-mail wccwrite@hawaii.edu.

Computer Labs

Windows PCs and Apple computers with Internet access are available for use by all Windward students in the Library, the Student Activities Center 'Ākoakoa 232, and several other locations around campus. The software applications available include the Microsoft Office suite (Word, PowerPoint, Excel, and Access) and various Adobe programs (Acrobat Professional, Contribute, Dreamweaver, Illustrator, InDesign, Photoshop Elements, and Photoshop Extended). A reasonable per-page fee is charged for black-and-white and color printing.

Use of the computer labs and all other Windward computing resources must conform to UH Executive Policy E2.210 "Use and Management of Information Technology Resources" Visit <http://hawaii.edu/infotech/policies/itpolicy.html>.

Further information about the computing resources available to students is posted on the college website at windward.hawaii.edu/computing.

Math Lab

The Math Lab, located in Hale Mana'opono 113, is open daily. Services include drop-in tutorial assistance in math, access to math lab resources and references, and assessment/advising in math.

The Testing Center (TTC)

The Testing Center located in Alaka'i 106, is open Monday through Friday. Services include administration of tests including placement testing for Math and English.

Fujio Matsuda Technology Training and Education Center

The Office of Career and Community Education administers the Fujio Matsuda Technology Training and Education Center which was established in 1985 to serve as a technological education center for the Windward O'ahu community. The Center, supported by a generous contribution of \$1 million over a 5-year period from a group of donors, provides a "high tech, high touch" approach to computer education and training.

The Matsuda Center offers personal advising, a wide range of non-credit courses and workshops, and follow-up activities to individuals who wish to learn about computers in a friendly, low anxiety, high touch environment. The Center is an accessible and valuable community resource which meets the educational and training needs of individuals and businesses in Windward O'ahu. For additional information on the Matsuda Center, please call 808-235-7433.

Centers for Learning

Library Learning Commons

The Library Learning Commons, Hale La'ākea, serves as a source of learning resources and a place to study and use print and nonprint resources. The library houses a collection of books, periodicals and audiovisual materials and maintains a collection of online journal bases and e-books which are accessible from off campus. Computers with Internet access and standard software applications are provided for students to do research, access journal databases and e-books, and prepare papers and presentations.

A reference librarian is available at all times to assist students and faculty in locating information, learning to use library resources, evaluating sources of information, and citing these sources. Resources of other libraries in the University of Hawai'i system are available to students and faculty through intersystem loans.

Students need a Windward Community College ID card to borrow books and other materials. The library also welcomes use by other University of Hawai'i students and community members. For additional information, contact the library at 808-235-7338 or visit <http://library.wcc.hawaii.edu>.

Media Center

The Media Center is maintained by the College primarily to serve the instructional staff in the development of instructional learning resources. The Center provides service to students by assisting them with the audiovisual requirements of student projects. The Center is located in Hale La'ākea, the Library Learning Commons.

Science Resources

Center for Aerospace Education

The Center for Aerospace Education (CAE), which was piloted in 1985 and officially established in October 1986, supports WCC's credit and community outreach programs in aerospace science. The mission of the CAE is to inspire students to actively engage in science activities through informal experience and formal education, to explore career options in aerospace science and industry, and to become informed, contributing citizens by becoming science-literate.

The following facilities and services are offered by the CAE:

- Aerospace Exploration Lab
- Hōkūlani Imaginarium
- NASA Flight Training Aerospace Education Laboratory
- Lanihuli Observatory
- Hawai'i Space Grant-Windward

The CAE also sponsors teacher workshops and offers consultation to students and teachers on aerospace education and science projects.

- The goals of the CAE are to:
- help students develop high-tech skills to succeed in a knowledge-based global economy;

- increase enrollment and success of K-12 students in science, mathematics and technology courses in high schools;
- generate greater interest in careers in science and help facilitate the successful transition of students from high school to post-secondary institutions; and,
- increase the number of underserved students entering college who choose to major in science, technology, engineering and mathematics (STEM) and have the skills necessary to successfully complete their higher education.

For more information, contact Prof. Joseph Ciotti at 808-236-9111 or visit the website at aerospace.wcc.hawaii.edu.

Aerospace Exploration Lab

The Aerospace Exploration Lab (AEL), which is managed by the college's Center for Aerospace Education (CAE), provides instructional materials and services in astronomy, astronautics (rocketry), aeronautics (aviation), and atmosphericology (weather and climate). Founded in 1989, this educational resource center acts as a "hands-on" science exploratorium, assisting K-12 students and teachers in discovering scientific principles through low-tech experiential activities.

The AEL also houses a library of aerospace books, magazines, videos, posters, curricular programs, and demonstration models. School tours of the Aerospace Exploration Lab are available on a reservation basis. Visitors can explore the world of science at the Discovery Pad—a hands-on exploratorium, as well as view numerous displays depicting air and space exploration from early flight to the future.

The AEL is located in Hale 'Imiloa 135 (Science Building). All services are free of charge. For inquiries and reservations call Krissie Kellogg at 808-235-7321, or visit <http://aerospace.wcc.hawaii.edu/AEL.html>.

Hawai'i Space Grant Consortium—Windward

Windward Community College is a participating member of the Hawai'i Space Grant College (HSGC), which promotes student involvement in space science education. Each semester, a limited number of stipends are available to college students engaged in space-related projects. Students choose a topic under the guidance of a faculty mentor with whom they work throughout the semester. Past projects have included space science curriculum development, astronomical observations, remote sensing of the earth, space art, and zero-g research through the NASA Reduced Gravity Student Flight Opportunities Program on-board its KC-135A aircraft. WCC Space Grant students are currently engaged in CanSat/ARLISS/USLI projects involving high-powered rocketry and payload probe design and construction, while others are pursuing astronomy internships at the Lanihuli Observatory and Imaginarium. Each semester, students have the opportunity present their work at the HSGC Fellowship Symposium. HSGC—Windward is located in Hale 'Imiloa 112 and managed by the college's Center for Aerospace Education (CAE). Contact Prof. Joseph Ciotti for further information at 808-236-9111.

Hökūlani Imaginarium

The Hōkūlani Imaginarium is a high-tech, multi-media planetarium and scientific visualization theater under the management of the college's Center for Aerospace Education (CAE). Dedicated in October 2001, the Imaginarium supports the college's astronomy and Polynesian navigation curricula and community outreach efforts. The theater includes a full-dome digital projector system with over 80 additional special effects projectors. Its 66 seats are equipped with interactive buttons for audience participation. This facility is available for K-12 visits as well as group and public shows. For school tours call 808-235-7321. For public shows contact the college's Office of Continuing Education at 808-235-7433. An admission fee is charged for shows. For general information, call Mary Beth Laychak, Imaginarium Manager, at 808-236-9350 or visit the website at <http://aerospace.wcc.hawaii.edu/imaginarium.html>.

Lanihuli Observatory

Lanihuli Observatory is an astronomical and meteorological observatory under the management of the college's Center for Aerospace Education (CAE). Dedicated in Oct 2007, Lanihuli Observatory supports the college's astronomy labs, HSGC student projects, K-12 outreach and the general public. This facility includes:

- NOAA weather satellite tracking station providing real-time images of the weather and ocean conditions surrounding Hawai'i as well as an on-site weather station.
- Radio telescope operated in partnership with NASA Goddard Space Flight Center's Radio Jove Project. Radio observations of Jupiter and the sun are streamed to students around the world via the Internet.
- Solar telescope (heliostat) consisting of a 6-inch refractor capable of white light projection and direct H-alpha viewing.
- 16-inch optical Schmidt-Cassegrain telescope under an automated 16-foot dome.
- Cosmic ray telescope operated in affiliation with Fermilab's QuarkNet project.
- Visitor's Gallery with library and earth/space science kiosks including a 24-inch Magic Planet display.

The Lanihuli Observatory is available for daytime school tours and to the general public after evening Imaginarium shows. There is no charge to visit this facility. To schedule school tours, contact 808-235-7321. Jovian and solar radio data collected through NASA's radio Jove project are archived at jupiter.wcc.hawaii.edu/newradiojove/lanihuli.html.

NASA Flight Training Aerospace Education Laboratory

NASA Flight Training Aerospace Education Laboratory (AEL) was dedicated in 2002 in partnership with NASA's Glenn Research Center. Managed by the college's Center for Aerospace Education (CAE), this facility houses computer simulators designed for exploring careers in aerospace. Included are a research-grade windtunnel, a zero-gravity drop

tower, and a flight simulator. Located in Hale 'Imiloa 112, the NASA Flight Training AEL supports the college's astronomy curriculum, other STEM-related programs, and Hawai'i Space Grant students, and serves as a community outreach resource for students in grades six and above. There is no charge for this venue. For school tours, contact 808-235-7321. For general information, contact Dr. Jacob Hudson at 808-347-8246 or visit <http://aerospace.wcc.hawaii.edu/NASAael.html>.

Hoā'aina RS/GIS Center for Environmental Monitoring

The Hoā'aina RS/GIS Center for Environmental Monitoring serves to facilitate WCC's undergraduate curriculum in Remote Sensing (RS), Geographic Information Systems (GIS) and Global Positioning System (GPS). This center, managed under the Pacific Center for Environmental Studies (PaCES), further serves as a resource to researchers, managers, educators and community members whose work can benefit from the application of these advanced technologies. Current applications involve coral reef monitoring in Kāne'ohe Bay, identifying the geographic distributions of introduced species, stream mapping in the Windward O'ahu watershed, and documenting Hawaiian fishpond restoration.

The Hoā'aina RS/GIS Center for Environmental Monitoring is designated as a NASA Center of Excellence in the Training and Applications of Remote Sensing and Geographic Information System to Environmental Monitoring. For further information, contact either Dr. David Krupp at 808-236-9121 or Prof. Floyd McCoy at 808-236-9115.

Bioprocessing Medicinal Garden Complex

The Bioprocessing Medicinal Garden Complex is located across from Hale 'Imiloa. It was dedicated on June 18, 2007. It consists of three facilities: the medicinal garden (containing plants from Asia, the Pacific, and America), the aquaponic system, and the bioprocessing facility. The complex is supported through the grants from USDA-NIFA (National Institute of Food and Agriculture) and USDA-SPEC (U.S. Department of Agriculture - Secondary and Two-Year Post secondary Agriculture Education Challenge). The medicinal plants grown organically in the garden and in the aquaponic system are processed into bioproducts in the bioprocessing facility. For more information, contact Dr. Ingelia White at 808-236-9102.

Climate-Controlled Greenhouse

The climate-controlled greenhouse is located next to Hale 'Imiloa. It was acquired through a grant from the Pacific Center for Advanced Technology Training (PCATT), and was dedicated on October 3, 2001. The greenhouse provides a controlled atmosphere for mericlones and seedlings to thrive out of their post-in-vitro culture. It also houses orchid species for identification purposes. Contact Dr. Ingelia White for further information at 808-236-9102.

Centers for Learning

Kuhi La'au

The Kuhi La'au - Tropical Plant and Orchid Identification Facility: Inouye and Rifai Collection is located in Hale 'Imiloa 112-A. It was dedicated on February 9, 2000. The facility provides a free plant identification service, focusing on plants of Hawai'i, tropical plants of Asia and the Pacific, and orchids. Fresh samples of branches, flowers or fruits can be sent to the facility for identification. Information regarding plant names and ethnobotanical uses will be mailed to the sender within a week. For further information, contact Dr. Ingelia White at 808-236-9102.

Tissue Culture and Plant Biotechnology Laboratory

The laboratory is located in Hale 'Imiloa 101-A. It is supported through the grants from USDA-NIFA (National Institute of Food and Agriculture), and was dedicated on February 5, 2003. The Tissue Culture and Plant Biotechnology Laboratory is an aseptic room used for in vitro culture and gene transformation operations. Contact Dr. Ingelia White at 808-236-9102.

Coral Disease Laboratory

The Coral Disease Lab, a Windward Community College facility operated in partnership with the Hawai'i Institute of Marine Biology and the Papahānaumokuākea Marine National Refuge, is managed by the Pacific Center for Environmental Studies (PaCES). Located in Hale 'Imiloa, the Lab conducts collaborative research and education projects whose goals are to understand the occurrence of disease in coral reef organisms. Students may participate in these projects for credit by enrolling in undergraduate Independent study courses through the Marine Option Program or through PaCES. Paid internships may be available (pending funding) from the Pacific Center for Environmental Studies. For additional information, contact either Prof. Floyd McCoy at 808-236-9115 or Prof. David Krupp at 808-236-9121.

Pacific Center for Environmental Studies (PaCES)

Housed within the Department of Natural Sciences, the Pacific Center for Environmental Studies (PaCES) encourages and supports environmental science education, research, and stewardship at Windward Community College through the following activities: undergraduate environmental science enrichment through classroom instruction and research; workforce training; K-12 environmental science enrichment; teacher training; and community environmental science awareness.

PaCES is guided by the following Themes:

- Understanding the functioning of ecosystems and human influences on them;
- Viewing humans as functional components of ecosystems from historical, cultural, and social, as well as scientific, perspectives;
- Recognizing that the quality of human life is dependent upon the quality of our environment and our ability to sustain our humanity within this environment;

- Promoting stewardship through wise and thoughtful management of our environment and natural resources, looking to traditional practices and promising technologies of the future; and
- Embracing ahupua'a as a symbol for sustainability and positive human interaction with the environment.

Along with providing support for the College's environmental studies courses, PaCES's also integrates and coordinates WCC's Academic Subject Certificate in Bio-Resources Development and Management, the Marine Option Program, the Hoā'aina RS/GIS Center for Environmental Monitoring, and Coral Disease Laboratory. For more information, contact either Prof. David Krupp at 808-236-9121 or Prof. Floyd McCoy at 808-236-9115, or visit the website at <http://wcc.hawaii.edu/paces/>.

Arts Resources

Gallery 'Iolani

Gallery 'Iolani is recognized as one of the finest exhibition sites in the state of Hawai'i, showing work from local, national and international venues. It is the mission of Gallery 'Iolani to promote exhibitions of cultural and educational significance. The gallery also serves as a classroom for students studying gallery design and management at WCC. Gallery 'Iolani is located adjacent to Palikū Theatre in the Hale Pālanakila complex. For more information about the gallery and/or opportunity to study in the gallery design class, contact art professor and Gallery director Toni Martin at 808-236-9150, or visit gallery.wcc.hawaii.edu.

Palikū Theatre

Palikū Theatre—the jewel of Windward O'ahu—is a state-of-the-art, 300-seat theatre that provides theatrical opportunities to students, faculty and the community, while promoting cultural diversity in an educational setting. Palikū Theatre has been in operation since July, 2002 and offers a unique, flexible and affordable performance venue for students and members of the community to showcase their talents. The theatre is also home to an in-house production company, which has successfully staged such popular productions as *Fiddler on the Roof*, *My Fair Lady*, *Big River*, *South Pacific*, *Miss Saigon*, and *Oklahoma!* The facility is also used as a venue for lectures, seminars and special speaking engagements as part of the college's educational and community service programs. For more information, you may contact theatre manager Tom Holowach at 808-235-7330, or visit <http://wcc.hawaii.edu/paliku>.

Student Affairs



Students at Windward Community College receive support from a variety of student services from acceptance to graduation and beyond.

Although advisory services are provided and students are encouraged to take advantage of them, students themselves are ultimately responsible for following the proper procedures and completing the work required in courses and programs.

Academic Advising

Academic advisors are available to help students develop a program of study to meet their educational objectives. In meeting with an academic advisor, students will have an opportunity to develop an individualized educational plan along with a program of academic support throughout their college experience. Students will also receive guidance in academic planning through assistance in course selection.

Academic advising sessions are conducted throughout the registration period and may be arranged on an appointment basis by phoning Student Affairs.

Personal Counseling

Student Affairs counselors are available to assist students with personal or college-related problems and to help assess personal growth and development.

Student Employment

Job placement assistance is available on a limited basis for referrals to on-campus jobs through the Personnel Office. Eligibility is based on a minimum enrollment of 6 credits within the University of Hawai'i system and a minimum GPA of 2.0. Call 808-235-7404 or stop by Hale Alaka'i 120. See the Federal Work Study Program (FWSP) section for more information.

Services to Students with Disabilities

In accordance with Section 84.4 of the Federal rules and regulations governing Section 504 of the Rehabilitation Act of 1973, no qualified individual with a disability shall, on the basis of his/her disability, be excluded from participation in, be denied benefits of, or otherwise be subjected to discrimination under any program or activity which receives or benefits from Federal financial assistance.

- Students with disabilities, either permanent or temporary, are provided the following services:
- personal, academic and career counseling
- admissions and financial aid application assistance
- campus orientation
- registration assistance
- tutorial, reader, notetaker, interpreter, and/or other academic support services as needed
- campus accessibility map
- specifically designed auxiliary equipment to meet the needs of the disabled student

Students desiring special services are advised to contact the Disabilities Accommodations Coordinator at least six weeks prior to the beginning of the semester so that services may be arranged on a timely basis. For further information and assistance please call 808-235-7448.

For disability accommodations, please call 808-235-7448 or the TTY relay service at 1711 or 1511. Advance notice requested.

Student Affairs

Hearing impaired individuals desiring information may contact the College by using the Telecommunication Device for the Deaf (TTY) relay service at 808-643-8833 or by using the TTY phone located in Hale Alaka'i.

TRiO Student Support Services (formerly STAAR)

Windward Community College, in association with the federal government, has developed a program to assist students with special needs to make their college experience successful. The program provides remedial/developmental coursework, academic advising, counseling services, and free tutorial assistance for students who meet the federal government eligibility criteria. Students are encouraged to visit the TRiO Student Support Services office located in Hale Na'auao 146, or to call 808-235-7487, for further information.

Student Activities and Organizations

The Associated Students of the University of Hawai'i at Windward Community College (ASUH-WCC) have an organized student government to develop a program of activities for students and members of the community. ASUH-WCC administers the use of student activity fees. Last year ASUH-WCC sponsored the College newspaper, *Ka'Ohana*, the College literary magazine, Rain Bird, and other educational, cultural, and social activities.

Elections for ASUH-WCC seats are held each semester. Interested students are invited to participate in these activities.

Student Participation in College Governance

Students at Windward Community College are encouraged to participate in institutional policy making and in implementing the program of activities offered.

A number of College committees invite student participation in policy making. Students may also serve as instructors for non-credit courses, lab assistants, and as assistants in the development of a public services program.

Students interested in these activities should contact a member of the ASUH-WCC or the Student Affairs Office staff. To contact the ASUH-WCC, e-mail them at wccasuh@hawaii.edu or call 808-235-7390.

Students are also encouraged to participate in campus clubs and organizations.

Honor Society

Students who have earned 12 credits with a cumulative grade point average of 3.5 are invited to join the Phi Theta Kappa National Honor Society each semester. The campus chapter is actively involved in sponsoring events for intellectual and scholarly growth and provides opportunities for service, social activities, and developing friendships for its members.

Clubs and Societies

Botany Club
Ceramics Club
Chess and Backgammon Club
Ka 'Ohana
Ke Kumau 'Ölelo Hawai'i (Hawaiian Language Club)
Kupono Hawaiian Club
Music Club
Palikū Players
Phi Theta Kappa
Psi Beta (Psychology Club)
Safe Spaces

Food Services

Cafeteria services are available in Hale 'Ākoakoa (Campus Center). Several campus buildings are equipped with vending machines. There are several fast food restaurants in nearby Kāne'ohe town.

Parking

There is no charge for parking, but parking is permitted in designated areas only. Cars parked in restricted areas may be towed away at the owners' expense. The College assumes no liability for damage to or thefts from automobiles parked on campus.

Parking is permitted in the parking lots and along the roads marked for parking. No parking is permitted on the grass or in restricted areas indicated by signs or red or yellow markers.

Parking for disabled persons is provided in specially marked stalls. Special placards issued by the City and County of Honolulu are required to park in these marked stalls. Vehicles without a valid placard are in violation of HRS Sec. 19.150 and may be towed away at owners' expense, in accordance with City Ordinance Sec. 15-24.11 (3d).

Bookstore

The Windward Community College Bookstore is operated for the convenience of the College's students and staff and members of the community. Textbooks, related reference materials, and some supplies are available.

The Bookstore is located in Hale 'Ākoakoa and is open Monday-Friday, 8:00 a.m. to 3:30 p.m. Phone 808-235-7418.

Health Services

The College provides no health services. Students are eligible to participate in a group health insurance program. Information may be secured through Student Affairs. Programs offering certain free or low cost health services are available at the Windward Comprehensive Health Center, adjoining the campus.



Lost and Found

Articles which are lost and found are taken to/or held at the Business Office in Hale Alaka'i 114.

Housing

The College has no dormitories and does not assist students in locating housing.

Attendance

Regular class attendance is expected of all students. Students who stop attending classes or never attended classes are likely to receive an F grade and responsible for any tuition/fees. To avoid this, official withdrawal must be made by the deadline. Refer to the Academic Calendar or Schedule of Classes for drop/withdrawal dates.

Electronic Channels for Communicating with Students

UH e-mail is the official means of communication within the University/College. Students are responsible for checking their e-mail account frequently and consistently to remain current with the University/College communications. Students are expected to monitor and manage their e-mail storage quota to insure that their mailboxes are not saturated and are able to receive new messages.

Student Conduct

The University of Hawai'i Windward Community College has a Code of Student Conduct which defines expected conduct for students and specifies those acts subject to University sanctions. Students should familiarize themselves with the Code of Student Conduct, since upon enrollment at UH Windward Community College the student has placed herself/himself under the policies and regulations of the University and its duly constituted bodies. The disciplinary authority is exercised through the Student Conduct Committee. The Committee has developed procedures for hearing allegations of misconduct. *Copies of the Student Conduct Code are available in the Office of the Vice Chancellor of Student Affairs.*

Impermissible Behavior

The Board of Regents of the University of Hawai'i has established a policy on impermissible behavior which applies to students at Windward Community College. Students alleged to have violated this policy are subject to the disciplinary procedures of the College. Copies of the hearing procedures are available in the Office of the Vice Chancellor of Student Affairs, Vice Chancellor of Academic Affairs, and the library.

Academic Dishonesty

Academic dishonesty cannot be condoned by the University. Such dishonesty includes cheating and plagiarism (examples of which are given below) which violate the Student Conduct Code and may result in expulsion from the University.

Student Affairs

Cheating

Includes but is not limited to giving unauthorized help during an examination, obtaining unauthorized information about an examination before it is administered, using inappropriate sources of information during an examination, altering the record of any grades, altering answers after an examination has been submitted, falsifying any official University record, and misrepresenting the facts in order to obtain exemptions from course requirements.

Plagiarism

Includes but is not limited to submitting any document to satisfy an academic requirement that has been copied in whole or part from another individual's work without identifying that individual; neglecting to identify as a quotation a documented idea that has not been assimilated into the student's language and style, or paraphrasing a passage so closely that the reader is misled as to the source; submitting the same written or oral material in more than one course without obtaining authorization from the instructors involved; or drylabbing, which includes (a) obtaining and using experimental data from other students without the express consent of the instructor, (b) utilizing experimental data and laboratory writeups from other sections of the course or from previous terms during which the course was conducted, and (c) fabricating data to fit the expected results.

Student Academic Grievance Procedures

The College has adopted the University of Hawai'i's Policy and Procedures for Student and Applicant Complaints and Grievances. Copies of the procedures are available in the Office of the Vice Chancellor of Student Affairs. Students may also file complaints of discrimination with:

The Office of Civil Rights
U.S. Department of Education
Old Federal Building
50 United Nations Plaza, Rm. 239
San Francisco, California 94102
Phone: 415-556-7035

Students having concerns about educational and civil rights matters are encouraged to contact:

Vice Chancellor of Student Affairs
Windward Community College
45-720 Kea'āhala Road
Kāne'ohe, Hawai'i 96744
Phone: 808-235-7466

Student Grievance Procedures

The College maintains formal procedures for resolving complaints and grievances brought by students who believe a faculty member has acted improperly or in a manner inconsistent with the student's customary academic expectations. These procedures are contained in the WCC Policy Guidelines Manual, No. 4-6. The manual is available in the Office of the Vice

Chancellor of Student Affairs, the Office of the Vice Chancellor of Academic Affairs, and the library. The following is a general summary of the steps in resolving a complaint. Students who have a complaint are urged to consult Policy No. 4-6 for more information if they wish to go beyond Step 2 below.

The WCC Academic Grievance Procedures protect students' freedom of expression, right to orderly and fair grading and evaluation, and right to confidentiality. These are defined in more detail in the policy.

Students who have a complaint must follow strict timelines to have their complaint resolved under this policy, as follows:

Step 1. Within 14 days after a student has become aware of the problem, she or he must attempt to resolve the matter with the faculty member involved.

Step 2. If the matter is not resolved, the student may discuss the matter with the faculty member's Dean. This must be done within 7 days after the last scheduled meeting with the faculty member. The Dean has 7 days to resolve the complaint.

Step 3. If the student is not satisfied with the results of Step 2, he or she may file a written complaint with the Vice Chancellor of Academic Affairs. This must be done within 7 days after notification by the Dean. The Vice Chancellor of Academic Affairs has 14 days to resolve the matter.

Step 4. If the matter is not satisfactorily resolved by the Vice Chancellor of Academic Affairs, the student may file a written grievance with the Chairperson of the Academic Grievance Committee. This must be done within 7 days after notification by the Vice Chancellor of Academic Affairs.

Within 10 days, the Academic Grievance Committee must convene a hearing, detailed procedures for which are contained in the Policy Guidelines Manual. The Committee informs the Chancellor of its findings and recommendations within 5 days after the close of the hearing. The Chancellor's decision is final within the University.

The process of addressing allegations of discrimination are described in the procedures for Handling Impermissible Behavior and the Academic Grievance Procedures and in CCCM No. 2210, UH Community College Procedure and Guidelines Relating to Complaints of Discrimination. Copies are available at the Office of the Vice Chancellor of Student Affairs.

Students may also file complaints of discrimination with the Office of Civil Rights, Region IX, Henry M. Jackson Federal Building, 915 Second Avenue, Rm. 3310, Seattle, WA 98174-1099. Phone: 206-220-7900, FAX: 206-220-7887.

Educational Rights and Privacy of Students

Pursuant to Section 99.6 of the rules and regulations governing the Family Educational Rights and Privacy Act of 1974 (hereinafter the Act), students in attendance at the University of Hawai'i Windward Community College are hereby notified of the following:

1. It is the policy of Windward Community College to subscribe to the requirements of Section 438 of the General Education Provision Act, Title IV, of Public Law 90-247, as amended, and to the rules and regulations governing the Act, which protect the privacy rights of students.

2. The rights of students under the Act include the following, subject to conditions and limitations specified in the Act:

- a. The right to inspect and review education records.
- b. The right to request to amend education records.
- c. The right of protection from disclosure by Windward Community College of personally identifiable information contained in education records without permission of the student involved.
- d. The right to file complaints concerning alleged failure by Windward Community College to comply with the Act.

3. Students are advised that institutional policy and procedures required under the Act have been published as Administrative Procedure A7.022, Procedures Relating to Protection of the Educational Rights and Privacy of Students. Copies of A.P. A7.022 may be obtained from The Office of the Vice Chancellor of Student Affairs of Windward Community College.

4. Directory Information: Students are advised that certain personally identifiable information listed below is considered by the College to be directory information and, in response to public inquiry, may be disclosed in conformance with State law, at the College's discretion, without prior consent of the student unless the student otherwise so informs the College not to disclose such information.

- a. Name of student.
- b. Address and zip code
- c. Telephone number
- d. Major field of study.
- e. Educational level (e.g., freshman, sophomore, etc.).
- f. Fact of participation in officially recognized activities and sports.
- g. Weight and height of members of athletic teams.
- h. Dates of attendance.
- i. Degrees, awards and academic honors received and date
- j. Most recent educational institution attended.
- k. E-mail address.
- l. Enrollment status (full-time or part-time).

A student has the right to request that any or all of the above items not be designated directory information with respect to that student. Should a student wish to exercise this right, he or

she must in person and in writing, not earlier than the first day of instruction nor later than fourteen calendar days from the first day of instruction for the academic term or semester, or the fourth day of a summer session, inform the Admissions and Records Office which of the above items are not to be disclosed without the prior consent of that student.

5. A parent or spouse of a student is advised that information contained in educational records, except as may be determined to be directory information, will not be disclosed to him/her without the prior written consent of the son, daughter, or spouse.

Use of Social Security Number

The University of Hawai'i ("University") is committed to safeguarding the privacy of personal and confidential information of its students, employees, alumni, and other individuals associated with the University. In the normal practice of conducting official University business, the University collects and maintains confidential information relating to its students, including a student's Social Security Number ("SSN"). The University requests that a student provide a SSN at the time of application to the University. The SSN is not required for enrollment, however, the University is required by federal law to report to the Internal Revenue Service ("IRS") the SSN and other information for tuition-paying students. Federal law also requires the University to obtain and report to the IRS the SSN for any person to whom compensation is paid. Due to the practical administrative difficulties which the University would encounter in maintaining adequate student records and processing financial transactions without the SSN, the University will continue to collect SSNs as permitted by law for official use within the University system. Providing the University with your SSN ensures that University programs and services are available with the least delay.

Students will be assigned a University generated student identification number upon enrollment, which will be used as the primary identifier. The SSN will not be used as the primary identifier of students associated with the University. The SSN will be used in activities, including but not limited to, matching and reconciling documents in order to determine eligibility for admission and financial aid, to determine residency for tuition purposes, to comply with federal and/or state law reporting requirements (e.g. for financial aid, Internal Revenue Service mandates, Taxpayer's Relief Act of 1997, Immigration and Naturalization Service), and in accordance with the Family Educational Rights and Privacy Act. The SSN will not be disclosed to any persons outside the University system, except as allowed by law or with permission from the individual. This policy does not preclude, if a primary means of identification is unavailable, the University from using the SSN as needed to conduct official University business.

Student Affairs

Definition of Terms Used by Windward Community College

Cancelled Classes

Courses are subject to cancellation (e.g. low enrollment). There is a 100% tuition/fees refund for cancelled classes. Students are notified via mail, e-mail, phone call, or posted on classroom door.

Change In Registration

All changes in registration (adds, drops, withdrawals) must be officially recorded by the deadlines. If drops and withdrawals are not officially recorded, students are subject to receiving a failing grade. Changes can be made via MyUH portal, or by visiting the academic counselor, or the Admissions & Records Office. Once the semester begins, there is a fee for in-person add/drop transaction charged to students. Additional tuition and fees may be applicable when adding a class. Once the semester begins, complete withdrawal from ALL courses must be made in person at the students' home campus.

Change of Home Institution

Students that want to change institution after submitting an admissions application or enrolled at a CC campus must complete a Change of Home Institution form instead of a UH System-wide application (excluding 4-year UH campuses).

Class Size

Classes at the College normally range in size from 15 to 35 students; WI classes are usually limited to no more than 20 students.

Classified Students

Students who are enrolled for credit in an officially declared prescribed program leading to a degree or certificate (AA, CA, CC, CO).

Commencement

A public ceremony and celebration held at the end of the academic year at which students' degrees and certificates are recognized.

Course

A unit of instruction consisting of varying combinations of recitations, lectures, laboratory sessions, and field trips in a particular subject within the time span of a semester or session.

Credit Hours (also referred to semester hours, credits, units)

The value assigned to each class of each course. One credit hour usually equals fifteen hours in class per semester. The number of credit hours for each course is determined by the number of lecture, laboratory, or field experience hours determined necessary for each semester course. No student may register for more than 18 credits without obtaining approval from a counselor at registration.

Continuing Student

After admission, students must be enrolled each semester (Fall/Spring) for at least 1 credit hour of course work. Students who are not enrolled will need to submit the system application form for

readmission with the established regulations. Students who are readmitted will be subject to the degree requirements in effect at the time of readmission.

Distance Education

Working collaboratively, the UH Community Colleges now provide courses that allow Hawai'i students to earn a degree through cable TV, Internet, and interactive television.

Erase Period

During this time students dropping a course will have the class erased from their registration file. See current Academic Calendar or Schedule of Classes for deadlines.

Full-time Student

A student carrying twelve (12) or more credit hours in a semester or six (6) credits or more in a 6-week Summer session where full-time status is for only the 6-week session. A third party sponsor may have a different definition of full-time status used in determining their benefits (e.g. VA, financial aid).

Part-time Student

A student carrying 11 or fewer credit hours in a semester.

Prerequisite

Skills or courses required prior to enrollment in a course. Course descriptions indicate prerequisites if they apply.

Returning Students

Students who have missed (stopped-out) a semester (Fall/Spring) must reapply for admissions if they wish to return to the College.

Semester

A time span of fifteen weeks within a four and one-half month period during which courses are offered and completed. Some courses are also scheduled for 13-week. There are usually two semesters in one academic year: fall semester and spring semester. There may be several "accelerated terms" within each semester (e.g. 8-week, 5-week).

Summer Session

The College usually offers two sessions during the summer. Tuition and fees for the summer session differ from those of the Fall/Spring. Students who are enrolled for the Spring semester may register for the summer session without applying for summer. New/Returning summer students are required to apply for the Fall semester if the students want to continue for the upcoming semester.

Unclassified Students

Students who are not pursuing a degree or certificate but are taking courses for upgrading or enrichment.



Hale 'Ākoakoa, the campus center, framed by the majestic Ko'olau.

Transfer of Credits from Other Institutions

Credits earned for courses taken at any of the public community colleges in Hawai'i, or at the University of Hawai'i at Mānoa, West O'ahu, and Hilo may be transferred to this College and applied to meet requirements of degree and certificate programs subject to the specific requirements in each program. Some credits, however, may be classified as electives if Windward Community College has no equivalent course.

Credits earned at a grade level of "D" (not D-) or better at other regionally accredited institutions either in Hawai'i or another state or country may be transferable and applied to meet program requirements at Windward Community College. "CR" or similar "PASS" grades are acceptable if the awarding institution indicates the work is of "D" level or better. Counselors are available to discuss with students which credits are acceptable in transfer from other institutions. The College's policy statement on the acceptance of transfer credits is available from the Office of the Vice Chancellor of Student Affairs.

Students must be aware, however, that transfer credits awarded are applicable to meet requirements of this College but may not necessarily be accepted by any other institution upon transfer of the student from Windward Community College to another college.

Students transferring to other institutions from Windward Community College should refer to that institution's transfer information.

Evaluation of Transfer Credits

A request must be made by the student to have an official evaluation of transfer credits. The request for transcript evaluation is processed after three weeks into the start of the semester. The student must be currently enrolled, in a declared degree/certificate program at Windward Community College (exception – applying for graduation). The evaluation request form is available in the Admissions and Records Office.

Transcripts from institutions outside of the UH system must be sent directly to the Admissions & Records Office and are maintained for one year. For transcripts from other UH campuses, it is no longer necessary to request that transcripts be sent. UH system transcripts will be viewed electronically by the transcript evaluator.

Advanced Placement Examination (AP)

The Advanced Placement Examinations are administered in high schools by the Educational Testing Service for the College Entrance Examination Board for students who have completed specific college-level courses in high school. For the University's credit policy, students should consult the Student Affairs Office.

College Level Examination Program (CLEP)

Any student at Windward Community College is eligible to apply for the College Level Examination Program (CLEP). A passing score on a CLEP examination is recorded as CR (credit) and the credit is entered as "Advanced Standing" credit on the student's transcript. Only students achieving CLEP examination scores at or above specified levels of achievement are awarded the number of credits indicated for each examination. *Students interested in applying for CLEP examinations must make their own arrangements at the University of Hawai'i at Mānoa.*

Grade Point Average

A student's grade point average is computed by dividing the student's total grade points earned by the total credits attempted, excluding the credits for classes in which grades of I, W, N, CR, and NC were awarded. Although I, W, N, and NC are not included in the grade point average, students are advised that some colleges, especially graduate and professional schools, do not look favorably upon transcripts containing these grades. Similar attitudes occur among some employers and scholarship grantors.

Academic Regulations

Grading

Letter grades and grade points are awarded to students to reflect their level of achievement of the objectives of a course. At the College, the letter grades which can be awarded include the following table:

A	Excellent achievement	4 grade points given (course credits awarded)
B	Above average achievement	3 grade points given (course credits awarded)
C	Average achievement	2 grade points given (course credits awarded)
D	Minimal passing achievement	1 grade point given (course credits awarded)
F	Less than minimal passing achievement	0 grade points given (no course credits awarded)
CR	Achievement of objectives of course at C level or higher	No grade points given (course credits awarded)
NC	Used to denote achievement of objectives of the course	No grade points given (no course credits awarded) at less than C level under the CR/NC option
N ¹	Refer to footnote	No grade points given (no course credits awarded)
I ²	Incomplete	No grade points given (no course credit awarded until student completes course)
W ³	Official withdrawal from course	No grade points given (no course credits awarded)
L	Audited Course	No grade points given (no course credits awarded)
CE	Credit by exam	No grade points given (course credits awarded)
NCE	No Credit by exam	No grade points given (no course credits awarded)

¹N grade indicates that the student has worked conscientiously, attended regularly, finished all work, fulfilled course responsibilities, and has made measurable progress. However, either the student has not achieved the minimal student learning objectives and is not yet prepared to succeed at the next level, or the student has made consistent progress in the class but is unable to complete the class due to extenuating circumstances, such as major health, personal or family emergencies.

²I grade (Incomplete) is a temporary grade given at the instructor's option when a student has failed to complete a small part of a course because of circumstances beyond his or her control. The student is expected to complete the course by the designated deadline in the succeeding semester. If this is not done, the "I" will revert to the contingency grade identified by the instructor.

³W grade indicates that the student officially dropped/withdrew from the class. If the student dropped/withdrew during the erase period, the record of the registration does not appear on the transcript. Refer to the Academic Calendar or Schedule of Classes for drop/withdrawal deadlines.

Dean's List

Each semester the Dean's List recognizes students who have achieved academic excellence at the College. Students who have earned 24 credits at the College, who have a current and cumulative grade point average of 3.5 or better, and who have no N or NC grades in the current semester are automatically placed on the Dean's List unless they request to be omitted. Dean's List is noted on the student's transcript.

Repeating Courses

A student may repeat any course taken at the College but will receive additional credit only if the course description in the catalog states that the course may be repeated for additional credit. With the exception of courses which specifically allow repeating for additional credit, credit will be allowed only once for a course, and the student will receive the higher grade and grade point. The lower grade, however, shall remain on the student's record.

Credit By Examination

Windward Community College students who present evidence of having achieved course objectives through prior experience may apply for credit by exam. Credit by exam is not available for all courses. Students are advised to check with individual instructors and the Department Chairperson on a course-by-course basis. Students must be officially enrolled in at least one course (other than the course the student is attempting to receive credit by exam) during the semester in which credit by exam is attempted. Credit by examination forms must be filed with the Admissions & Records Office prior to the end of the late registration period. Students will be charged for credit by exam courses at the prevailing tuition and fees rate.

Credit/No Credit Option

The Credit/No Credit option is maintained to encourage students to broaden their education by taking courses outside of major requirements without affecting their grade point averages. No grade points are given for courses taken under this

grading option. Course credit is awarded for courses completed at Windward Community College with certain restrictions. This grading option is not offered in all courses and students majoring in a particular program are not permitted to take a major required course with the CR/NC grading option. The student should consult the instructor's course outline to determine if this option is available in a particular course. If this option is available, the student must submit the completed CR/NC Option form to the Admissions and Records Office by the deadline. Once the CR/NC Option is submitted, the CR/NC cannot be changed. Refer to the Academic Calendar or Schedule of Classes for deadline date.

Auditing

No credit is given for an audited course. The grade of "L" will be recorded for the course on the student's transcript.

Auditors must complete all admission and registration requirements and procedures, including the payment of tuition and fees. Students are permitted to audit certain classes with the written consent of the instructor. Students who want to audit a course must submit the completed Auditor Request Form to the Admissions and Records Office by the deadline. Refer to the Academic Calendar or Schedule of Classes for deadline date.

Grade Reports

Grade reports may be viewed online at the end of each semester. Students must report any errors on their grade report to the Admissions & Records Office within 7 calendar days following the end of term.

Academic Probation Policy

Further details of the policy are available in the Office of the Vice Chancellor of Student Affairs, Hale 'Ākoakoa 202, 808-235-7466.

A cumulative GPA of 2.0 is required to remain on satisfactory academic progress at Windward Community College. Students who do not meet this minimum GPA at the end of any semester will receive a warning of unsatisfactory academic progress. If satisfactory progress is not made in ensuing semesters, the student will be placed on academic probation and eventually suspended or dismissed from the college.

All students notified of unsatisfactory academic progress are required to meet with an academic counselor prior to registration.

Warning

Students may be placed on academic warning at the end of any semester in which their cumulative GPA falls below 2.0. A warning is not notated on the permanent academic record. Warned students may continue to attend Windward Community College but must raise their cumulative GPA to 2.0 or higher. Failure to do so will result in academic probation.

Probation

If students on warning fail to raise their cumulative GPA to 2.0 or higher, they will be placed on academic probation. Notation of probation is made on the students' permanent academic record. Probationary students may continue to attend Windward Community College under the following terms:

- they will be allowed to enroll only in courses approved by an academic counselor
- they will meet regularly thereafter with that counselor to review progress
- they must earn a semester GPA of 2.0 in each probationary semester
- they will remain on probation until their cumulative GPA is raised to 2.0 or higher

Failure to meet these conditions will result in academic suspension.

Suspension

A student will be suspended for failing to meet the terms of probation. Notation of academic suspension is made on the student's permanent academic record. A suspended student is eligible to apply and return to Windward Community College after a wait period of at least one semester (not including summer session). A student returning after suspension will be placed on probation during the semester of re-entry. Under extenuating circumstances a waiver of the wait period may be granted, allowing a student to enroll. Failure to meet the terms of probation after returning from suspension will result in dismissal.

Dismissal

A student returning after suspension will be dismissed for failing to meet the terms of probation. A dismissed student may be readmitted only in unusual circumstances, and only after the passage of at least two semesters (not including summer session). Note that readmission after dismissal occurs only rarely.

Removal from Probation

A student will be removed from probation once the cumulative GPA is raised to 2.0 or higher.

Appeals

A student may appeal a decision regarding academic probation, suspension or dismissal by filing a formal petition with the Office of the Vice Chancellor of Student Affairs in Hale 'Ākoakoa 202. Appeals must be filed as soon as notification is received, and prior to the first day of instruction of the following semester.

Degrees and Certificates

Degrees and Certificates Offered at Windward Community College

Associate in Arts Degrees

Associate in Arts in Liberal Arts

Associate in Arts in Hawaiian Studies

Associate in Science Degrees

Associate in Science in Veterinary Technology

Academic Subject Certificates

Art: Drawing and Painting

Bio-Resources and Technology:

Bio-Resource Development and Management

Bio-Resources & Technology: Plant Biotechnology

Business

Hawaiian Studies:

Language

History/Culture

Science

Psycho-Social Developmental Studies

Certificates of Achievement

Agripharmatech

Veterinary Assisting

Certificates of Completion

Agricultural Technology: Plant Landscaping
and/or Agricultural Technology

Agricultural Technology:
Subtropical Urban Tree Care

Landscaping Maintenance
Turfgrass Maintenance

Certificates of Competence

Geographic Information System/
Global Positioning System

Information Computer Science:
Applied Business & Information Technology

Information Computer Science: Web Support

The Instructional Program

The instructional program at Windward Community College recognizes that people differ in interest, motivation, ability, and learning styles. Thus, alternatives are stressed in the kinds, levels, and ways in which courses are offered. Courses offered are intended to meet the needs of individuals:

- intending to earn an Associate in Arts degree in the liberal arts;
- intending to earn a Certificate of Achievement in a vocational program;
- intending to earn a Certificate of Completion or Certificate of Competence in a vocational program;
- intending to transfer to a four-year college to earn a bachelor's degree;
- interested in taking courses for personal enrichment;
- interested in acquiring skills and knowledge needed for employment in selected occupational fields;
- interested in reinforcing basic learning and study skills, e.g., reading, writing, note taking, memory/concentration skills;
- interested in updating skills and knowledge for employment in certain vocational fields.

Modes of instruction also vary and students may enroll in group-learning, lecture-oriented classes, highly individualized classes, or independent study projects. A few classes take an interdisciplinary approach to a topic or problem.

Some coordinated studies packages are also offered. Here, instructors offering interrelated courses integrate their courses and provide students with a team of professionals who are concerned with all the learning activities of the student.

Piggyback courses are also offered. In some of these courses, where self-instructional materials are used, students can opt to meet the objectives of different courses, working at their own rate of speed and proceeding to a second level within the term, depending on their own abilities.

A pre-test may also be given in some classes. This is intended to help identify the knowledge and skills already possessed by students, thus enabling instructors to tailor the instruction to meet the special needs or interests of the class. (Pre-tests are not used in grading students.)

General Education Mission Statement

Windward Community College provides an open door to a comprehensive general education through which students enhance basic tools of inquiry for understanding themselves and the world around them, develop their capacity to expand and apply knowledge, and cultivate more creative and meaningful lives. With an orientation to Hawai'i and its unique heritage, general education at Windward Community College includes:

Global and Cultural Awareness, Critical Thinking and Creativity, Communication and Information Literacy.

Windward Community College General Education Student Learning Outcomes

Global and Cultural Awareness

Develop the ability to perceive how people interact with their cultural and natural environments, through their own worldview and through the worldviews of others, in order to analyze how individuals and groups function in local and global contexts.

Specific outcomes in Global and Cultural Awareness may include:

- Analyze and empathize with the attitudes and beliefs of other cultures.
- Identify instances where cultural norms affect cross-cultural communication.
- Explore how various factors shape a culture's development and values and one's sense of place.

Critical Thinking and Creativity

Make judgments, solve problems, and reach decisions using analytical, critical, and creative thinking skills.

Specific outcomes in Critical Thinking and Creativity may include:

- Identify challenges and problems and find solutions through creative exploration, scientific and quantitative reasoning, and other forms of inquiry.
- Analyze complex ideas to arrive at reasoned conclusions.
- Use creative processes to discover potential and to express ideas and beliefs.

Communication

Use written, visual, and oral communication to discover, develop, and communicate meaning, and to respond respectfully to the ideas of others in multiple environments.

Specific outcomes in Communication may include:

- Listen to, comprehend, interpret, analyze, synthesize, and evaluate ideas.
- Present ideas in a variety of formats, including written, oral, and visual.
- Convey ideas and facts to a variety of audiences in various contexts.

Information Literacy

Identify information needed in a variety of situations, and access, evaluate, and use relevant information effectively and responsibly.

Specific outcomes in Information Literacy may include:

- Determine the nature and extent of information needed in order to accomplish a goal.

- Use appropriate resources and methods to access and acquire relevant information.
- Critically evaluate information and its sources.
- Organize, synthesize, and communicate information to achieve a specific purpose.
- Apply ethical, legal, and social standards when using information and information technology.

Associate in Arts Degree

The Associate in Arts degree is awarded to students who complete a general program of liberal arts courses which may be applied to meet baccalaureate degree requirements at a four-year college or to fulfill the general education interests of the student. Students who plan to transfer to other colleges, including the University of Hawai'i at Mānoa, should work closely with a counselor to help ensure that courses taken for the AA degree are also applicable at their next campus.

Effective Fall 1994, students who have earned an articulated Associate in Arts (AA) degree from a University of Hawai'i Community College shall be accepted as having fulfilled the general education core requirements at all other University of Hawai'i campuses.

Global and Cultural Awareness

Develop the ability to perceive how people interact with their cultural and natural environments, through their own worldview and through the worldviews of others, in order to analyze how individuals and groups function in local and global contexts. Specific outcomes in Global and Cultural Awareness may include

- Analyze and empathize with the attitudes and beliefs of other cultures.
- Identify instances where cultural norms affect crosscultural communication.
- Explore how various factors shape a culture's development and values and one's sense of place.
- Take an active role in the community (work, service, co-curricular activities).

Critical Thinking and Creativity

Make judgments, solve problems, and reach decisions using analytical, critical, and creative thinking skills. Specific outcomes in Critical Thinking and Creativity may include

- Identify challenges and problems and find solutions through creative exploration, scientific and quantitative reasoning, and other forms of inquiry.
- Analyze complex ideas to arrive at reasoned conclusions.
- Use creative processes to discover potential and to express ideas and beliefs.

Degrees & Certificates

Communication

Use written, visual, and oral communication to discover, develop, and communicate meaning, and to respond respectfully to the ideas of others in multiple environments. Specific outcomes in Communication may include

- Listen to, comprehend, interpret, analyze, synthesize, and evaluate ideas.
- Present ideas in a variety of formats, including written, oral, and visual.
- Convey ideas and facts to a variety of audiences in various contexts.

Information Literacy

Identify information needed in a variety of situations, and access, evaluate, and use relevant information effectively and responsibly. Specific outcomes in information Literacy may include

- Determine the nature and extent of information needed in order to accomplish a goal.
- Use appropriate resources and methods to access and acquire relevant information.
- Critically evaluate information and its sources.
- Organize, synthesize, and communicate information to achieve a specific purpose.
- Apply ethical, legal, and social standards when using information and information technology.

While an articulated AA degree satisfies general education core requirements, students must also complete all specialized lower-division, major, college and degree/graduation requirements. Additional campus-specific requirements, such as competency in a foreign language or writing intensive courses may also be required. With planning, most, if not all, of these requirements may be incorporated into the Associate in Arts degree; if not, they are required in addition to the Associate in Arts degree. Students are advised to visit one of the academic counselors on campus to review a program sheet for the specific degree being sought, e.g., Bachelor of Arts, Bachelor of Business Administration, Bachelor of Education, etc. College catalogs are published every two years and do not always reflect the most recent campus actions involving core courses. For the most recent information concerning core courses, students should check with their advisors.

Certificate Programs

The College offers certificate-level programs within the Associate in Arts degree (Academic Subject Certificate) and certificate-level programs (Certificate of Achievement, Certificate of Completion, and Certificate of Competence) which are designed to prepare students for entry-level employment or upgrading of work skills in several vocational fields.

In the vocational area, certificates are offered in Plant Landscaping, Subtropical Urban Tree Care, Veterinary Assisting, Global Information System/Global Positioning System, Applied Business and Information Technology, and Web Support.

In the Associate in Arts degree, most credits completed in certificate-level programs (Academic Subject Certificate) may be applied to meet the Associate in Arts degree program requirements.

Certificate of Achievement (CA)

A college credential for students who have successfully completed designated medium-term technical-occupational-professional education credit course sequences which provide them with entry-level skills or job upgrading. These course sequences shall be at least 24 credit hours but may not exceed 45 credit hours (unless external employment requirements exceed this number). The issuance of a Certificate of Achievement requires that the student must earn a GPA of 2.0 or better for all courses required in the certificate

Certificate of Completion (CC)

A college credential for students who have successfully completed designated short-term technical-occupational-professional education credit course sequences which provide them with entry-level skills, or job upgrading. These course sequences shall be at least 10 credit hours, but may not exceed 23 credit hours. The issuance of a Certificate of Completion requires that the student must earn a GPA of 2.0 or better for all courses required in the certificate.

Certificate of Competence (CO)

A college credential for students who successfully complete designated short-term credit or non-credit courses which provide them with job upgrading or entry-level skills. The issuance of a Certificate of Competence requires that the student's work has been evaluated and determined to be satisfactory. Credit course sequences shall be at least 4 but less than 10 credits. In a credit course sequence the student must earn a GPA of 2.0 or better of all courses required in the certificate

Academic Subject Certificate (ASC)

A college credential for students who have successfully completed a specific sequence of credit courses from the Associate in Arts (AA) curriculum. The sequence must fit within the structure of the AA degree, may not extend the credits required for the AA degree, and shall be at least 12 credit hours. The issuance of the Academic Subject Certificate requires that the student must earn a GPA of 2.0 or better for all courses required in the certificate.

Additional Offerings

Military Science Courses

Military science and air science courses are offered through the University of Hawai'i at Mānoa. Windward students making satisfactory academic progress may enroll in these courses as concurrent students. For further information, contact the military departments at the Mānoa campus.

Independent Studies

This program offers students the opportunity to participate in the creation of academic learning experiences designed to meet individual needs, interests, aptitudes and desired outcomes. It is intended to serve the student, who after completing the requirements of an introductory course, may wish to continue an in-depth study of a particular topic or issue previously covered, or who may wish to reinforce understanding of concepts or relationships covered.

A student at the College, under faculty supervision, may design an independent study project at any of three levels: Vocational (099) or Academic (199)/(299). An independent study project could take the form of directed reading, research, or field work experience. Students are encouraged to develop original projects and the project must be appropriate to the student's program of study, related to the existing college curriculum, and in the area of the supervising instructor's and/or co-advisor's expertise.

Independent study projects are undertaken with at least one student selected faculty advisor. The advisor must be a member of the College faculty and participation by this faculty member is voluntary. The advisor serves as a facilitator of learning, guiding the student in establishing and achieving the goals of the independent project. An advisor may recommend particular preparation before a student undertakes a project.

No more than 12 credits in any combination of independent study or cooperative education can be applied to meet the Associate Degree requirements. Procedural details may be obtained through an instructor or the Vice Chancellor of Academic Affairs Office. The deadline for registration in an independent study course is the end of the Add Period for the second 8-week session.

Service Learning

Service Learning is a learning option in designated courses at Windward Community College. Students who opt for service-learning earn partial course credit by actively applying the skills and perspectives taught in academic courses in ways that benefit the community. Students work with instructors and the service-learning office to select approved community sites. Service-learning enhances the academic experience by incorporating a real-world component to the curriculum, as well as fostering civic responsibility, career exploration, and community connections in students.

Cooperative Education

This program offers students opportunities to participate in career related experiences designed to reinforce skills learned in different areas and to apply these skills in actual job situations. Cooperative Education experiences are offered in Agriculture and Social Sciences, and are being planned in other disciplines. See each subject area and/or the department for eligibility requirements, prerequisites and information on procedures for setting up such a course.

Distance Learning

Distance Education provides classes to students outside of the classroom through cable, interactive television, and the internet. For a complete list of available courses throughout the UH system, go to <http://hawaii.edu/dl/>.

Online Learning

Online learning takes place primarily on the internet, although students may be required to do outside activities and to take tests at official proctoring sites. To take an online class, a student must have access to a computer, the internet, and a UH e-mail account. Online courses require the use of Laulima, University of Hawai'i's online course system (<http://laulima.hawaii.edu>). The instructor will provide students with a list of software that will be needed, which should be purchased and/or downloaded before the first day of class. Students should actively participate in the online discussions forums, chats, and other forms of online interaction in their course to maximize learning. Communication, time management, and other skills crucial to success in the online learning environment are discussed at WCC's online information page <http://windward.hawaii.edu/online>. Here, one can also find useful webpages and other relevant information.

Degrees & Certificates

Transferring to Another College

Many Windward Community College students transfer to other colleges and universities to complete their studies. Each college or university sets its own rules concerning the credits that they will accept and the requirements for transferring students. Therefore, students should read the catalogs from prospective colleges carefully and consult with a counselor for full information.

Generally speaking, students earn 60 credits of courses with numbers of 100 and above before transferring to another institution. (Courses numbered below 100 are usually not accepted in transfer by four-year colleges.) The number of credits that you should take at the College depends on the rules of the institution that you want to transfer to, as well as the major field that you wish to study.

When to Apply for a Transfer

Students should plan to apply at least one semester before they plan to enroll at a new school. Some colleges have early deadlines; specific information can be found in college catalogs and websites. Deadline dates pertain to the admissions application form and require receipt of official transcripts from all colleges previously attended by that date.

Transferring Credits

The transfer school will evaluate transcripts and determine which credits will be accepted as part of the degree that you are seeking there. There is no physical transfer of actual credits; your permanent academic record at Windward Community College always remains here. Normally, courses numbered 100 and above are transferable if you are going to a four-year college, but not all of the courses 100 and above will meet the basic requirements (some will be electives).

Transferring to the UH-Mānoa Campus

It's important to observe deadlines when applying to UH-Mānoa. Send for official transcripts from other colleges in plenty of time to reach Mānoa by the published application deadlines. Mānoa accepts credits that have been completed with a grade of 'D' (not 'D-') or better.

Credit/No Credit grading options at Windward Community College need to be avoided if you expect to use the course in fulfillment of Mānoa core or major requirements. Mānoa will apply Credit/No Credit marks only to electives, but not to requirements (unless you had no choice because the course was offered for a mandatory Credit/No Credit grade).

Mānoa requires 60 or more credits of non-introductory courses for its bachelor degrees. Non-introductory courses are courses numbered 300 and above (or any other courses with explicit college-level prerequisites published in the catalog).

See a counselor at Windward Community College for help in planning to meet the specific requirements for a bachelor's degree at Mānoa. Students are encouraged to visit the Mānoa Advising Center for degree requirement and advising at Mānoa.

To enter the UH-Mānoa campus as a transfer student, at least 24 credits of college-level work (courses numbered 100 and above), with a grade point average of 2.0 or better are required. Students may have more than 24 credits, but they still need to have a 2.0 or better grade point average. If a student wishes to enter the Mānoa campus with fewer than 24 credits, she or he will need to provide SAT (or ACT) test scores and their high school grades.

Auto Admission and Reverse Transfer

Automatic admission and reverse transfer are two University of Hawai'i System initiatives designed to better serve students who transfer between the two year and four year campuses.

The admissions standards at UH remain unchanged, but these procedural changes will expedite a student's ability to enroll and to finish a degree program. Automatic admission will admit a graduate from one of the seven community colleges to one of the three baccalaureate campuses. For community college students who transfer before receiving a degree, reverse transfer will lead to a credit review to determine if they have earned their associate's degree. See a counselor for more information.

Transferring to Institutions Other than UH-Mānoa

Students planning to transfer to a college outside the UH System are urged to review college catalogs and website information and to consult a counselor early in their college career so that a planned program can be arranged to meet the general education and admissions requirements of the college to which they plan to transfer. It is the student's responsibility to obtain accurate information from any college or university that is being considered for transfer.

Graduation Requirements



Chancellor Doug Dykstra presents students with their diplomas at commencement.

Application for Graduation

Students should consult with their counselor/academic advisor at least one semester prior to registering for their projected final semester of study. For specific graduation requirements, see the programs of study listed in the catalog.

Students who intend to file for graduation must have a graduation certification done by a counselor prior to filing a graduation application form by the deadline with Admissions and Records Office. The graduation fee of \$15 is payable upon submission of the application for graduation.

Scholastic Standards

A cumulative 2.0 grade point average is required for graduation with the Associate in Arts degree. At least 12 of the credits for the AA degree must be earned at Windward Community College. Students completing certificate program requirements must successfully complete credits in specified fields and

maintain a cumulative grade point average of 2.0. At least 50% of the required courses in the major area must be earned at the College. Under certain circumstances, this requirement may be waived upon a request made to the Vice Chancellor of Student Affairs

Associate in Arts Degree

The Associate in Arts (AA) degree is a two-year transfer liberal arts degree consisting of at least 60 semester credits at the 100 and 200 levels.

To earn an AA degree, Windward Community College students must complete 60 credits in courses numbered 100 or above with a grade-point average of at least 2.0. Students who are awarded an AA degree from a UH Community College must have a community college cumulative GPA of 2.0 or higher for all course work taken in fulfillment of AA degree requirements.

Graduation Requirements



At least 12 of the credits for the AA degree must be earned at Windward Community College. No more than 12 credits in any combination of independent study or cooperative education may apply to the degree requirements. Credits must be earned in the required areas. Underlined courses are infrequently offered.

Students will follow the program requirements stated in the course catalog at the time of their initial enrollment, providing that the student has been continually enrolled. Continual enrollment is defined as attending each semester (excluding summer session) for at least one credit hour of course work.

Students who have a break in enrollment will need to submit the system application form for readmission with the established regulations. Students who are readmitted will be subject to the degree requirements in effect at the time of readmission.

Written and Oral Communications

Individuals need various modes of expression. These areas provide for the development of clear and effective written and oral communication skills.

REQUIREMENT: Three credits in English 100 and three credits selected from Speech 151, Speech 181, Speech 231 or Speech 251.

Graduation Requirements



Symbolic Reasoning

Symbolic reasoning courses expose students to the beauty and power of formal systems, as well as their clarity and precision; courses will not focus solely on computational skills. Students learn the concept of proof as a chain of inferences. They learn to apply formal rules or algorithms; engage in hypothetical reasoning; and traverse a bridge between theory and practice. In addition, students develop the ability to use appropriate symbolic techniques in the context of problem solving and to present and critically evaluate evidence.

REQUIREMENT: Three credits from selected math courses numbered 100 or above, Philosophy 110, or ICS 141 (beginning Fall 2010).

Global and Multicultural Perspectives

Global and multicultural perspectives courses provide thematic treatments of global processes and cross-cultural interactions from a variety of perspectives. Students will gain a sense of human development from prehistory to modern times through consideration of narratives and artifacts of and from diverse cultures. At least one component of each of these courses will involve the indigenous cultures of Hawai'i, the Pacific, or Asia.

REQUIREMENT: Six credits must come from two different groups.

Arts and Humanities

Through study of artistic, literary, and philosophical masterworks and by examining the development of significant civilizations, cultures, and the nature of human communication, students should gain an appreciation of history and achievements. This experience should enable the student to approach future studies of a more specific character with a broadened perspective.

REQUIREMENT: A total of 6 credits selected from two of three groups.

Natural Sciences

A scientifically literate person should know what science is, how scientific investigation is conducted, and that the activity of a scientist is a blend of creativity and rigorous thinking.

Experimental investigations in the laboratory provide the student with first hand experience with the scientific method and research.

REQUIREMENT: Minimum of 6 credits. Must include a biological science course, a physical science course, and a laboratory/field trip course.

Social Sciences

Every educated person should have some appreciation of the role of culture and social institutions in the shaping of individual personality and the creation of social identities. Students should also develop an understanding of the extent to which scientific inquiry is appropriate to the creation of social knowledge and of the alternative ways of organizing human institutions and interpreting social reality.

REQUIREMENT: A total of 6 credits made up of two or more courses from two different subject areas.

Writing Intensive Courses

Writing Intensive (WI) Courses are part of a University of Hawai'i systemwide movement to incorporate more writing in courses from all disciplines. A WI course is a discipline-specific course in which writing plays a major integrated role. Students in course sections designated as a "WI" (preceding the course title in the Schedule of Classes) learn to understand course content through writing and to write in ways appropriate to that discipline. English 100 is a prerequisite before students take the two required WI courses for the Associate in Arts degree. Students transferring to some bachelor's degree campuses in the UH system may bring two or three WI courses with them to count for the bachelor's degree. The hallmarks of a writing intensive course are:

- Writing promotes learning of course content.
- Writing is considered to be a process in which multiple drafts are encouraged.
- Writing contributes significantly to each student's course grade.
- Students do a substantial amount of writing, a minimum of 4,000 words. Depending on the types of writing appropriate to the discipline, students may write critical essays or reviews, journal entries, lab reports, research reports or reaction papers.

To allow for meaningful teacher-student interaction on each student's writing, the class is restricted to 20 students.

REQUIREMENT: Two Writing Intensive (WI) courses are required.

Math

Students must have placement into Math 100, or successfully complete Math 25 or higher with a grade of "C" or better.

Associate in Arts



The Associate in Arts (AA) degree is a two-year direct transfer liberal arts degree consisting of at least 60 semester credits at the 100 and 200 levels.

To earn an Associate in Arts (AA) Degree, Windward Community College students must complete 60 credits in courses numbered 100 or above with a grade-point average of at least 2.0. Students who are awarded an Associate in Arts degree from a UH Community College must have a Community College cumulative GPA of 2.0 or higher for all course work taken in fulfillment of AA degree requirements.

At least 12 of the credits for the AA degree must be earned at Windward Community College. No more than 12 credits in any combination of independent study or cooperative education may apply to the degree requirements. Credits must be earned in the required areas. Underlined courses are infrequently offered. See course descriptions for prerequisites.

Graduation Requirements:

Writing Intensive (WI) (Required: A total of 2 courses)

Placement into Math 100 or complete Math 25 or higher with a grade of "C" or better.

Oral Communication (OC)

Required: A total of 3 credits
SP 151, 181, 231, 251

Foundations Requirements:

Written Communication (FW)

Required: A total of 3 credits
ENG 100

Global & Multicultural Perspectives (FG)

Required: A total of 6 credits from two different groups.
Group A: HIST 151
Group B: HIST 152
Group C: REL 150 (If taken at WCC Fall 2008 or after)

Symbolic Reasoning (FS)

Required: A total of 3 credits
ICS 141 (If taken at WCC Fall 2010 or after)
MATH 100, 103, 112, 135, 140, 203, 205
PHIL 110

Diversification Requirements:

Arts, Humanities and Literature

Required: A total of 6 credits, each course selected from two different groups.

Arts (DA)

ART 101, 104D, 105B, 105C, 107, 108, 111, 113, 114, 115, 116, 123, 189, 207, 208, 213, 214, 223, 224, 243, 244, 253, 260
ENG 204A
HWST 130, 131, 135, 136, 222
HUM 100, 269V*
MUS 101*, 108, 114*, 121B*, 121C*, 121D*, 121F*, 121Z*, 122B*, 122C*, 122D*, 122F*, 130F*, 221C*, 222C*, 253
SP 151, 231, 251
THEA 101, 211, 221, 222, 240, 260

***Any combination that totals 3 credits will be considered the equivalent of one semester course.**

Humanities (DH)

ART 269V, 270, 280
HWST 107, 115, 255, 270, 275, 275L, 285
HIST 231, 232, 241, 242, 281, 282, 284
IS 160A, 160B and 160L, 260A, 260B
LING 102
MUS 106, 107, 166
PHIL 100, 101, 102, 211, 213
REL 150 (up to and including Spring 2008) 151, 201, 202, 205, 207

Literature (DL)

ENG 209, 270, 271, 272

Natural Sciences

Required: A minimum of 6 credits with 3 credits from the biological science area (DB) and 3 credits from the physical science area (DP). In addition, the student must take a science laboratory/field trip course (DY).

Note: BOLD TEXT denotes Natural Science courses that fulfill both a lecture (as DB or DP) and a lab (DY) requirement simultaneously.

Biological Sciences (DB)

AG 120
ANSC 142, 151, 251, 262
AQUA 106, 201
BIOL 100, **101**, 124, 171, 172, 200, 265, 275
BOT **101, 130, 160, 205, 210**
FSHN 185
IS 201
MICR 130
OCN 220
SCI 123
ZOO **101**, 106, **107**, 141, 142, 200, 254

Physical Sciences (DP)

ASTR 110, 130, 180, 181, 250, 281, 294V
CHEM 100, 151, 152, 161, 162, 272
GEOG 101
GG **101**, 103, 166
MET 101
OCN 201
PHYS 122, 151, 152, 170, 272

Natural Sciences Lab (DY)

ANSC 142L, 151L, 152L
AQUA 106L, 201L
ASTR 110L, 250L
BIOL 100L, **101**, 124L, 171L, 172L, 200L, 265L, 275L
BOT **101, 130, 205, 210**
CHEM 100L, 151L, 152L, 161L, 162L, 272L
GEOG 101L
GG **101**, 210, 211, 212, 213, 214
IS **201**, 260L
MET 101L
MICR 140
NREM 250
OCN 201L
PHYS 122L, 151L, 152L, 170L, 272L
SCI 123
ZOO **101**, 107, 141L, 142L, 200L

Social Sciences (DS)

Required: A total of 6 credits from 2 different subject areas.

ANTH 150, 175 and 175L, 200
BOT 105
ECON 120, 130, 131
FAMR 230
GEOG 102, 122, 151
GIS 150
ICS 100
POLS 110, 120, 130, 180, 243
PSY 100, 170, 202, 224, 240, 250, 260, 270
SOC 100, 218, 231, 250, 251
SSCI 200
WS 151, 200, 202

Note: Generally, any one course can fulfill only one area, e.g., SP 151, SP 231, SP 251 can fulfill either OC or DA, but not both. Certain natural science courses can fulfill both DP and DY requirements.

Associate in Arts in Hawaiian Studies (AAHS)

Effective Spring 2013 pending ACCJC approval.



The Associate in Arts in Hawaiian Studies is a 60-credit degree that is a foundational degree in Hawaiian knowledge and culture. The AA degree is patterned after WCC's current liberal arts AA degree, and is an option for students seeking an associate degree and subsequent entry into most baccalaureate programs at UH-Mānoa, UH-Hilo and UH-West O'ahu. The degree is also a pathway for entrance into either UH-Mānoa or UH-Hilo Hawaiian Studies Programs. The AAHS also provides students with qualifications that will be useful in the workforce where understanding of the host culture or application of Hawaiian knowledge is desired.

Program Outcomes

- Upon successful completion of the associate in arts degree in Hawaiian studies, the student will be able to:
- Describe aboriginal Hawaiian linguistic, cultural, historical, and political concepts.
- Apply aboriginal Hawaiian concepts, knowledge and methods to the areas of science, humanities, arts, and social sciences—in academics and in other professional endeavors.
- Engage, articulate, and analyze topics relevant to the aboriginal Hawaiian community using college-level research and writing methods.

Graduation Requirements:

Foundation Requirements (12 credits)

Written Communication (FW)

Required: A total of 3 credits
ENG 100

Global and Multicultural Perspectives (FG)

Required: A total of 6 credits from two courses listed below.
HIST 151, HIST 152, REL 150

Symbolic Reasoning (FS)

Required: A total of 3 credits
MATH 100, 103, 112, 135, 140, 203, 205, ICS 141, PHIL 110

Oral Communication Requirement (OC)

Required: A total of 3 credits
SP 151, 181, 231, 251

Hawaiian Studies Requirements (14 credits)

Hawaiian Studies Core Requirements (6 credits)

HWST 107, 270

Hawaiian Language Requirements (8 credits)

HAW 101, 102

Diversification Requirements (19 credits)

Arts, Humanities, and Literature

Required: A total of 6 credits selected from two groups:
DA, DH

Arts (DA)

ART 189
HWST 130, 131, 135, 136, 222
MUS 121F, 121Z, 122 F, 122Z, 130F

Humanities (DH)

HIST 284
HWST 115, 255, 275, 275L, 285
REL 205
IS 160, 260
LING 102

Natural Sciences

Required: A total of 7 credits; at least one lecture course must be chosen from DB and DP. One of the lecture courses must also have a paired laboratory course, DY.

Biological Sciences (DB)

AQUA 201
BIOL 200
BOT 130
IS 201 (2 credits)
ZOOL 105, 200: Marine Biology

Physical Sciences (DP)

ASTR 110
GG 103
OCN 201

Natural Sciences Lab (DY)

AQUA 201L
ASTR 110L
BIOL 200L
BOT 130L
GG 210, 211, 212, 213, 214
IS 201, 260L
OCN 201L
ZOOL 200L

Social Sciences (DS)

Required: A Total of 6 credits selected from two different disciplines:

ANTH 175, 175L
BOT 105
GEOG 122
POLS 180

Electives (12 credits)

Choose a minimum of 12 credits from any of the following list of approved elective courses for this degree:

‘Ōlelo Hawai‘i (Hawaiian Language)

HAW 201, 202

Mo‘olelo Hawai‘i (Hawaiian History and Traditions)

HIST 284
HWST 115, 255
POLS 180
REL 205

Ahupua‘a (Hawaiian Land & Ocean Systems)

ANTH 175 & 175L
AQUA 201, 201L
BIOL 200
BOT 105, 130
GG 103
HWST 275 & 257L, 285
IS 160A, 160B, 160L, 201, 260A, 260B, 260L
ZOOL 105, 200

Hawaiian Performing Arts

HWST 130, 131
MUS 121F, 121Z, 122F, 122Z, 130F, 177

Hana No‘eau (Visual Art and Design)

ART 189
HWST 135, 136, 222

Writing Intensive (WI)

Required: A total of two courses

The issuance of an AA degree requires that the student must earn a grade point ratio (GPR) of 2.0 or higher for all courses applicable toward the degree.

Please note: Students must also complete one Hawaiian, Asian and Pacific Issues (HAP) course. Please refer <http://windward.hawaii.edu/committees/HAP/> for the most current listing of approved Hawaiian, Asian and Pacific courses.

Associate in Science in Veterinary Technology

Effective Spring 2013, pending ACCJC approval.



The Associate in Science degree in Veterinary Technology combines traditional classroom instruction with intensive hands-on laboratory and practical experience utilizing live animals in a clinical setting. Students enrolled in the program will receive didactic and practical training in pharmacology, radiology, anesthesiology, surgical assisting, dentistry, nutrition, and veterinary office procedures and will learn how to perform over 130 skill sets deemed essential by the American Veterinary Medical Association (AVMA). During the final year of the program, students will intern at three of the over 20 preceptor clinics and shelters associated with WCC where their skills will be evaluated and critiqued by industry professionals. Not only does this experience allow students to hone and apply their skills in a real world setting, it will also serve as a bridge to future employment. The program is awaiting accreditation from AVMA.

There is a \$100 professional fee each semester for the first year and a \$300 professional fee each semester for the second year.

After completing the program, students will be able to:

- Effectively communicate with clients and veterinary staff.
- Perform routine business transactions and maintain patient and facility records.
- Ensure the safety of patients, clients, and staff and maintain compliance with regulatory agencies.
- Identify common breeds of companion animals, list their nutritional requirements and husbandry needs, and describe the anatomy and functions of major body systems.
- Assist with physical exams and obtain patient histories.

- Perform routine nursing procedures including first-aid, wound-management, and administration of medications and vaccines.
- Develop a working knowledge of common companion animal diseases and their medical treatments.
- Collect biological samples and perform diagnostic laboratory tests.

Curriculum

An AS in Veterinary Technology is awarded to students who complete the required 67 credits. It is anticipated that students will complete the degree in two years. Students are eligible for the Certificate of Achievement in Veterinary Assisting after the first year. Below are the degree requirements with current course descriptions:

Year 1: General Education and Preparatory Classes (9 Credits)

ENG 100	Expository Writing
PSY 100	Survey of Psychology
SP 151	Personal and Public Speech
OR SP 181	Interpersonal Communication

Veterinary Assisting Core Classes (22 Credits)

ANSC 140	Introduction to Veterinary Technology & Assisting
ANSC 142	Anatomy & Physiology of Domestic Animals
ANSC 142L	Anatomy of Domestic Animals Laboratory
ANSC 151	Clinical Laboratory Techniques
ANSC 151L	Clinical Laboratory Techniques Laboratory
ANSC 152	Companion Animal Diseases & Nutrition
ANSC 152L	Companion Animal Nursing
BUSN 191	Veterinary Office and Computer Skills
HLTH 125	Survey of Medical Terminology
MATH 101	Mathematics for Veterinary Assistants & Technicians

Year 2: Associate of Science in Veterinary Technology

General Education Classes (3 credits)

Humanities Elective (3 credits)

Veterinary Technology Core Classes (33 Credits)

ANSC 190	Clinical Practices & Internship I
ANSC 251	Pharmacology for Veterinary Technicians
ANSC 252	Diagnostic Imaging for Veterinary Technicians
ANSC 258	Clinical Lab Techniques II
ANSC 261	Anesthesiology & Surgical Nursing for Veterinary Technicians
ANSC 262	Clinical Procedures for Large Animals
ANSC 263	Lab Animal Nursing
ANSC 266	Clinical Practices & Internship II
ANSC 290	Veterinary Technician Exam Review

Academic Subject Certificate

Art: Drawing and Painting



The purpose of this Academic Subject Certificate in Art: Drawing and Painting is to provide pre-professional training for students planning careers in the Visual Arts in the areas of drawing and painting. The certificate would meet the goals of students who plan to (1) transfer to a four-year institution and earn a Bachelor of Fine Arts degree (BFA) and/or, (2) become a professional artist exhibiting in galleries and completing portraiture commissions, and/or, (3) enter a career in commercial art.

Upon successful completion of this certificate, students will be able to:

- Make accurate drawings and paintings from observation.
- Apply the visual elements of line, shape, light and shadow, color, texture, and the design principles of balance, rhythm, focal points, implied movement, and unity in works of art.
- Draw the human figure accurately and expressively.

Exit Portfolio Review

Completion of the Academic Subject Certificate in Art: Drawing and Painting requires a portfolio review. The student must consult with the full-time faculty in drawing and painting in preparation for his or her exit portfolio review. A review committee will be formed consisting of two faculty members in drawing and painting. The portfolio submission will occur in the week following spring break, or at the end of the first Summer Session, if the student completed the Windward Atelier as his or her last studio art course.

The student's exit portfolio must include six to eight drawings and three to four paintings that demonstrate that the student has developed his or her skills in observational and figurative drawing and painting. A student's work must pass the portfolio review in order to receive the Academic Subject Certificate. The portfolio review is the capstone of the Academic Subject Certificate in Art: Drawing and Painting.

The Academic Subject Certificate in Art: Drawing and Painting consists of 21 credits. At least half of the classes must be taken at WCC. See course descriptions for prerequisites.

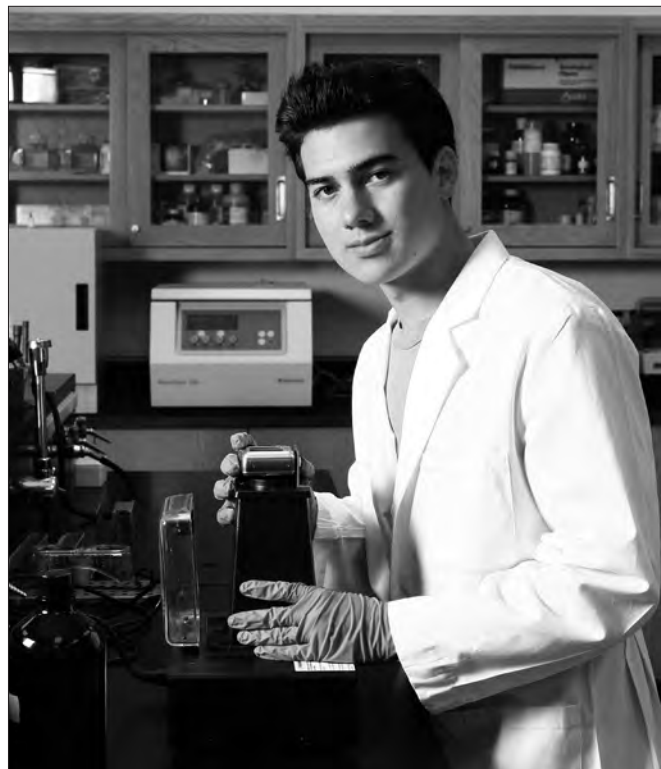
Required Courses

ART 113	Introduction to Drawing (3)
ART 114	Introduction to Color (3)
ART 115	Introduction to 2D Design (3)
ART 123	Introduction to Oil Painting (3)
ART 213	Intermediate Drawing (3)
ART 214	Introduction to Life Drawing (3)
ART 223	OR Intermediate Painting (3)
ART 224	Painting from Life (3)

In addition, the drawing and painting faculty strongly recommend that the student complete:

ART 101	Introduction to the Visual Arts (3)
ART 111	Introduction to Watercolor Painting (3)
ART 270	Introduction to Western Art (3)

Bio-Resource Development and Management



The Academic Subject Certificate in Bio-Resources and Technology: Bio-Resource Development and Management will prepare students for careers in environmental science/studies and qualify them to transfer to Bachelor of Science degree programs. Knowledge and training in Bio-Resource Development and Management will be an asset to the productive and efficient use of natural resources for promoting sustainable management of our environment.

This Certificate consists of 26 credits. See course descriptions for prerequisites.

Upon successful completion of this certificate, students will be able to:

Integrate basic environmental science concepts with traditional and modern resource management practices in recommending environmental management decisions.

- Exhibit best management practices when extracting and utilizing natural resources.
- Design and implement an environmental study.
- Effectively use laboratory and field instrumentation to collect data.
- Analyze and interpret environmental data.
- Write an objective technical report involving the presentation and analysis of environmental data.

Required Courses (14 credits)

BIOL 101*	Biology and Society (4)
GEOG 101**	The Natural Environment (3)
IS 201	The Ahupua'a (3)
BIOL 124***	Environment and Ecology (3)
BIOL 124L***	Environment and Ecology Lab (1)

*BIOL 171/171L & 172/172L (General Biology I & II plus labs; 8 credits total) may replace BIOL 101. BIOL 171/171L & 172/172L are highly recommended for those students intending to major in an environmental science discipline at a four-year institution.

**GG 101 (Introduction to Geology; 4 credits) may replace GEOG 101.

***Students may also replace the BIOL 124/124L requirement with BIOL 172/172L provided they take BIOL 265/265L in Elective Set 2.

Elective Set 1 (6 credits)

Technology, Utilization, and Management

AQUA 106	Small Scale Aquaculture (3)
AQUA 106L	Small Scale Aquaculture Laboratory (1)
AQUA 201	The Hawaiian Fishpond (3)
AQUA 201L	The Hawaiian Fishpond Lab (1)
BOT 105	Ethnobotany (3)
CHEM 151/151L	Elementary Survey of Chemistry/Lab (4)
ENVST 199/299	Independent Study (1-4)
GIS 150	Introduction to GIS/GPS (3)
NREM 250	GIS Application in Environmental Science and Natural Resource Management (2)
OCN 220	Hawai'i Fisheries (3)
ZOOL 105	Hawaiian Use of Fish & Aquatic Invertebrates (3)

Elective Set 2 (6 credits)

Environment and Ecology

BIOL 200	Coral Reefs (3)
BIOL 200L	Coral Reefs Lab and Field Studies (1)
BIOL 265*/265L*	Ecology and Evolutionary Biology/Lab (4)
BOT 130	Plants in the Hawaiian Environment (4)
ENVST 199/299	Independent Study (1-4)
GEOG 101L*	The Natural Environment Lab (1)
GG 103	Geology of the Hawaiian Islands (3)
HIST 285	Environmental History of Hawai'i
OCN 201	Science of the Sea (3)
ZOOL 106	Hawaiian Marine Invertebrates (3)
ZOOL 107	Identification of Hawaiian Fishes (3)
ZOOL 200	Marine Biology (3)
ZOOL 200	Marine Biology Laboratory (1)

*BIOL 265/265L and GEOG 101L are highly recommended for those students intending to enroll in a baccalaureate-level environmental science program.

Plant Biotechnology



The Academic Subject Certificate in Bio-Resources and Technology: Plant Biotechnology will prepare students for careers in biotechnology and qualify them to transfer to Bachelor of Science degree programs. Knowledge in plant biotechnology will be an asset in bioproduct manufacturing, assuring safe food/medicine products.

Upon successful completion of this certificate, students will be able to:

- Cultivate and maintain plant growth.
- Identify plants.
- Achieve fluency in aseptic culture.
- Perform biotech lab activities (genetic engineering, DNA analysis).
- Conduct pharmaceutical and nutraceutical research.
- Apply technology, management, and marketing skills to become a bioprocessing entrepreneur.
- Follow standard ethics and regulations of the biotech profession, biosafety, and intellectual property rights.
- This Certificate consists of 26 credits. See course descriptions for prerequisites.

Required Courses (16 credits)

BOT 101	General Botany (4) OR
BIOL 171/171L	General Biology I and Lab (4)
BOT 160	Identification of Tropical Plants (3) OR
BOT 130	Plants in the Hawaiian Environment (4)
BOT 210	Phytobiotechnology (4) OR
BIOL 275/275L	Cell and Molecular Biology and Lab (4) OR
BOT 205	Ethnobotanical Pharmacognosy (4)
MICRO 130	General Microbiology (3)
MICRO 140	General Microbiology Lab (2)

Electives (10 credits)

AG 149	Plant Propagation (3)
AG 152	Orchid Culture (3)
BIOL 275	Cell and Molecular Biology (3)
BIOL 275L	Cell and Molecular Biology Laboratory (1)
BOT 105	Ethnobotany (3)
BOT 130	Plants in the Hawaiian Environment (4)
BOT 199/299	Independent Study or Summer Field Study Abroad (1-4)
BOT 205	Ethnobotanical Pharmacognosy (4)
CHEM 151 OR CHEM 161	
CHEM 152 OR CHEM 162	
CHEM 151L OR CHEM 161L	
CHEM 152L OR CHEM 162L	
FSHN 185	Human Nutrition (3)
GIS 150	Introduction to GIS/GPS (3)

Academic Subject Certificate

Business

The Academic Subject Certificate in Business is a college credential for students who have completed a specific sequence of credit courses that prepare and qualify them for transfer to a four-year college. This certificate is designed to provide Windward Community College students with recognition for their accomplishments and to also serve as an indication to potential employers that students who have earned an Academic Subject Certificate have specific prerequisite business skills.

Upon successful completion of this certificate, students will be able to:

- Utilize the appropriate computer applications to produce professional-level documents, including electronic spreadsheets, presentations, databases, and web pages to enhance effective communication.
- Understand and apply basic accounting skills such as recording, posting, summarizing, and interpreting financial data of an organization.
- Develop a working understanding of skills required for effective management of a business, including but not limited to communications, administrative, technical, human relations, and problem solving.
- Develop a basic understanding of ethical and moral issues involved in and related to the use of computer technology, the misuse of accounting information, and employment issues of women and other minority groups.

This Certificate consists of 24 credits. The sequence of courses required for the Academic Subject Certificate in Business is designed to provide a foundation in accounting, economics, computer science, and written and oral communications, while also qualifying for articulation as transfer credits to four-year college business degree programs. See course descriptions for prerequisites.

Please note that completing the sequence of courses below does not automatically qualify a student for entrance in a four-year college program. There may be other required courses. See your WCC counselor or check the four-year institution's applicable program requirements or its current catalog.

Required Courses (24 credits)

ACC 201	Intro to Financial Accounting (3)
ACC 202	Intro to Managerial Accounting (3)
ECON 130	Principles of Economics (Microeconomics) (3)
ECON 131	Principles of Economics (Macroeconomics) (3)
ENG 100	Expository Writing (3)
ENG 209	Business Writing (3)
ICS 101	Digital Tools for the Information World (3)
SP 151	Personal and Public Speech (3) OR
SP 251	Principles of Effective Speaking (3)



Hawaiian Studies



The ASC in Hawaiian Studies prepares students for careers in education, the visitor industry, or in fields requiring expertise in Hawaiian subject matter.

Upon successful completion of this certificate, students will be able to:

- Access sources of Information about Hawai'i and Hawaiian Studies.
- Critically analyze information about Hawai'i and Hawaiian Studies.
- Communicate, applying correct Hawaiian pronunciation, spelling, basic phrase and sentence patterns.
- Apply a firm foundation to continued Hawaiian language acquisition.
- Demonstrate a basic understanding of Hawai'i, its natural and social history, and its Hawaiian heritage.
- Identify Hawaiian environmental and community issues and ways to contribute to Hawai'i by applying information and understanding gained from the ASC in Hawaiian Studies.
- Understand, appreciate, articulate, and safeguard Hawai'i, its unique heritage and identity through having attained the ASC in Hawaiian Studies.

This certificate consists of a minimum of 25 total credits with three different areas of emphasis: Language, History/Culture, and Science. See course descriptions for prerequisites.

Required Core Courses for ALL Areas of Emphasis (11 credits)

HAW 101	Elementary Hawaiian I (4)
HAW 102	Elementary Hawaiian II (4)
HWST 107	Hawai'i: Center of the Pacific (3)

Required Courses for Area of Emphasis (6-9 credits)

(Select one Area of Emphasis)

Language (8 credits)

HAW 201	Intermediate Hawaiian I (4)
HAW 202	Intermediate Hawaiian II (4)

Recommended Elective for Language Emphasis

HWST 130	Hula 'Ōlapa: Traditional Hawaiian Dance (3)
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History/Culture (6 credits)

HIST 224/284	History of Hawai'i (3)
HWST 270	Hawaiian Mythology (3) OR REL 205 Understanding Hawaiian Religion (3)

Recommended Electives for History/Culture Emphasis

HWST 130	Hula 'Ōlapa: Traditional Hawaiian Dance (3)
IS 160	Polynesian Voyaging & Seamanship (3)
IS 260	Polynesian Voyaging & Stewardship (3)

Science (9 credits)

BOT 105	Ethnobotany (3)
IS 160	Polynesian Voyaging & Seamanship (3)
IS 260	Polynesian Voyaging & Stewardship (3)

(Continued on following page.)

Recommended Electives for Science Emphasis

ASTR 110	Introduction to Astronomy (3)
BIOL 200	Coral Reefs (3)
BOT 130	Plants in the Hawaiian Environment (4)
BOT 181	Plant Sea Life (4)
GG 103	Geology of the Hawaiian Islands (3)
OCEAN 201	Science of the Sea (3)
ZOOL 107	Identification of Hawaiian Fishes (3)

Electives (5-8 credits)

Any one course can be used only once in each Academic Subject Certificate.

AQUA 201	The Hawaiian Fishpond (3)
AQUA 201L	The Hawaiian Fishpond Lab (1)
ART 189	Ka Unu Pa'a—Introduction to Hawaiian Art & Design (3)
ASTR 110	Introduction to Astronomy (3)
BIOL 200	Coral Reefs (3)
BOT 105	Ethnobotany (3)
BOT 130	Plants in the Hawaiian Environment (4)
BOT 181	Plant Sea Life (4)
GEOG 122	Geography of Hawai'i (3)
GG 103	Geology of the Hawaiian Islands (3)
GG 210	O'ahu Field Geology (1)
GG 211	Big Island Field Geology (1)
GG 212	Maui Field Geology (1)
GG 213	Moloka'i, Lāna'i, and Kaho'olawe Field Geology (1)
GG 214	Kaua'i and Ni'ihau Field Geology (1)
HAW 201	Intermediate Hawaiian I (4)
HAW 202	Intermediate Hawaiian II (4)
HIST 224/284	History of Hawai'i (3)

HWST 115	Mo'okūauhau: Hawaiian Genealogies (3)
HWST 130	Hula 'Ōlapa: Traditional Hawaiian Dance (3)
HWST 131	Hula 'Ōlapa 'Elua: Traditional Hawaiian Dance II
HWST 136	Kālai Lā'au: Hawaiian Woodwork and Wood Carving (3)
HWST 222	Ma'awe No'eu: Hawaiian Fiber Work (3)
HWST 270	Hawaiian Mythology (3)
HWST 275	Wahi Pana: Mythology of the Hawaiian Landscape (3)
HWST 275L	Wahi Pana: Mythology of the Hawaiian Landscape Field Lab (1)
IS 160A/B	Polynesian Voyaging and Seamanship (3)
IS 160L	Polynesian Voyaging and Seamanship Lab (1)
IS 201	The Ahupua'a (3)
IS 260A/B	Polynesian Voyaging and Stewardship (3)
IS 260L	Polynesian Voyaging and Stewardship Lab (1)
MUS 121F	Beginning Slack Key Guitar (1)
MUS 122F	Intermediate Slack Key Guitar I (1)
MUS 121Z	Beginning 'Ukulele (1)
MUS 130F	Slack Key Guitar Ensemble (1)
MUS 177	Introduction to Hawaiian Music (3)
OCN 201	Science of the Sea (3)
OCN 260	Pacific Surf Science and Technology (3)
OCN 260L	O'ahu Surf Science and Technology Lab (1)
POLS 180	Introduction to Hawaiian Politics (3)
REL 205	Understanding Hawaiian Religion (3)
SOC 250	Community Forces in Hawai'i (3)
ZOOL 105	Hawaiian Use of Fish and Aquatic Invertebrates (3)
ZOOL 107	Identification of Hawaiian Fishes (3)

Academic Subject Certificate

Psycho-Social Developmental Studies

The ASC in Psycho-Social Developmental Studies provides pre-professional training for students planning careers in human services (social work, counseling, education, corrections, psychology, and human development). The curriculum combines existing liberal arts courses and cooperative education at designated field sites in partnership with a social service agency or hospital. This certificate is unique because of the linkage and collaboration with liberal arts courses (interdisciplinary).

Upon successful completion of this certificate, students will be able to:

- Communicate effectively via writing, speaking and non-verbal cues.
- Manage a group by supervising, negotiating, evaluating others, fostering teamwork and open communication.
- Operate a computer to manage records, communicate, and gather information.
- Interact effectively and ethically one-on-one or in a group, show good listening skills, empathy, and problem-solving.

To earn the PSDS Academic Subject certificate, students must complete a total of 27 credits with a cumulative

grade point average of 2.0 or better for all required courses. Twelve credits, including SSCI 193V and SSCI 293V must be taken at Windward Community College. See course descriptions for prerequisites.

Required Courses (24 credits)

PSY 100	Survey of Psychology (3)
PSY 170	Psychology of Adjustment (3) OR
SOC 218	Introduction to Social Problems (3) OR
SOC 231	Introduction to Juvenile Delinquency (3)
PSY 224	Abnormal Psychology (3)
PSY 240	Developmental Psychology (3) OR
FAMR 230	HUMAN DEVELOPMENT
SOC 100	Survey of General Sociology (3)
SOC 251	Introduction to Sociology of the Family (3)
SSCI 193V	Cooperative Arts & Science Education (3)
SSCI 293V	Cooperative Arts & Science Education (3)

Electives (3 credits)

Select one course from the list below:

ANTH 200	Cultural Anthropology (3)
BOT 105	Ethnobotany (3)
ICS 100	Computing Literacy and Applications (3)
POLS 180	Introduction to Hawaiian Politics (3)

Certificate of Achievement

Agripharmatech

Effective Spring 2013, pending ACCJC approval.



The Certificate of Achievement in Agripharmatech is organized in two tracks: Plant Biotechnology and Ethnopharmacognosy. Each track consists of 30-32 credits, and requires a unique capstone class (see table below). The plant biotechnology track deals with developing and improving plant production in order to supply the world's need for healthier (decreased use of pesticides) and more nutritious food crops, novel ornamentals, and plant-derived pharmaceuticals. Ethnopharmacognosy is the study of traditional medicines derived from natural sources (medicinal/nutritious plants). Students will be able to complete the certificate in 2-3 semesters with coursework flexible enough to prepare them for employment in agricultural biotechnology or pharmacognosy, for entrepreneurship in agribusiness or plant-based product manufacturing, and for seamless credit transfer to higher degree institutions for the study of agriculture, pharmacy, and related disciplines.

After completing the program, students will be able to:

- Apply knowledge gained in plant sciences: identify plants, propagate/cultivate/maintain plants in vivo and in vitro.
- Apply knowledge gained in microbial sciences: prepare/maintain bacterial cultures for genetic transformation and bioassay tests
- Conduct plant biotech and/or pharmacognosy research.

In addition, students opting for the biotechnological track will focus on plant molecular genetics, and will:

- Operate specialized lab equipment such as autoclave, gel electrophoresis, PCR machine, Particle Deliver/1000 Helium System, spectrophotometer, fluorescent microscope, Gel Doc System
- Perform DNA/RNA extraction, electrophoresis, PCR reaction, DNA sequencing, gene transformation via bacteria, and particle bombardment, alignment and analyzing DA sequence results using Sequencher, PAUP, Finch TV software systems

Students opting for the ethnopharmacognosy track will focus on plant pharmacognostical study, and will:

- Operate laboratory equipment: autoclave, spectrophotometer, stereo microscope, anaerobic transfer chamber, rotary evaporator, distiller, Biacore Q system
- Conduct pharmaceutical and nutraceutical research

Capstone (4 credits)

Plant Biotechnology:

BOT 210 Phytobiotechnology

Ethnopharmacognosy:

BOT 205 Ethnobotanical Pharmacognosy

Required Courses (18-19 credits)

AG 152 Orchid Culture (3)
 MICRO 130 General Microbiology (3)
 MICRO 140 General Microbiology Lab (2)
 MATH 103 College Algebra (4) or equivalent
 ENG 100 Expository Writing (3)
OR SP 151 Personal and Public Speech (3)
 BOT 160 Identification of Tropical Plants (3)
OR BOT 101 General Botany (4)
OR BIOL 172/L General Biology II/L (4)

Electives (8-9 credits)

Plant Biotechnology:

CHEM 161/L General Chemistry I/L (4)
 CHEM 162/L General Chemistry II/L (4)
 BIOL 171/L General Biology I/L (4)
 BOT 199/299* (1-4)

Ethnopharmacognosy:

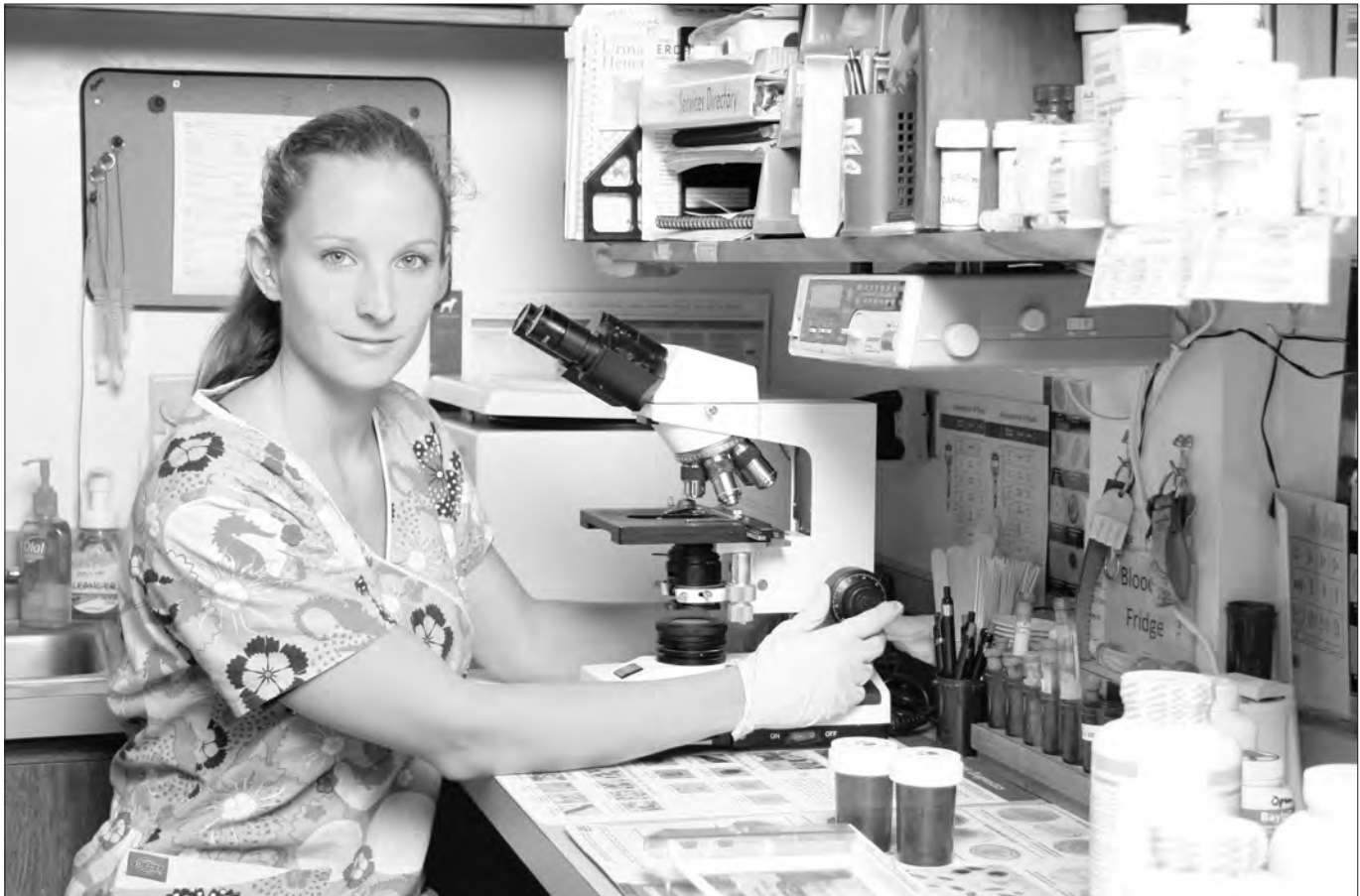
CHEM 161/L General Chemistry I/L (4)
 BOT 105 Ethnobotany (3)
 BOT 130 Plants in the Hawaiian Environment (4)
 AG 149 Plant Propagation (3)
 FSHN 185 Human Nutrition (3)
 BOT 199/299** (1-4)

*involves plant biotechnology research

**involves pharmaceutical/nutraceutical research

Certificate of Achievement

Veterinary Assisting



The Certificate of Achievement in Veterinary Assisting is designed to provide students with the basic knowledge and skills required to perform effectively as an assistant in a veterinarian's office, animal shelter or animal research facility. The two-semester program includes coursework in the physical and life sciences as well as hands-on experience through internships at local veterinary clinics.

Upon successful completion of this certificate, students will be able to:

- Effectively communicate with clients and veterinary staff
- Schedule appointments and generate invoices
- Demonstrate proper patient restraint and safety procedures
- Conduct routine physical exams and obtain patient histories
- Assist with surgical procedures and dental cleanings
- Calculate dosages and administer medications
- Collect blood samples and perform diagnostic laboratory tests

Required Courses (31 credits)

ANSC 141	Introduction to Veterinary Technology (3)
ANSC 142	Anatomy and Physiology of Domestic Animals (3)
ANSC 142L	Anatomy of Domestic Animals Laboratory (1)
ANSC 151	Clinical Laboratory Techniques (3)
ANSC 151L	Clinical Laboratory Techniques Laboratory (1)
ANSC 152	Companion Animal Diseases and Nutrition (3)
ANSC 152L	Companion Animal Nursing (1)
BUSN 191	Veterinary Office and Computer Skills (3)
ENG 100	Expository Writing (3)
HLTH 125	Survey of Medical Terminology (1)
MATH 101	Mathematics for Veterinary Assisting (3)
PSY 100	Survey of Psychology (3)
SP 151	Personal and Public Speech (3)

See course descriptions for prerequisites.

Plant Landscaping and/or Agricultural Technology



The curriculum is designed for students desiring entry-level employment or to enhance their skills in the field of plant landscaping (landscape maintenance, turfgrass maintenance, nursery operations, and/or retail plant outlets). All courses are taught with a “hands-on, learn-by-doing” philosophy. Students are expected to make sound decisions about real life horticultural and environmental situations. The Certificate of Completion in Plant Landscaping consists of 16 credits. Students must complete 12 credits of required courses and select a 4-credit area of specialization (Landscape Maintenance and/or Turfgrass Maintenance).

The Certificate of Completion in Agricultural Technology consists of 15 credits. Students must complete 10 credits of required courses and select 5 credits of electives. See course descriptions for prerequisites.

At the conclusion of the program, students will be able to:

- Describe common plant and insect life cycles; understand basic plant nutritional requirements and plant propagation techniques
- Demonstrate landscape maintenance skills or turfgrass maintenance skills
- Recommend common controls for plant pests
- Properly manage soil for plant growth
- Operate common landscape and turfgrass equipment

Required courses for both Certificates (7 credits)

AG 20 **OR** AG 120 Plant Science (3)
AG 32B/C/D **OR** Plant Disease & Pest Control (3)
AG 132 Integrated Pest Management (3)
AG 36 Pesticide Safety (1)

Plant Landscaping (CCPL)

Additional requirements for Certificate of Completion Required courses (5 credits)

AG 45 **OR** AG 235 Irrigation Principles & Design (3)
AG 93V Cooperative Education (1)
AG 100 AG Orientation: Careers (1)

Area of Specialization:

Select one (1) of the two (2) pairs of classes below (4 credits)

Landscape Maintenance

AG 44 Landscape Equipment (1)
AG 80 **OR** AG 180 Landscape Maintenance (3)

AND/OR

Turfgrass Maintenance:

AG 40 Turfgrass Equipment (1)
AG 82 **OR** AG 182 Turfgrass Management (3)

Agricultural Technology

Additional Requirements for Certificate of Completion Required course (3 credits)

AG 49 **OR** AG 149 Plant Propagation (3)

Electives: Select from the list below. (5 credits)

AG 45 **OR** AG 235 Irrigation Principles & Design (3)
AG 52 **OR** AG 152 Orchid Culture (3)
AG 92 Special Topics (1-4)
AG 93V Cooperative Education (1-4)
AG 100 AG Orientation: Careers (1)

Subtropical Urban Tree Care



The Certificate in Subtropical Urban Tree Care is a 12–14-credit educational program for people who want to learn more about tree care and get involved in an emerging green industry. This is hands-on education with lots of tree touching. Completion of this program will help prepare students for the International Society of Arboriculture certification exams. See course descriptions for prerequisites.

Windward Community College has the only accredited educational program to learn how to care for our Island trees. Graduates can start earning between \$11 and \$25 per hour for helping to protect some of our island assets and enhancing our environment.

After completing the Arborist program, students will be able to:

- Describe tree anatomy and physiology
- Identify and characterize tree species on the Hawai'i ISA list
- Recommend tree preservation techniques during construction
- Use ISA pruning standard ANZI A300
- Apply ANSI Z133.1 and OSHA safety standards
- Assess trees for risk
- Select and use tree pruning and felling equipment

Students completing the Tree Worker program will:

- Describe tree anatomy and physiology

- Identify and characterize tree species on the Hawai'i ISA list
- Use ISA pruning standard ANSI A300
- Apply ANSI Z133.1 and OSHA safety standards
- Select and use tree pruning and felling equipment
- Climb a tree with rope and saddle

Required Courses

Arborist Focus

- AG 20 / AG 120 Plant Science (3 credits)
- AG 32B/C/D **OR** Plant Disease and Pest Control (3 credits total)
- AG 132 Integrated Pest management (3)
- AG 93V Cooperative Education (1 credit)
- AG 155 Subtropical Arboriculture (3 credits)
- AG 156 Tree Risk Assessment (3 credits)
- AG 158 Tree Pruning and Felling Equipment (1 credit)

Tree Worker Focus

- AG 20 / AG 120 Plant Science (3 credits)
- AG 32B/C/D **OR** Plant Disease and Pest Control (3 credits total)
- AG 132 Integrated Pest management (3)
- AG 93V Cooperative Education (1 credit)
- AG 155 Subtropical Arboriculture (3 credits)
- AG 158 Tree Pruning and Felling Equipment (1 credit)
- AG 159 Tree Climbing (1 credit)

Certificate of Completion

Marine Option Program



The Marine Option Program (MOP), offered through UH-Mānoa, is designed to assist undergraduate and other students interested in marine and freshwater systems. Through MOP, you can obtain a marine orientation to your own major while earning an official University of Hawai'i Certificate, which is registered on your transcript.

MOP emphasizes experiential, cross-disciplinary education and provides opportunities to apply your traditional coursework to the real world while you obtain practical marine skills through a hands-on internship, research project, or employment.

A certificate issued by the University of Hawai'i at Mānoa is awarded to students who successfully complete at least 10 credit hours of marine-related courses (1-credit OCN 101, 3-credits OCN 201 or ZOOL 200, 6 credits marine electives) and the MOP skill project. The unique MOP skill project (2 or more credits, e.g., Academic Independent Study 199) allows students to design and conduct an independent aquatic project related to their academic field of interest or educational goals. At WCC, MOP is managed by the Pacific Center for Environmental Studies (PaCES).

For information about the program, contact the Windward MOP Coordinator at 808-235-9118 or visit the MOP Office in Hale 'Imiloa 118, or e-mail wccmop@hawaii.edu, or visit the Web site: wcc.hawaii.edu/MOP/.

Certificate of Competence

Business Technology



The Certificate of Competence in Business Technology provides students with a certificate that combines career-search skills with basic clerical skills, allowing graduates to qualify for entry-level clerical positions. This five-credit certificate responds to the newly-common business practice of requiring job applicants to apply online, or to download or e-mail applications. It also provides students with basic computer and telephone skills common to contemporary clerical work. Upon completing the certificate, students will be able to use current and emerging

technologies effectively to create and manage documents; communicate clearly and effectively through oral and written interactions, complying with standard office etiquette; and apply appropriate strategies to secure employment.

Required Courses:

BUSN 121	Introduction to Word Processing (3)
BUSN 160	Telephone Techniques and Communications (1)
BUSN 166	Professional Employment Preparation (1)

Certificate of Competence

Geographic Information System and Global Positioning System

GIS/GPS certifies that a student has successfully completed two GIS/GPS courses. These courses will provide a student with job entry level skills in GIS/GPS, or an opportunity for job upgrading.

Upon successful completion of this certificate, students will be able to:

- Use basic ArcGIS desktop software functions such as displaying, modifying, and analyzing maps
- Independently plan, organize, and present a GIS research project

- Use a GPS unit to find locations, and import obtained GPS data into ArcGIS for further investigation

Required Courses (5 credits)

GIS 150	Introduction to GIS/GPS (3)
NRM 250	GIS application in Environmental Science and Natural Resource management (2)
<u>OR</u> GIS/NREM 199/299	Independent Study (2)

See course descriptions for prerequisites.

Certificate of Competence

Information Computer Science: Applied Business and Information Technology

The Certificate of Competence in Applied Business and Information Technology (ABIT) is a competency based program designed for the novice or professional information worker. This certificate is appropriate for upgrading the information skills of industry members or for administrative support professionals.

Upon successful completion of this certificate, students will be able to:

- Develop advanced skills in Industry-standard computer programs
- Integrate Web technologies into business applications to modernize information technology skills
- Integrate design elements in publications and Web projects

The Certificate can be earned separately or In conjunction with the Business Academic Subject Certificate at Windward Community College. Students who choose to obtain a four-year degree can transfer to UH Maui College for upper division coursework to obtain a bachelor's degree in Applied Science (BAS)

Required Courses (9 credits)

ICS 101 Digital Tools for the Information World (3)
ICS 115 Microcomputer Applications (3)
ICS 214 Fundamentals of Design for Print and Web (3)
See course descriptions for prerequisites.



Certificate of Competence

Information Computer Science: Web Support

The Certificate of Competence in Web Support is a competency based program designed for the novice or professional information worker who has little to no experience in Web support. This certificate is appropriate for upgrading the Web skills of industry members or for administrative support professionals.

Upon successful completion of this certificate, students will be able to:

- Design a professional website with Web tools

- Upload the website with interactive components
- Modify and update the website and add new components as needed
- Develop and produce a published product

Required Courses (9 credits)

ICS 107 website Development (3)
ICS 123 Introduction to Audio and Video Editing (3)
ICS 214 Fundamentals of Design for Print and Web (3)
See course descriptions for prerequisites.

Course Descriptions



The following pages list courses of instruction. Courses may not be offered every semester; students should refer to the Schedule of Classes prior to registration. Changes, additions, or deletions may be necessary, and when possible, advance notice will be given.

Credit

The number of credits of each course is indicated by a number in parentheses following the title of each course.

Windward Community College Articulation Codes

FW	Written Communication
FS	Symbolic Reasoning
FGA	Global & Multicultural Perspectives, Group A
FGB	Global & Multicultural Perspectives, Group B
FGC	Global & Multicultural Perspectives, Group C
OC	Oral Communications
DA	Arts
DH	Humanities
DL	Literatures
DS	Social Sciences
DB	Biological Science
DP	Physical Science
DY	Laboratory Science

Course Numbering

Each course is designated by an abbreviation which stands for the subject area of the course, followed by a number.

- Courses numbered from 1-99 are generally not applicable for credit toward a baccalaureate degree but some are applicable to certificates.
- Courses numbered from 100-199 are initial or introductory courses.
- Courses numbered from 200-299 are generally second-year courses in a sequence or development within a field of study.
- Undergraduate courses ending in -97 or -98 are experimental courses and will be offered for only one year on this basis.
- Courses ending in -99 are independent study courses such as directed reading, research or field work experience.
- The suffix “L,” when used, designates a laboratory course which is a companion course (whether required or not) to a given lecture course.
- The suffix “V,” when used, designates variable credit. The credit to be earned is arranged with the instructor by each student at the time of registration.
- The suffix “WI,” when used in the class schedule, designates a Writing Intensive course.

Accounting

ACC 201 Introduction to Financial Accounting (3)

Introduction to accounting theory and methods used to record and report financial information according to generally accepted accounting principles. (3 hours lecture)

The student learning outcomes are:

- Describe and understand the nature, environment and role of accounting as it relates to individuals, business organizations, and the business community.
- Analyze, record and report the business activities and transactions of a service and/or merchandising type organization using GAAP.
- Understand and describe what internal controls are, including its basic components and limitation, and apply internal control activities in the control of cash and merchandising transactions.
- Apply generally accepted accounting principles (GAAP) in accounting for financial assets and liabilities including, but not limited to, short term financial assets, inventories, long-term assets, and current liabilities.

ACC 202 Introduction to Managerial Accounting (3)

Introduction to practices and procedures used to report internal operations to management. Topics include manufacturing operations, budgeting, standard costing, cost-volume-profit analysis, job and process costing, statement of cash flows, and financial statement analysis. (3 hours lecture)

Prerequisite: ACC 201 with a grade of "C" or better or equivalent or consent of instructor.

The student learning outcomes are:

- Analyze, record, and report equity and long-term liability transactions related to partnerships and corporations from both an issuer and investor perspective using GAAP.
- Prepare and analyze the Statement of Cash Flows.
- Analyze financial statements using horizontal analysis, vertical analysis, and financial statement ratio techniques.
- Describe the concepts of managerial accounting and explain how they are applied to various business models.
- Analyze, record, and report the activities of a manufacturing company using process cost, job order cost, and standard cost accounting systems.
- Prepare information and reports that may be used by management to plan, direct, motivate, and control a business using Cost-Volume-Profit analysis, incremental analysis, and operational and capital budgeting techniques.

Agriculture

AG 20 Plant Science (3)

The study of plant morphology, anatomy, physiology, classification, growth, growth regulators, and propagation. (2 hours lecture, 2 hours laboratory)

The student learning outcomes are:

- Describe and explain general plant structure and function in relation to plant growth and development.
- Demonstrate knowledge of horticultural principles in the cultivation of plants.

- Examine commercial agricultural enterprises for to become familiar with employment opportunities and the impact of horticulture on our lives.

AG 36 Pesticide Safety (1)

Pesticide application, formulation, toxicity, transportation, storage, safety equipment, disposal, and rules and regulations governing pesticide use. (1 hour lecture)

The student learning outcomes are:

- Select proper pesticide application equipment.
- Identify pesticides according to what they control.
- State the general rules and regulations governing the use of pesticides.

AG 40 Turfgrass Equipment (1)

Teaches the operation and maintenance of equipment used in turfgrass operations. (2 hours lecture/lab)

Prerequisite: Credit for or registration in AG 82 or AG 182 or consent of instructor.

The student learning outcomes are:

- Select the proper tool for the job.
- Demonstrate the effective use of the tool.
- List the advantages and disadvantages of various engine types.

AG 44 Landscape Equipment (1)

Teaches the operation and maintenance of equipment used in landscape operations. (2 hours lecture/lab)

Prerequisite: Credit for or registration in AG 80 or AG 180 or consent of instructor.

The student learning outcomes are:

- Select the proper tool for a job.
- Demonstrate the safe and effective use of the tool.

AG 49 Plant Propagation (3)

Introduction to the principles and practices of propagation of fruit, vegetable and ornamental crops by seed, cuttings, grafting, budding, layering and division. Lecture/laboratory/field trip course. (2 hours lecture, 3 hours laboratory)

The student learning outcomes are:

- Describe basic plant growth.
- Relate the principles of plant growth to the solution of everyday problems in plant production.
- Understand the influence of environmental factors on plant growth.
- Propagate plants by various methods.

AG 52 Orchid Culture (3)

An extensive study of orchid identification, breeding, growth, and culture. (3 hours lecture)

The student learning outcomes are:

- Identify orchid species, hybrids and trace their pedigrees.
- Provide cultural requirements for each genus, including temperature, light intensity, humidity, watering, fertilizing, media composition, pest/disease control and repotting.
- Perform traditional and in vitro propagation techniques.
- Perform orchid breeding and discuss its economic importance.

Course Descriptions

AG 80 Landscape Maintenance (3)

Application of horticultural principles and practices to the maintenance of plants in the landscape. Emphasis on trees, shrubs, and annuals. (2 hours lecture, 2 hours laboratory)

Prerequisite: Credit for AG 20 or AG 120 or equivalent or consent of instructor.

The student learning outcomes are:

- Sketch a landscape plan.
- Install and maintain plants in a landscape.
- Identify common plants found in a landscape.

AG 82 Turfgrass Management (3)

Identification, planting, and maintenance of turfgrass for home, park, and golf areas. Discusses watering, fertilizing, insects, disease, and weed control in turfgrass. (2 hours lecture, 2 hours laboratory)

Prerequisite: Credit for or registration in AG 20 or AG 120 or consent of instructor.

The student learning outcomes are:

- Identify turf grasses found in Hawai'i.
- Select the proper turf for a site.
- Describe and perform maintenance practices in a golf course situation.

AG 92V Special Topics (1-4)

This course covers current agricultural topics. The course is designed to have variable credits to coincide with the rigor of the topics. A student may enroll and receive credit for this course more than one time (for different topics). A specific course description will be printed in the schedule of classes. (14 hours lecture, 18 hours lecture/lab)

Prerequisite: Determined by course.

The student learning outcomes are:

- To be determined by the instructor.

AG 93V Cooperative Education (1-4)

This course provides college credit for compensated work experience to reinforce knowledge and skills learned in coursework for the Agricultural Technology Program. Related instruction may be provided as appropriate. Seventy-five hours of work per semester is required for each credit earned. Repeatable to a total of 4 credits that may be applied to the AA degree, 1 credit applicable toward Certificate of Completion.

Prerequisite: Open to Agriculture majors only. Instructor's permission is required.

The student learning outcomes are:

- Demonstrate the utilization of course work in the field.

AG 100 Agriculture Orientation: Careers (1)

Familiarizes students with different agricultural operations in Hawai'i through lectures, guest speakers and fieldtrips. (1 hour lecture)

The student learning outcomes are:

- Describe various careers in agriculture.
- Identify positive and negative aspects of various agriculture careers.

AG 120 Plant Science (3)

The study of plant science, morphology, anatomy, physiology classification, growth, growth regulators, and propagation. Students are required to write a 10 to 15 page research report. (2 hours lecture, 2 hours lecture/laboratory)

DB

The student learning outcomes are:

- Describe and explain general plant structure and function in relation to plant growth and development.
- Demonstrate knowledge of horticultural principles in the cultivation of plants.
- Examine commercial agricultural enterprises for to become familiar with employment opportunities and the impact of horticulture on our lives.
- Research and report on a horticultural plant.

AG 132 Integrated Pest Management (3)

Strategies of integrated pest management; biological and cultural pest controls, weed control, disease control, insect control. (3 hours lecture)

The student learning outcomes are:

- Identify major insects, weeds, diseases that are detrimental to the horticulture industry in Hawai'i.
- Define Integrated Plant Management and develop an IPM plan.
- Understand and use economic thresholds.
- Identify common predators and parasites.
- Identify management strategies to reduce pest pressures on plants.

AG 149 Plant Propagation (3)

Introduction to the principles and practices of propagation of fruit, vegetable, and ornamental crops by seed, cuttings, grafting, budding, layering and division. (3 hours lecture)

Recommended Preparation: 12th Grade reading level.

The student learning outcomes are:

- Describe basic plant growth.
- Relate the principles of plant growth to the solution of everyday problems in plant production.
- Understand the influence of environmental factors on plant growth.
- Propagate plants by various methods.
- Determine the best form of propagation for a selected plant.

AG 152 Orchid Culture (3)

An extensive study of orchid identification, breeding, growth, and culture. Students are required to write a 10 to 15 page research report. (3 hours lecture)

The student learning outcomes are:

- Identify orchid species, hybrids and trace their pedigrees.
- Provide cultural requirements for each genus, including temperature, light intensity, humidity, watering, fertilizing, media composition, and pest or disease control and repotting.
- Perform traditional and in vitro propagation techniques.
- Perform orchid breeding and discuss its economic importance.
- Conduct research and submit research paper.

Course Descriptions

AG 155 Subtropical Arboriculture (3)

The introduction of arboriculture and the care of community trees. This is a balanced course of practical skills and scientific tree care. (3 hours lecture)

Prerequisite: Credit for AG 20 or AG 120 or equivalent or consent of instructor.

The student learning outcomes are:

- Identify and describe the characteristics of tree species on the Hawai'i ISA list.
- Describe tree anatomy and physiology.
- Recommend techniques of tree preservation during construction.
- Use ISA standards (ANSI A300) when pruning trees.

AG 156 Tree Risk Assessment (3)

This is an introductory course in the evaluation of hazard trees. It is intended for those students interested in pursuing careers in arboriculture. (3 hours lecture)

Recommended Preparation: AG 155.

The student learning outcomes are:

- Perform tree site inspections.
- Perform tree inspections.
- Document tree risk hazards.

AG 158 Tree Pruning and Felling Equipment (1)

An introduction to the arboriculture uses of pruning and felling equipment. Safety and efficient use are emphasized. (2 hours lecture/laboratory)

The student learning outcomes are:

- Operate a chain saw using ISA ANSI Z133.1 standards.
- Select the correct tool for the task.

AG 159 Tree Climbing (1)

An introduction to tree climbing using ropes and tree maintenance equipment in and around trees. (3 hours laboratory)

Prerequisite: Credit for AG 155 or consent of instructor. *Physical and mental capacity to climb trees using ropes.*

The student learning outcomes are:

- Ascend a tree with ropes to a minimum of 15 feet.
- Use ISA standards to prune a tree while attached to a rope.

AG 170 Introduction to Aquaponics (4)

The course covers aquaculture, hydroponics, aquaponics, sustainable aquatic feed production, renewable local seeding technologies and micronutrient supplementation, fish and plant physiology, renewable energy systems, water catchment and conservation techniques, and best aquaponic food safety practices. The basic physical and biological principles governing sustainable farm and agribusiness operations are emphasized. (3 hours lecture; 3 hours lab)

Recommended Preparation: AG 120 and IS 201.

The student learning outcomes are:

- Design and construct a basic aquaponic system that uses all three growout technologies (nutrient film technique, ebb and flow, and floating raft) either alone or in combination.
- Apply best aquaculture practices for culturing fishes in an aquaponic setting.

- Identify the water quality parameters and manage them in order to maximize fish, plant and microbial outputs in an aquaponic setting.
- Use best agricultural practices for plant crop production in an aquaponic setting. Prepare seedlings for planting, harvest produce, stagger production of both plant and fish, and apply food safety procedures.

AG 180 Landscape Maintenance (3)

Application of horticulture practices to the maintenance of plants in the landscape. Emphasis on trees, shrubs, and annuals. Students are required to write a 10 to 15 page research report. (2 hours lecture, 2 hours laboratory)

Prerequisite: Credit for AG 20 or AG 120 or consent of instructor.

The student learning outcomes are:

- Sketch a landscape plan.
- Install and maintain plants in a landscape.
- Identify common plants found in a landscape.
- Research and report on a landscape topic.

AG 182 Turfgrass Management (3)

Identification, planting, and maintenance of turfgrass for home, park, and golf course areas. Discusses irrigation, fertilization, cultivars, and pest control. Students are required to write a 10 to 15 page research report. (2 hours lecture, 2 hours laboratory)

Prerequisite: Credit for AG 20 or AG 120 or consent of instructor.

The student learning outcomes are:

- Identify turf grasses found in Hawai'i.
- Select the proper turf for a site.
- Describe and perform maintenance practices in a golf course situation.
- Research and report on a turf grass topic.

AG 192V Special Topics in Agriculture (1-4)

Topics related to diversified agriculture chosen by the Instructor. Course content may vary. May be repeated. (1 to 4 hours lecture)

The student learning outcomes are:

- Identify the important concepts and facts presented for the topic(s) under examination.
- Make inferences and draw conclusions from the topic(s) under discussion.
- Develop skills appropriate to the topic(s) under discussion.
- Gain a higher appreciation for the human endeavor of agriculture.
- Gain a higher awareness of the potential career paths that this special topic course in agriculture covers.

AG 235 Irrigation Principles and Design (3)

Fundamentals of irrigation principles, plant, soil, water relationships, soil moisture sensing devices, delivery systems, set up of drip, sprinkler, and surface irrigation systems. Use of chemigation. (3 hours lecture)

Recommended Preparation: Math 22 or higher.

The student learning outcomes are:

- Determine water requirements for plant growth.
- Describe soil water concepts.

Course Descriptions

- Select the appropriate irrigation method and components for the situation.
- Design a basic drip and sprinkler irrigation system.
- Trouble shoot irrigation problems.

Animal Sciences

ANSC 140 Introduction to Veterinary Technology (3)

This course introduces students to the field of veterinary technology and describes the responsibilities and expectations for students enrolled in the program. Topics include: roles of the veterinary team members, legal and ethical aspects of veterinary practice, breeds of companion animals, safety, sanitation and waste-disposal protocols, and career fields in veterinary medicine. (3 hours lecture)

The student learning outcomes are:

- Describe the roles and legal boundaries of veterinary health care team members and discuss the legality of the veterinary-client-patient relationship.
- Create and maintain facility records and maintain compliance with appropriate regulatory agencies.
- Identify and describe common workplace hazards, including zoonotic diseases.
- Establish and maintain appropriate sanitation, nosocomial, and waste-disposal protocols.
- Identify common breeds of companion animals.

ANSC 142 Anatomy and Physiology of Domestic Animals (3)

Introduction to the anatomy and physiology of domestic animals. Compares the anatomy and function of major body systems for the cat, dog and horse, with lesser emphasis on birds, reptiles and amphibians. This course is intended for students entering veterinary technology, veterinary assisting or other animal-related fields. (3 hours lecture)

Prerequisite: Credit for or registration in ANSC 142L.

DB

The student learning outcomes are:

- Discuss the chemical building blocks of major biological molecules.
- Describe the link between cells, tissues, organs, and organ systems.
- Contrast the structure and function of major body systems (e.g., skeletal, circulatory, respiratory, and reproductive) among companion animals and selected livestock species.
- Explain how disease and disorders disrupt the homeostasis of each of the above body systems and discuss how common veterinary medical treatments are used to restore homeostasis.

ANSC 142L Anatomy of Domestic Animals Laboratory (1)

Laboratory to accompany ANSC 142. This course is designed to acquaint the student with the body systems of common domestic species (e.g., cats, dogs, horses and birds) through dissections, examinations of models, laboratory exercises, and other hands-on activities. This course is intended for students entering veterinary technology, veterinary assisting or other animal-related fields. (3 hours laboratory)

Prerequisite: Credit for or registration in ANSC 142.

DY

The student learning outcomes are:

- Identify and describe the anatomy of the major body systems for cats, dogs and horses using prepared slides, skeletons, models and dissections.
- Use standard anatomical terms to describe body directions, regions and sectioning planes.
- Recognize common domestic breeds of cats and dogs.
- Identify major anatomical landmarks used to assess patient health during physical exams.
- Demonstrate proficiency at the use of the microscope as a clinical instrument.

ANSC 151 Clinical Laboratory Techniques (3)

Provides students with the background knowledge needed to perform and interpret laboratory techniques commonly used in veterinary practice. Topics include: Homeostatic relationships, cytology, histology, parasitology and clinical physiology of major body systems. Includes a discussion of common disorders affecting major body systems and the techniques used for diagnosis. This course is intended for students entering veterinary technology, veterinary assisting or other animal-related fields. (3 hours lecture)

Prerequisite: Credit for ANSC 142 and 142L and credit for or registration in ANSC 151L.

DB

The student learning outcomes are:

- Describe the procedures for safely collecting specimens from domestic animals.
- Identify internal and external parasites common to domestic mammals and birds.
- Discuss the procedures used to culture and identify common strains of bacteria.
- Describe the functions and physiology of the digestive, endocrine, circulatory, respiratory, reproductive and urinary systems.
- Discuss the clinical tests used to assess function of the above body systems.
- Compare the technologies used by automated hematology and blood chemistry machines and discuss their impacts on the accuracy and reliability of test results.
- Recognize accurate vs. erroneous results in order to provide maximum diagnostic benefit.

ANSC 151L Clinical Laboratory Techniques Lab (1)

Laboratory to accompany ANSC 151. Provides students with the knowledge and skills necessary to perform common veterinary lab tests including urinalysis, hematology, blood chemistry, cytology and parasitology. This course is intended for students entering veterinary technology, veterinary assisting or other animal-related fields. (3 hours laboratory)

Prerequisite: Credit for ANSC 142 and 142L, credit for or registration in ANSC 151.

DY

The student learning outcomes are:

- Properly package, handle and store specimens for laboratory analysis.

Course Descriptions

- Demonstrate proficiency in the use of veterinary lab equipment (e.g. microscopes, blood chemistry analyzers, centrifuges, and refractometers).
- Determine proper maintenance and quality control procedures necessary to ensure accurate results.
- Properly carry out analysis of laboratory specimens, including urinalysis, CBC, blood chemistry and common cytological and parasitological procedures.
- Use critical thinking to analyze and interpret clinical data to determine if a need exists for additional laboratory tests that will provide useful diagnostic information.

ANSC 152 Companion Animal Diseases and Nutrition (3)

An introduction to the husbandry and medical care of companion animals. Topics include canine and feline life cycles (including breeding, pregnancy and parturition), housing and nutritional needs, exam procedures and medical recording, nursing and wound management, and identification and treatment of common diseases. This course is intended for students entering veterinary technology, veterinary assisting, or other animal-related fields. (3 hours lecture)

Prerequisite: Credit for ANSC 142 and ANSC 142L

The student learning outcomes are:

- Discuss energy and nutrient requirements for various life stages of companion animals and list substances that, when ingested, result in toxicity.
- Describe the importance of obtaining a complete patient history and performing a thorough physical exam.
- Describe how to perform various companion animal nursing procedures, including wound and abscess management.
- List the clinical signs and tests used in the diagnosis of common companion animal diseases.
- Describe the medical treatments for common companion animal diseases.

ANSC 152L Companion Animal Nursing (1)

This course provides students with hands-on training in basic companion-animal exam and nursing skills. Topics include: animal restraint methods, medical charting and patient exam procedures, specimen collection, administration of medications, grooming and husbandry. This course is intended for students entering veterinary technology, veterinary assisting or other animal-related fields. (3 hours laboratory)

Prerequisite: Credit for or registration in ANSC 152

The student learning outcomes are:

- Safely and effectively restrain companion animals.
- Gather subjective and objective patient information efficiently.
- Perform venipuncture and collect diagnostic samples of skin, blood, urine, and feces.
- Perform basic grooming such as bathing, nail trims, and ear cleaning.
- Apply emergency splints and bandages & administer medications by various routes (IV, IM, SQ, & PO).

ANSC 190 Veterinary Clinical Practices & Internship I (4)

Practical animal experience at veterinary clinics, zoos, research labs or other animal facilities. Topics covered may include restraint procedures, vein puncture, vital signs assessment, radiological techniques, veterinary business and front-office procedures, routine nursing care and animal husbandry. This course is intended for students entering veterinary technology, veterinary assisting or other animal-related fields (4 credits: 3 hours laboratory, 9 hours internship). Students participating in ANSC 190 are required to show proof of current health insurance and obtain a professional liability policy through their internship supervisor. (4 credits: 3 hours laboratory, 9 hours internship.)

Prerequisite: Permission of instructor.

The student learning outcomes are:

- Demonstrate proper patient restraint and safety procedures.
- Determine the breed and sex of patient and obtain a patient history.
- Properly collect a venous blood sample from multiple collection sites (e.g., cephalic and jugular veins) for a minimum of two species.
- Obtain objective patient data (e.g., temperature, pulse, respiration rate, hydration status, and auscultate heart/lungs).
- Sterilize instruments and supplies using appropriate methods.
- Provide surgical assistance.
- Safely and effectively produce diagnostic radiographic and non-radiographic images.

ANSC 251 Applied Pharmacology for Veterinary Technicians (3)

This course is designed to give students a practical knowledge of drugs used in veterinary medicine. Topics include drug classification, methods of action, calculations, administration, effects and side effects. Also includes a discussion of client education, drug safety, and federal regulations governing the purchase and storage of controlled drugs. Upon successful completion, students will be able to properly calculate, dispense, and administer medications, recognize adverse reactions and maintain pharmaceutical inventory and administrative records. This course is intended for students entering veterinary technology, veterinary assisting, or other animal-related fields. (3 hours lecture)

Prerequisite: Credit for or registration in ANSC 151 and 151L, MATH 101 and HLTH 125.

The student learning outcomes are:

- Recognize groups of veterinary drugs, their mechanisms & actions, and clinically relevant side effects.
- Correctly interpret a veterinarian's pharmacy orders.
- Accurately calculate, dispense, and administer the correct form and dose of a medication.
- Describe the safe and effective manner in which vaccines must be administered.
- Maintain a controlled substances log book in accordance with local and federal laws.
- Explain federal and state regulatory guidelines for drug purchase, storage, administration, withdrawal, disposal and inventory control.

Course Descriptions

- Accurately communicate drug information and dosing instructions to clients in order to maximize safety, compliance with prescribed therapy and successful treatment of the patient.

ANSC 252 Diagnostic Imaging for Veterinary Technicians (4)

This course trains students to safely and effectively use X-Ray technology to obtain diagnostic radiographs of the skeletal- and soft anatomy of companion animals. Students are also given an overview of alternative imaging techniques (ultrasound, CT Scans, and digital radiography) as well as an introduction to the radiography of large animals and exotics. This course is intended for students entering veterinary technology, veterinary assisting or other animal-related fields. (3 hours lecture, 3 hours laboratory)

Prerequisite: Credit for ANSC 142 and 142L. Students enrolling in ANSC 252 are required to show proof of current health insurance and sign a liability waiver.

Recommended Preparation: Credit for ANSC 190.

The student learning outcomes are:

- Describe the uses and functioning of various types of medical imaging equipment.
- Implement and observe recommended radiation safety measures.
- Safely and humanely position companion animals for radiographic studies.
- Utilize radiographic equipment to expose and develop radiographic films in order to create diagnostic radiographic images.
- Evaluate radiographic images for proper radiographic technique and patient positioning.
- Properly label and file radiographic films and complete radiographic logs and reports.
- Utilize radiographic contrast agents to produce diagnostic images of urinary and GI organs.
- Perform radiographic techniques utilized in screening for canine hip dysplasia.
- Demonstrate proper maintenance and troubleshooting of radiographic equipment.

ANSC 258 Clinical Laboratory Techniques II (4)

A continuation of ANSC 151 & 151L, this course provides students with additional instruction and hands-on experience with laboratory tests commonly used in veterinary practice. Topics include: 1) identification of internal parasites 2) performance and evaluation of microbiologic and serologic tests, 3) collection & evaluation of cytological samples 4) veterinary necropsy procedures. Included in this course is a review of the anatomy and physiology of major body systems and an overview of common diseases seen in veterinary practice. This course is intended for students entering veterinary assisting, veterinary technology or other animal-related fields. (3 hours lecture, 3 hours laboratory)

Prerequisite: Grade of "C" or better in ANSC 151 & 151L and ANSC 152 & 152L

Corequisite: None

The student learning outcomes are:

- Properly package, handle and store specimens for laboratory analysis.

- Identify and describe the life cycle of select internal parasites of companion animals, livestock, & exotic species.
- Perform serologic tests.
- Collect, culture, and identify bacteria from animal tissues and perform sensitivity testing.
- Collect and evaluate various cytological specimens including canine vaginal smears.
- Perform a postmortem examination of a non-preserved animal.

ANSC 261 Anesthesiology & Surgical Nursing for Veterinary Technicians (5)

This course will focus on the clinical skills necessary for safe and effective anesthesia and surgery of companion animal patients (dogs and cats) Skills such as intravenous catheter placement, proper endotracheal intubation, patient and surgical site preparation, and patient monitoring under general anesthesia will be stressed. The use and side effects of commonly used sedatives, analgesics and anesthetics will be covered. Postoperative procedures include patient monitoring and charting as well as client education for postoperative care. (3 hours lecture, 6 hours lab). (3 lecture/6 laboratory)

Prerequisite: Credit for ANSC 152/152L. Credit for or registration in ANSC 251

DB

The student learning outcomes are:

- Safely and effectively manage patients during all phases of anesthetic procedures
- Safely and effectively select, operate and maintain anesthetic delivery equipment and monitoring instruments.
- Understand and integrate all aspects of patient management for common surgical procedures in companion animal species.
- Identify and provide appropriate instruments, supplies and environment to maintain asepsis during surgical procedures.

ANSC 262 Clinical Procedures for Large Animals (4)

The student will learn techniques in large animal restraint, husbandry and clinical procedures and be provided some introduction to relevant large animal diseases. Biosecurity and public health will be discussed as they apply to large animal health care and husbandry. The course is appropriate for those entering animal husbandry, veterinary assisting, veterinary technology or animal science fields. (3 hours lecture, 3 hours laboratory)

Prerequisite: Credit for ANSC 151 and 151L.

The student learning outcomes are:

- Safely and successfully restrain various species of livestock for medical examination and procedures.
- Medicate, bandage, groom, and feed large animals.
- Successfully perform diagnostic sampling and imaging tasks on large animals.
- Describe common zoonotic diseases of large animals as they apply to animal health and public safety.
- Discuss biosecurity and isolation procedures necessary in livestock operations.

ANSC 263 Laboratory Animal Procedures (3)

Introduction to the care and use of laboratory animals. Includes training in restraint, nursing, and husbandry of common laboratory animal species (rats, mice and rabbits). This course is intended for students entering lab animal medicine, veterinary technology, veterinary assisting or other animal-related fields. (3 hours lecture, 1 hour laboratory)

Prerequisite: Credit for ANSC 151 and ANSC 151L.

The student learning outcomes are:

- Comply with national and institutional regulations regarding the care and use of laboratory animals.
- Recognize common lab animal species and safely restrain them for laboratory procedures.
- Administer drugs and medications using appropriate sites and routes (IV, IM, SQ and Oral Dosing).
- Humanely collect blood samples from mice and rats.
- Describe the signs and treatments for common diseases of lab animals.
- Explain anesthetic and recovery procedures.
- Perform a necropsy on a non-preserved animal.

ANSC 266 Veterinary Clinical Practices & Internship II (4)

A continuation of ANSC 190, this course provides veterinary technology students with additional instruction and practical experience in a clinical setting. Topics covered include: advanced sample collection & handling techniques, dentistry, administration of medications, anesthesiology & surgical assisting, and advanced nursing techniques. Emphasis is placed on integrating classroom learning with practical work experience. (3 hours laboratory, 9 hours internship)

Prerequisite: Permission of instructor.

The student learning outcomes are:

- Safely and effectively administer anesthesia and provide surgical assistance.
- Accurately dispense & administer medications to patients by a variety of routes (IV, PO, SQ) and explain prescribed medications to clients.
- Provide advanced nursing care including bandaging, wound care, critical- and emergency patient care.
- Perform routine dental prophylaxis.
- Perform advanced sample-collection and handling techniques.
- Provide client education in a variety of areas.

ANSC 290 Veterinary Technician Exam Review (1)

This course prepares students for the Veterinary Technician National Exam (VTNE). Topics include test-taking strategies, formation of a study plan, and a review of topics from previous veterinary technology courses. Students enrolled in this course will develop essential test-taking skills by completing practice exams covering all major topics of the WCC veterinary technology curriculum. (1 hour lecture)

Prerequisite: Permission of instructor.

The student learning outcomes are:

- Develop an appropriate study plan and essential test-taking skills to prepare for the VTNE.
- Identify areas of competence as well as topics which require further study.

Anthropology

ANTH 150 Human Adaptation (3)

Human variation, physical and cultural, examined for its adaptiveness. Alternative explanations of human behavior, with implications for the future. (3 hours lecture)

DS

The student learning outcomes are:

- Describe the concerns and general approach(es) of each of the four subfields of anthropology—cultural anthropology, physical anthropology, archaeology, and linguistics—and explain how they interact.
- Use basic terminology appropriate to the four subfields of anthropology.
- Apply key anthropological perspectives and approaches to real-world examples.
- Identify the major biological and cultural factors that influence human evolution.
- Describe basic archaeological approach to excavation.
- Explain the processes of heredity, variation, and natural selection involved in human evolution.
- Trace the evolutionary record from human ancestors to contemporary humans.
- Demonstrate an appreciation for the diversity of the Order Primates, in terms of biology and behavior.
- Discuss the relationship(s) among human biology, culture, and environment.
- Research and write a paper addressing some thesis, topic, or research question, utilizing appropriate sources and in a proper academic format (including proper citations).

ANTH 175 Polynesian Surf Culture (3)

Provides students with an understanding of surf culture in the Pacific Basin. Environmental and cultural factors are assessed in relation to surfing's development in Polynesia, integration into Hawaiian culture, decline due to Western influence, and revitalization as a modern recreational activity. The modern surfing industry is also assessed through a cultural perspective that analyzes business practices utilized by surfing organizations today. (3 hours lecture)

DS

The student learning outcomes are:

- Demonstrate an understanding and basic knowledge of environmental and cultural factors affecting the development of surfing in Polynesia, surfing's integration into Hawaiian culture, its decline due to Western influence, and its revitalization as a modern recreational activity.
- Coherently address modern social and legal issues relating to surfing.

ANTH 175L Surf Culture Field Lab (1)

Complements the lecture materials presented in the ANTH 175. Provides students with an understanding of surf culture in the Pacific Basin using O'ahu as a model for understanding ancient and modern surfing culture in Hawai'i. Field activities include surfing demonstrations and instruction, opportunities to speak with local cultural informants, and field trips to various museums to learn about

Course Descriptions

Hawai'i's surfing heritage. A coastal tour of O'ahu will be made to study the history of several major surf breaks. (3 hours laboratory)

Prerequisite: Credit for or registration in ANTH 175.

DS

The student learning outcomes are:

- Demonstrate an understanding and basic knowledge of environmental and cultural factors affecting the development of surfing in Polynesia, surfing's integration into Hawaiian culture, its decline due to Western influence, and its revitalization as a modern recreational activity.
- Demonstrate an understanding of the principles of anthropology as they apply to the creation and shaping of surfing culture, especially on O'ahu.
- Coherently address modern social and legal issues relating to surfing.

ANTH 200 Cultural Anthropology (3)

Nature of culture, introduction to basic concepts for analyzing cultural behavior; patterning, integration, and dynamics of culture; culture and the individual. (3 hours lecture)

DS

The student learning outcomes are:

- Explain how anthropologists study and talk about economic, kinship, political, gender, and religious systems, and cultural change.
- Apply the concept of culture to analyze cross-cultural issues in Hawai'i, the US, and the world.
- Identify cross-cultural differences and similarities in multicultural societies such as Hawai'i.
- Describe patterns of culture in societies which utilize various strategies of adaptation to their environments, including subsistence patterns, political organization, social organization, and stratification.
- Carry out ethnographic fieldwork in a subculture on O'ahu and produce a written description of the culture.
- Apply anthropological perspectives and research methods to careers and research outside of the discipline.
- Examine his/her own life and culture in a more critical manner in relation to the lives of people in other cultures.

Aquaculture

AQUA 106 Small Scale Aquaculture (3)

Survey of possibilities of small scale aquaculture. Application of basic biological and ecological concepts and theories to the selection, planning and design of small scale aquaculture systems. (3 hours lecture)

Recommended Preparation: Registration in AQUA 106L.

DB

The student learning outcomes are:

- Describe past and present aquaculture technologies.
- Plan and design a small scale aquaculture system.
- Select appropriate small scale aquaculture organisms.
- Determine the optimal conditions for cultivating small scale aquaculture organisms.

- Develop a small-scale aquaculture husbandry and management plan.
- Evaluate the economic feasibility of developing a small-scale aquaculture system.

AQUA 106L Small Scale Aquaculture Laboratory (1)

Companion laboratory to AQUA 106, Small Scale Aquaculture. Practical, hands-on experiences in small scale aquaculture. Laboratory/field trip class. (3 hours laboratory)

Prerequisite: Credit for or registration in AQUA 106.

DY

The student learning outcomes are:

- Construct and operate different kinds of small-scale aquaculture systems.
- Identify and classify common species of aquaculture organisms.
- Identify anatomical (internal and external) features of aquaculture organisms.
- Operate a small-scale aquaculture system to successful harvest of target species.
- Monitor culture conditions (physical, chemical and biological) in small-scale aquaculture systems.
- Demonstrate techniques for the cultivation of live food cultivation.
- Demonstrate techniques for the reproduction of aquaculture species.

AQUA 201 The Hawai'i Fishpond (3)

An introduction into the history, development, biology and ecology, management, restoration, and future of Hawaiian fishponds. This course will study traditional Hawaiian fishponds, merging traditional knowledge with the principles of modern Western science. (3 hours lecture)

Recommended Preparation: Registration in AQUA 201L.

DB

The student learning outcomes are:

- Explain the process and philosophical basis of scientific inquiry.
- Distinguish between the types of traditional Hawaiian fishponds, the history of their construction and use throughout the Hawaiian Islands, how and where they were constructed, their operation and management, their characteristics, and their biota.
- Describe the oceanography, biology and ecology of Hawaiian fishponds.
- Describe the basic principles of aquaculture, including pond dynamics, feeding regimes, cultivated species propagation and growth, disease management, production, harvesting and maintenance.
- Discuss the status of Hawaiian fishponds in modern times, including their restoration and their future.

AQUA 201L The Hawai'i Fishpond Lab (1)

An introduction into the history, development, biology and ecology, management, restoration, and future of Hawaiian fishponds. This course will study traditional Hawaiian fishponds, merging traditional knowledge with the principles of modern Western science. (3 hours laboratory)

Prerequisite: Credit for or registration in AQUA 201 or consent of instructor.

DY

The student learning outcomes are:

- Use the scientific method of inquiry to study a Hawaiian fishpond.
- Apply the concepts learned in AQUA 201 to an experimental and hands-on observational setting.
- Use analytical tools and instruments to study the oceanography, biology and ecology of Hawaiian fishponds.
- Collect, reduce, and interpret data.
- Prepare written objective reports describing and interpreting experimental and observational results.
- Identify and classify common fishpond species.
- Design a Hawaiian fishpond.
- Manage all aspects of a Hawaiian fishpond.

Art

ART 101 Introduction to the Visual Arts (3)

Art 101 is an introductory course that focuses on the question "What is the nature of visual art?" and the forms and conditions under which art is expressed. Projects will be required. Independent field trips to art galleries may be required. (3 hours lecture)

DA

The student learning outcomes are:

- Identify how an appreciation of the visual arts' influences the quality of life.
- Analyze how the elements of form and principles of design work together with the creative process to produce a work of art.
- Describe individual art disciplines, media and specific methods of making art.
- Define major historical and contemporary movements in art and discuss how art reflects its time and culture.
- Execute studio art projects in order to experience visual concepts, art disciplines and media in each of the following: - Maintain a comprehensive sketchbook demonstrating understanding of the elements of art. - Create at least one basic 2D and 3D studio art project, utilizing media specific to the successful outcome of each project. - Execute one project based upon art history or museum observation.

ART 104D Introduction to Printmaking/Screen Printing (3)

Studio experience mainly for non-majors. An introduction to printmaking providing experience in the development of skills used in designing for screen printing on paper. Includes skill in photo screening. Six credits may be applied to the AA degree. (6 hours lecture/lab)

DA

The student learning outcomes are:

- Demonstrate a knowledge and understanding of the elements of art, principles of design, and the creative process.
- Select and use screen printing materials.
- Complete the creative problem-solving process, from planning and discovery to implementation and evaluation.
- Examine the process of integrating content and meaning with visual form in the screen printing process.

ART 105B Ceramics Studio Handbuilding I (3)

Studio experience mainly for nonmajors. An introduction to clay as an art medium. Emphasis on basic handbuilding techniques, three-dimensional concepts in clay, glazing, decorating and firing kilns. NOTE: Art Majors: ART 105B and ART 105C must both be taken to receive equivalency at UH UH Mānoa as an art elective. Liberal Arts Students: ART 105B or ART 105C will transfer to fulfill the Humanities DA core requirements. (6 hours lecture/lab)

DA

The student learning outcomes are:

- Demonstrate through finished ceramic objects a basic understanding of the hand building techniques.
- 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.
- Demonstrate a basic understanding of color and color theory as it related to the use of glazes.
- Complete the creative problem-solving process from planning and discovery to implementation and evaluation.
- Demonstrate a basic understanding of drawing as a means of notation, conceptualization and visual organization.
- Demonstrate an awareness of historic and contemporary examples of ceramics.
- Begin to use the ceramic process to express personal imagery.
- Demonstrate an ability to articulate the concepts and intent of a finished ceramic piece.

ART 105C Ceramics Studio Wheelthrowing I (3)

Studio experience mainly for non-majors. Introduction to the potter's wheel. Emphasis on techniques of forming basic wheelthrown shapes on the electric or kick wheel. Emphasis also on decorating, glazing, and firing of ceramic pieces. NOTE: Art Majors: ART 105B and ART 105C must both be taken to receive equivalency at UH UH Mānoa as an art elective. Liberal Arts Students: ART 105B or ART 105C will transfer to fulfill the Humanities DA core requirements. (6 hours lecture/lab)

DA

The student learning outcomes are:

- Demonstrate through finished ceramic objects a basic understanding of wheel throwing techniques.
- 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.
- Demonstrate a basic understanding of color and color theory as it relates to the use of glazes.
- Complete the creative problem-solving process from planning and discovery to implementation and evaluation.
- Demonstrate a basic understanding of drawing as a means of notation, conceptualization and visual organization.
- Demonstrate an awareness of historic and contemporary examples of ceramics.
- Begin to use the ceramic process to express personal imagery.
- Demonstrate an ability to articulate the concepts and intent of a finished ceramic piece.

Course Descriptions

ART 107 Introduction to Photography (3)

Studio experience mainly for non-majors. An introduction to black and white photography emphasizing a variety of picturemaking techniques. Assignments and field trips. Student must have film camera with adjustable shutter speeds and aperture settings. (6 hours lecture/lab)

DA

The student learning outcomes are:

- Operate your camera to obtain correctly focused and exposed negatives, and use aperture and shutter speeds to create an intended image.
- Develop black and white film and make contact prints.
- Operate an enlarger to make black and white prints that express, enhance and communicate an intended image.
- Process and present photographic prints that aesthetically expresses your feelings, ideas and/or concepts.

ART 108 Elementary Studio: Drawing and Painting (3)

Art 108 is a studio course, which includes drawing and an introduction to acrylic painting techniques, with an emphasis on acrylic painting. Course content will also emphasize composition and color theory. Six credits may be applied to the AA degree. (6 hours lecture/lab)

DA

The student learning outcomes are:

- Comprehend and use basic drawing techniques to create finished drawings.
- Use appropriate acrylic painting and color techniques to make finished paintings.
- Evaluate the creative problem-solving process to complete a final composition.
- Evaluate and critique works of art by using art terminology.
- Distinguish seeing from looking.
- Create a personal drawing and painting style through art practice and theory.

ART 111 Introduction to Watercolor Painting (3)

Art 111 is an introduction to watercolor painting materials and techniques. Six credits may be applied to the AA degree. (6 hours lecture/lab)

Recommended Preparation: ART 101 and ART 113.

DA

The student learning outcomes are:

- Complete assignments that reflect the use of watercolor techniques and design principles in watercolor composition.
- Use and care properly for watercolor painting tools.
- Discuss watercolor painting concepts and techniques.
- Critique work based on watercolor concepts and techniques.

ART 113 Introduction to Drawing (3)

Art 113 is an introduction to the materials and techniques of drawing, focusing on line drawing, rendering, and the use of perspective. This course will include the study of the drawings of old and modern masters. Six credits may be applied to the AA degree. (6 hours lecture/lab)

Recommended Preparation: ART 101.

DA

The student learning outcomes are:

- Complete assignments that reflect the use of basic visual elements to create an illusion of space and form.
- Use linear perspective.
- Demonstrate through drawings, skill in hand-eye coordination.
- Use skillfully a variety of drawing materials and techniques.
- Identify drawing materials and techniques used by the old and modern masters.

ART 114 Introduction to Color (3)

Art 114 is an introductory course focusing on color theory and the application of color as related to studio art practice. (6 hours lecture/lab)

Recommended Preparation: ART 101.

DA

The student learning outcomes are:

- Formulate a personal and expressive sense of color.
- Recognize and comprehend color interaction, color phenomena, color theories and vocabulary specific to color study.
- Master skills in paint mixing, color matching and application as well as other art processes, to creatively solve color problems.
- Utilize the multiple dimensions of color: hue, value, intensity and temperature in specific color projects.
- Recognize and properly use the three types of color applications: opacity, transparency and optical mixing.

ART 115 Introduction to 2D Design (3)

Art 115 is an introductory course which focuses on the basic design concepts, elements and principles of art. This course emphasizes projects in basic two-dimensional design. (6 hours lecture/lab)

Recommended Preparation: ART 101.

DA

The student learning outcomes are:

- Become familiar with and successfully use the principles of design to develop individual creative designs and dynamic compositions.
- Use a variety of strategies to create and evaluate the creative problem-solving process through intuitive processes, revisions and risk-taking, to arrive at a final composition.
- Demonstrate proper use of diverse media and materials to produce a work of art.
- Evaluate and critique works of art and presentation by using art terminology.
- Identify historic references within the theory and practice of design.
- Organize a portfolio of works that demonstrate aesthetic understanding of the principles of design, elements of form, and appropriate presentation of art.

ART 116 Introduction to Three-Dimensional Composition (3)

Focuses on building three-dimensional structures and basic sculptural forms using various approaches and materials, as well as the designing of creative environments. The student's awareness of the natural order and the aesthetic aspect of design is broadened and the student learns the use of texture, volume, color, temperature,

proportion, space, time and movement in a three-dimensional form. (6 hours lecture/lab)

DA

The student learning outcomes are:

- Demonstrate an understanding of the following sculpting processes: assemblage, carving, mold making, metal construction and casting.
- Utilize creative problem solving.
- Demonstrate and sensitively apply the visual elements of line, texture, color, volume and mass and the design principles of balance, directional force, rhythm, dominance, contrast, variation, and proportion.
- Demonstrate a basic understanding of drawing as a means of notation, conceptualization and visual organization.
- Demonstrate an awareness of historic and contemporary examples of sculpture.
- Begin to use the sculpting process to express personal imagery.

ART 123 Introduction to Oil Painting (3)

Art 123 is an introduction to the materials and techniques of oil painting. Classical painting techniques will be emphasized. Six credits may be applied to the AA degree. (6 hours lecture/lab)

Recommended Preparation: ART 101, 113 and 114.

DA

The student learning outcomes are:

- Execute paintings using traditional painting techniques.
- Complete the technical process from preparation of the ground (canvas) to the completion of a painting.
- Execute underpainting, grisaille and limited palette painting techniques.
- Apply the visual elements of line, shape, light and shadow, color, texture and space as well as the design principles of balance, rhythm, focal points, implied movement and unity to a painting.
- Discuss oil painting concepts and techniques.
- Critique work based on oil painting concepts and techniques.

ART 189 Ka Unu Pa'a — Introduction to Hawaiian Art and Design (3)

An integrated beginning studio art course which offers students the opportunity to understand and express Hawaiian cultural perspective through contemporary visual arts activities. (6 hours lecture/lab)

Recommended Preparation: HAW 101 or one semester high school Hawaiian.

DA

The student learning outcomes are:

- Demonstrate a basic understanding of the historical and formal qualities of objects produced by Hawaiians through pre-contact, post-contact, and contemporary times.
- Demonstrate a basic understanding of art making as a means of contemporary notation, conceptualization and visual organization.
- Develop an appreciation of Hawaiian art, the variety and richness of its art forms and the cultural significance inherent in its production.

- Demonstrate how the Hawaiian language informs the process of art making and offers insights into the metaphorical nature intrinsic in Hawaiian art.
- Use various art making techniques and processes to explore personal imagery.
- Collaborate with others to make creative decisions.

ART 207 Intermediate Photography: Techniques and Aesthetics of Photography (3)

Basic techniques and esthetics of black and white photography; the camera as a tool for communication and self expression. Student must have a film camera with adjustable shutter speeds and aperture settings. Up to 6 credits applicable toward AA degree. (2 hours lecture and 4 hours studio)

Prerequisite: Credit for ART 107 or consent of instructor.

DA

The student learning outcomes are:

- Conceptualize an idea and translate it photographically into a visual form.
- Use different black and white films and development procedures to convey and express different photographic aesthetics.
- Express through refined photographic techniques your ideas, feelings and/or concepts.
- Produce photographic prints that require proficient skill in darkroom techniques.

ART 208 Intermediate Photography: Color Studio (3)

Color in photography emphasizing communication and self-expression. Lectures, demonstrations and projects. Student must have film camera with adjustable shutter speeds and aperture settings. (2 hours lecture and 4 hours studio)

Prerequisite: Credit for ART 101, 107, or consent of instructor.

DA

The student learning outcomes are:

- Conceptualize an idea and translate it photographically into a visual form.
- Use different color films and development procedures to convey and express different photographic aesthetics.
- Express through refined photographic techniques your ideas, feelings and/or concepts.
- Produce photographic prints that require proficient skill in darkroom techniques.

ART 213 Intermediate Drawing (3)

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. Portraiture will also be introduced. Repeatable once for a total of 6 credits that may be applied to the AA degree. (6 hours lecture/lab)

Recommended Preparation: ART 101 and ART 113.

DA

Course Descriptions

The student learning outcomes are:

- Exhibit a continued development of the skills and craft of drawing, as introduced in ART 113.
- Use perspective traditionally as well as in imaginative and creative ways.
- Draw portraits from life.
- Execute drawing concepts unique to the 20th century.
- Use drawing skills necessary to visually express creative ideas.

ART 214 Introduction to Life Drawing (3)

Art 214 is an introductory figure drawing course. Anatomical construction, light, space, diagrammatic analysis, and thematic content will be studied through the drawing process. Six credits may be applied to the AA degree. (6 hours lecture/lab)

Prerequisite: Credit for ART 113 or consent of instructor.

Recommended Preparation: ART 101 and 213.

DA

The student learning outcomes are:

- Draw the human figure accurately and expressively.
- Investigate through drawing, the interaction of structure, anatomy, design and expression, as it relates to the figure.
- Demonstrate an understanding of the relationship between the internal structure of the figure and its effects on topography.
- Discuss figure drawing concepts and techniques.
- Critique work based on figure drawing concepts and techniques.

ART 220 The Windward Atelier (Intensive Study in Drawing and Painting) (6)

Art 220 is an intensive course of study in the classical techniques of drawing and painting. Cast drawing, portraiture and figure painting will be the focus of instruction. The Windward Atelier is designed primarily for those students who have some prior studio experience in drawing. (34 hours lecture/lab for 6 weeks)

Prerequisite: Acceptance through a drawing portfolio which demonstrates evidence of skills in observational drawing.

The student learning outcomes are:

- Make accurate drawings and paintings from observation.
- Perceive and record values accurately and use various sighting techniques in order to develop observational drawing and painting skills.
- Draw from classical plaster casts using mapping, memory and sighting techniques.
- Execute the painting process from canvas preparation to the completion of a painting.
- Execute underpainting, grisaille and limited palette painting techniques.
- Properly care for brushes and wooden palette, stretch and prepare a canvas, and make the Maroger Medium.
- 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 cast drawing, portraiture and figure painting projects.
- Discuss classical drawing and painting concepts and techniques.
- Critique work based on classical drawing and painting concepts and techniques.

ART 223 Intermediate Painting (3)

Survey of late 19th and early 20th century studio practice. Completion of paintings which concentrate on historical styles as well as on a more personal direction. (6 hours lecture/lab)

Prerequisite: Credit for ART 123.

DA

The student learning outcomes are:

- Create paintings that exhibit a working knowledge of recent developments in the pictorial structure of paintings.
- Understand and use the dynamic organization of pattern, two and three dimensional space and rhythmic demands of the "flat" picture plane.
- Confidently paint shape, edges, color relationships and space with increased sensitivity.
- Develop original and personal concepts and techniques.
- Demonstrate an understanding of the technical aspect of the painting process.
- Develop the language skills in the critical evaluation of paintings.

ART 224 Painting from Life (3)

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. Six may be applied to the AA degree. (6 hours lecture/lab)

Prerequisite: Credit for ART 123 and 214, or consent of instructor.

DA

The student learning outcomes are:

- Create paintings that exhibit a working knowledge of the figurative tradition of painting from the Renaissance to the present.
- Paint the human figure accurately and expressively.
- 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 figure painting projects.
- Execute the painting process from canvas preparation to the completion of a painting.
- Create limited palettes, and explore color harmony and balance within a painting.
- Use art terminology to evaluate paintings.

ART 243 Ceramics Studio Handbuilding II (3)

Development of handbuilding techniques, sculptural and vessel concepts, and surface treatment and glazing. Six credits may be applied to the AA degree. NOTE: Art Majors: ART 243 and 244 must both be taken to receive equivalency at UH UH Mānoa as ART 242, Introduction to Ceramics. (6 hours lecture/lab)

Prerequisite: Credit for ART 105B or consent of instructor.

Recommended Preparation: ART 101, 116.

DA

The student learning outcomes are:

- Demonstrate an understanding of the three basic handbuilding techniques and the potential of each as structural and decorative elements.

Course Descriptions

- Demonstrate an understanding of two different clay bodies and their potential as structural and decorative elements.
- Demonstrate an awareness of the varieties of materials and techniques of the glazing and firing processes.
- Demonstrate innovative and inventive problem solving through creative decision-making and insightful articulation of finished ceramic vessels and sculptural forms.
- Demonstrate an ability to generate creative ideas through three-dimensional visualization techniques.
- Demonstrate an understanding of color and color theory as it relates to three-dimensional form in the use of glazes and oxides.
- Demonstrate an understanding of historic and contemporary examples of hand built ceramics.
- Demonstrate an understanding of drawing as a tool for conceptualization and documentation of personal imagery and technical investigation of the ceramic process.
- Demonstrate an appreciation for and awareness of ceramic objects.
- Demonstrate an awareness of the visual elements and the design principles while creating ceramic vessels and sculptural forms.
- Demonstrate an ability to articulate the concepts and intent of a completed piece.

ART 244 Ceramics Studio Wheelthrowing II (3)

Development of wheelthrowing techniques, vessel and structural concepts, and surface treatment and glazing. Six credits may be applied to the AA degree. NOTE: Art Majors: ART 243 and 244 must both be taken to receive equivalency at UH UH Mānoa as ART 242, Introduction to Ceramics. (6 hours lecture/lab)

Prerequisite: Credit for ART 105C, or consent of instructor.

Recommended Preparation: ART 101, 105B, 116.

DA

The student learning outcomes are:

- Demonstrate through completed projects, a basic proficiency in wheel throwing techniques.
- Demonstrate an understanding of color and color theory through the use of various decorated techniques: slips, oxides, engobes, stains, and glazes.
- Demonstrate an understanding of clay bodies, oxidation and reduction firing, and of the basic chemical compositions of glazes.
- Demonstrate an awareness of the visual elements and the design principles while creating ceramic vessels and sculptural forms.
- Demonstrate innovative and inventive problem solving, through creative decision-making and insightful articulation of finished ceramics vessels and sculptural forms.
- Demonstrate an ability to generate creative ideas through three-dimensional visualization techniques.
- Demonstrate an understanding of drawing as a tool for conceptualization and documentation of personal imagery and technical investigation of the ceramic process.
- Demonstrate an understanding of historic and contemporary examples of wheel made ceramics.
- Demonstrate an ability to articulate the concepts and intent of a finished ceramic object.

ART 251 Mold Making for Ceramics and Sculpture (3)

ART 251 is an introduction to mold making techniques and their application in the creation of functional ceramics and sculptural objects. Emphasis on the fabrication of various types of plaster molds from original and "found" objects, pressing and casting forms from molds in clay and other non-metal media, and various finishing techniques including glazing and firing. Repeatable once for a total of 6 credits. (6 hours lecture/lab)

Recommended Preparation: Recommended Preparation: ART 101, ART 105B, 105C, or ART 116

DA

The student learning outcomes are:

- Select, fabricate, and employ various mold types in the making of functional ceramics and sculptural objects.
- Design and produce original objects in clay and other materials to be used as mold patterns.
- Produce finished functional and artistic objects that explore the possibilities of mold made forms.

ART 253 Figure Modeling (3)

Modeling the human figure in clay, with emphasis on the basic skeletal structure and muscles in relation to surface modulation, proportion, volume and gesture. Six credits may be applied to the AA degree. (6 hours lecture/lab)

DA

The student learning outcomes are:

- Demonstrate through finished sculpture, an understanding of figure and portrait modeling, mold-making, fabrication, and the casting process and materials.
- Demonstrate an understanding of drawing as a tool for conceptualization and documentation of personal imagery.
- Demonstrate an awareness of historic and contemporary examples of sculpture.
- Perceive and sculpt volume and mass with increased sensitivity and personal confidence.
- Trust one's own decisions, insights, and perceptions during the creative problem-solving process.
- Demonstrate an ability to articulate the concepts and intent of a finished sculpture.

ART 260 Gallery Design and Management (3)

Design theory and techniques for presentation of art work and mounting an exhibition. Six credits may be applied to the AA degree. (6 hours lecture/lab)

DA

The student learning outcomes are:

- Plan and install an art display using the appropriate skills and techniques of gallery design and management.
- Evaluate spatial relationships, design principles and color theory as related to gallery displays and discover the role intuition plays in the arts and gallery design.
- Critique and evaluate works of art and presentation by using art terminology.
- Prepare publicity related to gallery practice to include press releases and gallery invitations.
- Generate a portfolio documenting art exhibitions in our local community.

Course Descriptions

ART 269C Study Abroad: Japanese Cultural Tour — Ceramic Pottery and Kilns (4)

An on-site study of Japanese pottery and kilns, using clay and sumi brush to analyze, understand and appreciate the development of Japanese Ceramic Art.

Prerequisite: Credit for ART 105B or 105C or consent of instructor.

The student learning outcomes are:

- Understand the development of Japanese ceramic art.
- Use clay and sumi brush as a tool to analyze, understand and sensitively appreciate and appraise Japanese ceramic form and structure.
- Execute the following pots or sculpture through hand building and wheel throwing ceramic techniques, glazing, and firing kilns: vases, bottles, bowls, plates and sculpture.
- Through the use of drawing, writing and photography, understand the evolution of space, color and design in Japanese pottery and sculpture.

ART 269V Study Abroad (Designated Region, Variable Credit) (1-6)

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. (30 hours lecture/lab per credit trip total)

Prerequisite: Meet with instructor for approval.

DH

The student learning outcomes are:

- Become more informed about the peoples and culture of the designated locations visited.
- Become aware of Internationalism and an interdependency of cultures.
- Understand the development of ceramic art and/or architecture of the designated locations visited.
- Use group discussions, essays and examinations, and a visual studio process as a tool to analyze, understand and sensitively appreciate and appraise forms and structures of the art studied.

ART 270 Introduction to Western Art (3)

The study of major developments in Western art from prehistory to the present. (3 hours lecture)

Recommended Preparation: ART 101 or consent of instructor.

DH

The student learning outcomes are:

- Think and act with intellectual integrity to access, critically evaluate and synthesize information from scholarly resources to make or express critical judgments about historical and contemporary issues in Western art.
- Demonstrate understanding that art is a visible manifestation of cultural values, which mirror its time period.
- Incorporate writing as a tool for analyzing art forms.
- Make a critical comparison of the past and present in Western art.
- Analyze style both descriptively and comparatively.

ART 280 Introduction to Eastern Art (3)

Major developments in the Arts of Asia. (3 hours lecture)

Prerequisite: Credit for ART 101 or consent of instructor.

DH

The student learning outcomes are:

- Identify the art works of India, China and Japan.
- Compare and contrast the different artistic preferences in styles, forms and meanings of the above visual arts based on cultural and historical assumptions of those particular periods.
- Discuss the historical development of the cultures, basic ideas, beliefs and attitudes that shaped these unique artistic creations.

Astronomy

ASTR 110 Introduction to Astronomy (3)

Introduction to the astronomical universe for non-science students. (3 hours lecture)

DP

The student learning outcomes are:

- Outline the development of astronomy from ancient times to present and explain the role of the scientific method in this historic context.
- Describe and explain the apparent motions of the celestial bodies, especially as related to naked-eye observations.
- Identify the appropriate instruments used by astronomers to understand the universe.
- Outline the origins of our solar system and appraise the leading cosmological theories of the origin of the universe.
- Describe the physical and chemical properties of the objects in our solar system and apply the concept of comparative planetology.
- Describe the physical and chemical nature of stars, and especially our sun, and apply the astronomical techniques used to measure stellar properties.
- Outline the evolutionary stages in a star's life and compare and contrast the structure of our Milky Way and other galaxies.
- Apply astronomical concepts to the search for extraterrestrial life.

ASTR 110L Introduction to Astronomy Laboratory (1)

Demonstration of astronomical principles through laboratory observations and analysis of astronomical data. Not required for ASTR 110. (3 hours laboratory)

Prerequisite: Credit for or registration in ASTR 110 or consent of instructor.

DY

The student learning outcomes are:

- Apply the scientific method to a selected group of topics in astronomy.
- Collect, report and analyze data obtained in a laboratory and/or observatory setting in a manner exhibiting organization, proper documentation and critical thinking.
- Demonstrate a basic understanding of the use of standard astronomical instruments.
- Perform image analysis, especially as related to astronomical photographic data.

- Identify environmental factors, which affect the outcome of an experiment or observation and apply basic error analyses techniques.
- Demonstrate a working knowledge of computer on-line and Internet astronomical programs.

ASTR 130 Introduction to Archaeoastronomy (3)

Introduction to the interdisciplinary study of cultures and astronomy for non-science majors. Topics include naked-eye astronomy, myths and rituals, calendar systems, architectural alignments and navigation. (3 hours lecture)

Recommended Preparation: ASTR 110.

DP

The student learning outcomes are:

- Describe and explain the observable daily motions of celestial bodies.
- Identify the phases of the moon and explain what causes them.
- List some cultural associations of the planets.
- Identify and use measurement tools for determining astronomical alignments.
- Illustrate how astronomical knowledge can be used in navigation.
- Compare and contrast how different cultures used astronomical knowledge.
- Assess the strengths and weaknesses of an interpretation of evidence from an archaeoastronomy site.
- Explain how culture and science are interrelated.

ASTR 180 Planetary Astronomy (3)

A survey of modern solar system astronomy with emphasis on the underlying physical principles. Topics discussed include the celestial sphere and aspects of the night sky, the structure and evolution of the Sun's planetary system, comparative planetology, and theories of the formation of planetary systems. Intended for science majors and prospective science teachers. (3 hours lecture)

Recommended Preparation: The student should have a good operational familiarity with high school algebra.

DP

The student learning outcomes are:

- Outline the development of planetary astronomy from ancient times to present and explain the role of the scientific method in this historic context.
- Describe the major geological and atmospheric features of the objects in our Solar System.
- Describe the physical and chemical properties of the objects in our solar system and apply the concept of comparative planetology.
- Outline the origins of our Solar System and formulate models that explain the different physical and chemical characteristics of objects within the Solar System.
- Describe the properties of our Sun and their effects on objects in the Solar System.
- Outline techniques for discovering extrasolar planets and extraterrestrial life.

ASTR 181 Stellar Astronomy (3)

A survey of modern stellar, galactic, and extragalactic astronomy, with emphasis on the underlying physical principles. Topics covered include stellar structure, interstellar environments and the formation of stars, stellar evolution and death, the structures of galaxies, and cosmology. Intended for science majors and prospective science teachers. The student should have a good operational familiarity with high school algebra. (3 hours lecture)

Recommended Preparation: The student should have a good operational familiarity with high school algebra; credit in ASTR 110 and/or ASTR 180.

DP

The student learning outcomes are:

- Outline the development of stellar astronomy from ancient times to present and explain the role of the scientific method in this historic context.
- Identify the appropriate instruments used by astronomers to understand the universe and describe the nature of electromagnetic radiation and its role in deciphering the mysteries of stellar astronomy.
- Describe the physical and chemical nature of stars, and especially our sun, and apply the astronomical techniques used to measure stellar properties.
- Outline the evolutionary stages in a star's life, including the role of the interstellar medium.
- Compare and contrast the structure of our Milky Way and other galaxies.
- Outline and appraise the leading cosmological theories of the origin of the universe.
- Apply astronomical concepts to the search for extraterrestrial life.

ASTR 250 Observational Astronomy (3)

An introduction to the tools and techniques of observational astronomy: astronomical time and coordinate systems, photometric systems and magnitudes, principles of telescopes and their operation, introduction to modern astronomical instruments, analysis of astronomical data. Includes planetary, solar and stellar observations. (3 hours lecture)

Prerequisite: ASTR 110; or ASTR 180 and ASTR 181 *Recommended Preparation:*

Recommended Preparation: Student should have operational familiarity with high school algebra and basic trigonometry.

DP

The student learning outcomes are:

- Use appropriate celestial charts and astronomical time system to identify and locate celestial objects, such as stars, nebulae, galaxies, planets, satellites and asteroids.
- Describe the primary functions of an astronomical telescope and major detectors, such as spectrometers and photometers.
- Apply basic principals in planetary remote sensing and image processing.
- Outline astronomical techniques involved in observing planetary and stellar objects, such as variable stars, asteroids and the Sun and Moon.

Course Descriptions

- Compare and contrast the research involved in optical, radio, infrared and cosmic ray astronomy.
- Use appropriate techniques to analyze astronomical data.

ASTR 250L Observational Astronomy Lab (1)

A lab course in modern observational astronomy, with emphasis on "hands-on" use of instruments to acquire data with research-grade telescopes at the college's Lanihuli Observatory. Remote telescope observations may also be used. Students will gain on-site observing experience with CCD photometry and spectroscopy through direct acquisition and data analysis using modern laboratory data reduction software. Applications to planetary, solar, stellar and, where possible, galactic astrophysics will be covered. (3 hours laboratory)

Prerequisite: credit or current enrollment in ASTR 250.

Recommended Preparation: Student should have operational familiarity with high school algebra and basic trigonometry.

DY

The student learning outcomes are:

- Use appropriate celestial charts and astronomical time system to identify and locate celestial objects, such as stars, nebulae, galaxies, planets, satellites and asteroids.
- Describe the fundamentals optics and telescopic observations.
- Operate and make observations with optical, radio and cosmic ray telescopes.
- Apply basic principals in planetary remote sensing and image processing using both real-time observations and archived data.
- Apply the techniques of astrophotography and spectrometry.
- Use appropriate techniques to analyze astronomical data.

ASTR 281 Space Explorations (3)

Current topics in planetary exploration, extraterrestrial life, and space resources and colonization. (3 hours lecture)

Prerequisite: Credit for ASTR 110 or consent of instructor.

DP

The student learning outcomes are:

- Outline the characteristics and origins of objects in our solar system, including the sun, planets, moons, meteoroids, asteroids and comets.
- Compare and contrast terrestrial and Jovian worlds and apply geological and atmospheric concepts to comparative planetology.
- Explain the effects and implications of collisional impacts on planetary surfaces.
- Apply the laws of planetary motion and celestial mechanics.
- Outline the historical development of manned and unmanned space flight.
- Identify and describe the appropriate instruments, detectors and space probes used by astronomers and space scientists to explore the solar system, especially in the area of remote sensing.
- Discuss the future of space colonization and exploitation.
- Discuss the nature and origin of life on earth and apply the astronomical concepts related to the search for extraterrestrial life.

ASTR 294V Special Topics in Astronomy (1-4)

This course covers current topics in astronomy. The course is designed to have variable credit to coincide with the rigor of the topic. A student may enroll and receive credit for this course more than one time (for different topics). A course description will be presented in the schedule of classes. (1 to 4 hours lecture)

Prerequisite: Credit for ASTR 110 or consent of instructor.

DP

The student learning outcomes are:

- Identify the important concepts and facts presented for the topic under examination.
- Make inferences and draw conclusions from the special topics under discussion.
- Apply skills appropriate to the topic under discussion.
- Evaluate the science and technology of astronomy and space science.

Biology

BIOL 100 Human Biology (3)

Introduction to structure and functions of cells, tissues, organs, and systems of the human body. Topics related to physical fitness, nutrition, health, and disease. Not intended for science majors. Students who have received credit for or are currently enrolled in ZOOL 101 may not receive credit for BIOL 100. (3 hours lecture)

Prerequisite: Grade of "C" or better in ENG 21, or placement into ENG 22 or higher.

DB

The student learning outcomes are:

- Explain the process and philosophical basis of scientific inquiry.
- Distinguish between living things and inanimate objects.
- Describe the chemical architecture of living things and the functions of the major groups of biological molecules.
- Describe the parts, their structure and functions, of cells, diversity of cell types, cell metabolism, cell communication, and cell division processes (mitosis and meiosis).
- Solve problems in Mendelian genetics.
- Describe the processes whereby genes are expressed as the characteristics of the whole organism.
- Explain the role of nutrition and fitness in human health.
- Describe the hierarchical architecture of the human body and how the organism achieves this organization (human development).
- Describe the anatomy and physiology of the systems that make up the human body, including skeletal, integumentary, muscular, circulatory, digestive, respiratory, excretory, nervous, endocrine, immune, and reproductive systems.
- Discuss current concepts regarding human evolution, its mechanisms and history.
- Describe the interrelationships between humans and their environments.

BIOL 100L Human Biology Laboratory (1)

Laboratory to accompany BIOL 100 (Human Biology). Emphasizes the application of the scientific method, basic laboratory methods and

Course Descriptions

procedures in biology, and facts and principles of human anatomy and physiology. (3 hours laboratory)

Prerequisite: Credit for or registration in BIOL 100 or equivalent preparation or consent of instructor.

DY

The student learning outcomes are:

- Use the scientific method of inquiry to investigate biological phenomena.
- Apply the concepts learned in BIOL 100 to an experimental and hands-on observational setting.
- Collect, reduce, and interpret biological data.
- Prepare written objective reports describing and interpreting experimental and observational results.
- Demonstrate the use of some of the standard tools of the biological scientist, such as microscopes, scales, spectrophotometers, computers, and other analytical tools.
- Apply the standard analytical procedures needed to study human biology, such as dissection, separation of biological compounds, microscopic examination of cells and tissues, membrane transport mechanisms, energy metabolism, genetics, digestion and nutrition, excretion, skeletal muscle physiology, cardiovascular function, nervous system function, respiration, and blood analyses.
- Recognize and identify basic human tissue types and their distinguishing characteristics.
- Demonstrate basic knowledge of anatomy (structure) and physiology (function) of the fetal pig (using preserved specimens) and human body (using models and figures).

BIOL 101 Biology and Society (4)

Historical development of scientific concepts, characteristics, and interaction of science and society from the perspective of biological sciences. (3 hours lecture, 3 hours laboratory)

Prerequisite: Credit for MATH 25 or higher or equivalent preparation. Eligibility for placement in ENG 100, or consent of instructor.

DB DY

The student learning outcomes are:

- Distinguish science as a way of knowing from other epistemological systems.
- Discuss the historical development of the discipline of biology into what it is today, relating the contributions made by significant individuals and concepts of the past to modern biology.
- Explain the major integrating principles of biology.
- Explain the origin and organization of the diversity of life on Earth.
- Describe how living systems function, relating structure to function, at all levels within the hierarchy of life from molecules to the biosphere.
- Solve problems in inheritance and genetics.
- Present informed, rational and objective opinions on biologically-related issues important to human society.
- Use the scientific method of inquiry to investigate biological phenomena.
- Apply the concepts learned to an experimental and hands-on observational setting.

- Collect, reduce, and interpret biological data.
- Prepare written objective reports describing and interpreting experimental and observational results.
- Demonstrate the use of some of the standard tools and methods of the biological scientist, such as microscopes, scales, spectrophotometers, computers, dissection dichotomous keys, and other analytical tools.
- Identify the major systematic groups to which specimens of living things belong.

BIOL 124 Environment & Ecology (3)

A study of human ecology through the analysis of the interrelationships between science and technology, the means these provide for manipulation of environment and the effects of this manipulation on the environment and on human populations. Lecture/field trip course designed for non-science majors. (3 hours lecture)

DB

The student learning outcomes are:

- Explain the process and philosophical basis of scientific inquiry.
- Describe the basic principles of ecology, including population ecology, community ecology, and ecosystem function.
- Describe the characteristics of the major biomes and ecosystems of the Earth.
- Describe the interrelationships between land, sea, the atmosphere and the living things that occupy these environments.
- Discuss the role that humans play in affecting the characteristics of the environment.
- Evaluate current environmental issues and problems including the solutions and management practices that have been used or offered to address these issues and problems.

BIOL 124L Environment & Ecology Laboratory (1)

Companion laboratory class to BIOL 124, Environment and Ecology. This class, providing hands-on experience in the laboratory and in the field, enhances the student's understanding of basic environmental science and ecological concepts presented in BIOL 124. (3 hours laboratory)

Prerequisite: Credit for or registration in BIOL 124 or consent of instructor.

DY

The student learning outcomes are:

- Use the scientific method of inquiry to investigate environmental phenomena.
- Apply the concepts learned in BIOL 124 to an experimental and hands-on observational setting.
- Collect, reduce, and interpret biological data.
- Prepare written objective reports describing and interpreting experimental and observational results.
- Demonstrate the use of some of the standard tools of the environmental scientist, such as microscopes, scales, spectrophotometers, various environmental meters, and basic statistical procedures.

Course Descriptions

- Apply the standard analytical procedures needed to study the environment, such as soil analyses, water quality determinations, stream bioassessments, and quantitative resource inventories.
- Conduct experiments that evaluate how environmental factors affect living organisms.

BIOL 171 General Biology I (3)

Introductory biology for all life science majors. Cell structure and chemistry, growth, reproduction, genetics, evolution, viruses, bacteria, and simple eukaryotes. (3 hours lecture)

Recommended Preparation: High school chemistry or college chemistry and registration in BIOL 171L.

DB

The student learning outcomes are:

- Explain the process and philosophical basis of scientific inquiry.
- Distinguish between living things and inanimate objects.
- Describe the classification of living things, the kinds of criteria used to classify them, and the formal protocol in naming them.
- Describe the chemical architecture of living things and the functions of the major groups of biological molecules.
- Describe the parts, their structure and functions, of cells, diversity of cell types, cell metabolism, cell communication, and cell division processes (mitosis and meiosis).
- Solve problems in Mendelian genetics.
- Describe the processes whereby genes are expressed as the characteristics of the whole organism.
- Describe evolution as the unifying principle of biological science; and present the evidence supporting evolution and natural selection.
- Discuss current hypotheses/theories regarding the evolutionary process and the origins of life, eukaryotic cells, sexuality, and multicellularity.
- Describe the characteristics, systematics, and biology of viruses, prokaryotes, protists, and fungi.

BIOL 171L General Biology Lab I (1)

Laboratory to accompany BIOL 171. (3 hours laboratory)

Prerequisite: Credit for or registration in BIOL 171.

Recommended Preparation: High school chemistry or college chemistry.

DY

The student learning outcomes are:

- Use the scientific method of inquiry to investigate biological phenomena.
- Apply the concepts learned in BIOL 171 to an experimental and hands-on observational setting.
- Collect, reduce, and interpret biological data.
- Prepare written objective reports describing and interpreting experimental and observational results.
- Demonstrate the use of some of the standard tools of the biological scientist, such as microscopes, scales, spectrophotometers, computers, and other analytical tools.
- Apply the standard analytical procedures of biology, such as chromatography, biochemical analyses, preparation of

materials for microscopic examination, culture techniques, and statistical procedures (descriptive statistics and hypothesis testing).

BIOL 172 General Biology II (3)

Continuation of BIOL171. Anatomy, physiology, and systematics of plants and animals, behavior, ecosystems, populations, and communities. (3 hours lecture)

Prerequisite: Credit for BIOL 171 and 171L.

Corequisite: BIOL 172L.

Recommended Preparation: High school biology and college level reading and writing skills.

DB

The student learning outcomes are:

- Distinguish between the major groups of higher plants by recognizing the anatomical, morphological, developmental features, and life cycles defining these groups.
- Distinguish between the major groups of animals by recognizing the anatomical, morphological, and developmental features defining these groups.
- Describe the biology of higher plants, including the following concepts: basic plant characteristics, plant adaptations to terrestrial versus aquatic life styles, and vascular plant reproduction, growth, anatomy, nutrition, transport mechanisms, and hormonal integration.
- Describe the biology of animals, including the following concepts: adaptations to terrestrial versus aquatic life styles, embryology, behavior, and the anatomy and physiology of animal organ systems (i.e., digestion, respiration, circulation, osmoregulation, thermoregulation, immunity, reproduction, nervous, and endocrine system).
- Describe the basic principles of ecology, including population ecology, community ecology, and ecosystem function.
- Describe the characteristics of the major biomes and ecosystems of the Earth.
- Describe the interrelationships between land, sea, the atmosphere and the living things that occupy these environments.

BIOL 172L General Biology Lab II (1)

Laboratory to accompany BIOL 172. (3 hours laboratory)

Corequisite: BIOL 172.

Recommended Preparation: High school biology and college level reading and writing skills.

DY

The student learning outcomes are:

- Use the scientific method of inquiry to investigate biological phenomena.
- Apply the concepts learned in BIOL 172 to an experimental and hands-on observational setting.
- Collect, reduce, and interpret biological data.
- Prepare written objective reports describing and interpreting experimental and observational results.
- Apply standard analytical procedures for the comparative study of plants and animals, such as the handling of living and preserved materials for study, dissection procedures, preparation of materials for microscopic examination, and use of dichotomous keys.

Course Descriptions

- Identify the diagnostic anatomical features of organisms representing major groups of plants and animals.
- Identify the major systematic groups to which specimens of plants and animals belong.

BIOL 200 Coral Reefs (3)

Introduction to the biology, ecology and geology of stony corals and the reef structures they build. Topics include, but not limited to, the following: photobiology, biochemistry, physiology, reproduction, ecology, biogeography and evolution of stony corals; contributions made by other members of the coral reef community, such as algae, invertebrates, fish, sea turtles, sea birds, and marine mammals; reef formation and geomorphology; corals as resources for human utilization and the impacts of human activities upon reefs throughout the world. Emphasis will be on Hawai'i's coral reefs, but comparisons will be made among reefs from other areas. (3 hours lecture)

DB

The student learning outcomes are:

- Explain the process and philosophical basis of scientific inquiry.
- Distinguish between living things and inanimate objects.
- Describe the classification of living things, the kinds of criteria used to classify them, and the formal protocol in naming them.
- Demonstrate an understanding of the biology of corals (e.g., systematics & classification, soft tissue morphology and cytology, skeletal morphology, endosymbiosis with zooxanthellae, modes of feeding, reproduction, environmental factors that influence growth and distribution, and evolution) with an emphasis on Hawaiian corals.
- Describe the ecological relationships among the living components of coral reef communities and their interactions with the physical environment.
- Describe the types of reefs and the processes that create and shape them.
- Describe the resources that coral reefs provide, especially to Pacific island nations and states.
- Describe the impacts of human activities on coral reefs and the significance of these impacts to Pacific island nations and states.

BIOL 200L Coral Reef Laboratory and Field Studies (1)

Laboratory and field studies of the biology, ecology, and geology of stony corals and the reef structures they build; companion course to BIOL 200. (3 hours laboratory)

Prerequisite: Credit for or registration in BIOL 200 or consent of instructor.

Recommended Preparation: High school biology and algebra.

DY

The student learning outcomes are:

- Use the scientific method of inquiry to investigate biological phenomena.
- Apply the concepts learned in BIOL 200 to an experimental and hands-on observational setting.
- Collect, reduce, and interpret biological data.
- Prepare written objective reports describing and interpreting experimental and observational results.
- Demonstrate the use of some of the standard tools of the biological scientist, such as microscopes, scales, spectrophotometers, computers, and other analytical tools.

- Demonstrate the use of specialized tools and methods frequently used in the study of corals and coral reefs.

BIOL 265 Ecology and Evolutionary Biology (3)

Principles of ecology and evolution for life science majors stressing integrated approach and recent advance. (3 hours lecture)

Prerequisite: Credit for BIOL 171/171L and 172/172L; or one year of introductory college biology plus labs; or equivalent preparation; or consent of the instructor.

Corequisite: BIOL 265L; or consent of instructor

DB

The student learning outcomes are:

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

BIOL 265L Ecology and Evolutionary Biology Lab (1)

Laboratory to accompany BIOL 265. (3 hours laboratory)

Corequisite: BIOL 265; or consent of the instructor.

Recommended Preparation: ICS 101 or ICS 105B-E; or familiarity with spreadsheets, word processing, and Internet browsers.

DY

The student learning outcomes are:

- Use the scientific method of inquiry to investigate ecological and evolutionary phenomena.
- Apply the concepts learned in BIOL 265 to an experimental and hands-on observational setting.
- Apply standard analytical procedures for the study of evolution and ecology. These include the following areas of study: experimental design and set-up; descriptive statistics and hypothesis testing; age structure of a natural population; sampling and describing population attributes; sampling, describing, and quantifying the flora, fauna, and relevant abiotic characteristics of a terrestrial habitat; plant competition; optimal foraging theory; sampling and describing community characteristics and functions; primary productivity; natural selection; colonization and adaptive radiation of Hawaiian flora and fauna; taxonomy, systematics, and phylogenetics.

Course Descriptions

- Collect, reduce, and interpret ecological and evolutionary data.
- Prepare written objective reports describing and interpreting experimental and observational results.

BIOL 275 Cell and Molecular Biology (3)

Integrated cell and molecular biology for life science majors. Modern advances in recombinant DNA technology. (3 hours lecture)

Prerequisite: "C" or better in BIOL171/171L and CHEM 272/272L or consent of instructor.

Corequisite: BIOL275L or consent of instructor.

DB

The student learning outcomes are:

- Describe the principles of cytology including cell organization, structures and functions.
- Describe cell biochemistry including macromolecules of the cells, enzymes, membrane transport, cell signaling, and energy flow in cells during respiration and photosynthesis.
- Describe the principles of genetics including DNA replication, protein synthesis, mitosis, meiosis, genetic recombination and gene expression.

BIOL 275L Cell and Molecular Biology Lab (1)

Laboratory for cell and molecular biology. (3 hours laboratory)

Corequisite: BIOL 275; or consent of the instructor.

Recommended Preparation: ICS 101 or ICS 105B-E, calculus or algebra.

DY

The student learning outcomes are:

- Operate equipment used in cell and molecular biology laboratory.
- Conduct experiments including DNA/RNA/protein extraction and electrophoresis, enzyme kinetics, ELISA, RFLP, PCR, gene expression.
- Produce lab reports using the standard scientific format.

Botany

BOT 101 General Botany (4)

Introduction to plant structure, function, reproduction, and evolution; plants in relation to the environment and human activities. Lecture/laboratory/field trip course. (3 hours lecture, 3 hours laboratory)

Recommended Preparation: High school biology.

DB DY

The student learning outcomes are:

- Discuss basic concepts of plant morphology, anatomy, physiology, cytology, taxonomy and genetics.
- Discuss life cycles of division in Thallophyta, Bryophyta, Pteridophyta and Spermatophyta.
- Discuss interrelationship between plants and animals, and socio-economic importance of plants on humans.
- Discuss plant biotechnology.
- Operate dissecting and compound microscopes.
- Perform traditional and in vitro propagations.

BOT 105 Ethnobotany (3)

The scientific study of the interaction between human culture and plants, including the interrelationship of botany, socio-economics, belief systems and history that have shaped the cultural uses of plants in Hawai'i, as well as Asia or the Pacific. Lecture/field trip course with service-learning option. (3 hours lecture)

DS

The student learning outcomes are:

- Identify plants of major importance in various aspects of Hawaiian, Asian and Pacific Island cultures.
- Utilize the plants for food, medicine, and other material goods.

BOT 130 Plants in the Hawaiian Environment (4)

Introduction to the evolution of plant communities and species of Hawaiian ecosystems; ecological interactions; observations, identification and systematics of native and introduced flora. Lecture/laboratory/field trip course. (3 hours lecture, 3 hours laboratory)

DB DY

The student learning outcomes are:

- Discuss geological history of the Hawaiian Islands and natural history of plants in Hawai'i.
- Discuss the arrival, establishment, major evolutionary trends and adaptive radiation of some of the surviving native species.
- Discuss natural and human-mediated changes in the ecosystems, plant succession, and interaction between native and introduced species of plants.
- Discuss botanical terminology for use in identifying native Hawaiian plants.

BOT 160 Identification of Tropical Plants (3)

Nontechnical course in identification of common plants of tropics, including native and introduced flora. (3 hours lecture)

DB

The student learning outcomes are:

- Operate dissecting microscopes.
- Recognize unique vegetative and generative characteristics of plant families.
- Use manuals, flora and monographs to identify plants.
- Prepare herbaria.

BOT 205 Ethnobotanical Pharmacognosy (4)

A study of medicinal plants of Hawai'i, their characteristics, plant extraction, isolation and identification of their chemical constituents for possible uses in pharmaceuticals or in their natural state, and bioproduct manufacturing. This course is designed to train students for careers in plant and medical biotechnology. Lecture and laboratory/field trip course. (3 hours lecture, 3 hours laboratory)

Prerequisite: Credit for or registration in any of these courses: BOT 101, BOT 105, BOT 130, MICR 130, MICR 140, BIOL 172/172L, CHEM 152/152L or consent of instructor.

Recommended Preparation: High school biology, chemistry and math.

DB DY

The student learning outcomes are:

- Discuss theories and principles in the study of medicinal and nutritious plants.

Course Descriptions

- Discuss ethics, intellectual property rights and conservation of traditional knowledge.
- Perform Laboratory activities: plant extraction, distillation, bioassay tests, analysis of chemical constituents for possible uses in pharmaceuticals and nutraceutical products.
- Produce lab reports using the standard scientific format.

BOT 210 Phytobiotechnology (4)

Introduction to practical aspects of Plant Biotechnology. Topics include micropropagation techniques, such as plant tissue, cell and protoplast cultures: DNA-based technologies, such as DNA extraction, DNA sequencing, PCR; and methods of plant genetic engineering. This course is designed to train students for careers in advanced agriculture technology and industry. (3 hours lecture, 3 hours laboratory)

Prerequisite: Credit for or registration in BOT 101, or AG 152, or MICR 130 and MICR 140, or BIOL 171 and 171L, placement into MATH 25 or higher.

Recommended Preparation: High school biology or chemistry, MATH 24.

DB DY DY

The student learning outcomes are:

- Apply the principles of genetics.
- Discuss and perform experiments including plant/bacterial/human DNA/protein electrophoresis, Southern and Western blots, plant genetic engineering using biolistic bombardment and bacterial gene transformation.
- Apply bioinformatics and DNA sequencing.
- Discuss bioethical issues, risks and benefits of biotechnology.
- Produce lab reports using the standard scientific format.

Business

BUS 120 Principles of Business (3)

Surveys the fundamentals of the American business enterprise. Examines the foundations and responsibilities of accounting, business, management, finance, marketing, and the business environment. (3 hours lecture)

Recommended Preparation: Credit for ENG 21 and ENG 22 or higher

The student learning outcomes are:

- Demonstrate qualitative understanding of the impact of external factors on business decisions relative to the accomplishment of the mission and objectives of an organization.
- Demonstrate qualitative understanding of various forms of business ownership to determine their appropriateness relative to an organization's resources, goals, and objectives.
- Demonstrate qualitative understanding of various business functions and practices and their impact on the successful operation of a business.
- Demonstrate qualitative understanding of the impact of business decisions on the external environment.

BUS 122 Introduction to Entrepreneurship (3)

This course covers the basic economic and business principles regarding small-scale business enterprises. Focusing on the creation of a business plan, topics include researching and evaluating resources, planning, marketing, cultivating money resources, and

understanding key concepts in law, budgeting, financial statements, and business documentation. (3 hours lecture)

Recommended Preparation: BUS 120 and placement into ENG 100.

The student learning outcomes are:

- Develop a comprehensive business plan for a future business enterprise.
- Apply fundamental economic, financial, and organizational principles that govern the operation of business.
- Work collaboratively in a group setting to cultivate entrepreneurship and develop solutions to economic issues.

BUS 122B Introduction to Entrepreneurship: Sustainable Agriculture (3)

This course is a specialized section of Introduction to Entrepreneurship that focuses on sustainable agriculture. The course will cover the basic economic and business principles regarding small-scale business enterprises connected to agriculture, with a particular focus on sustainable agriculture in Hawai'i. With a focus on the creation of a business plan, topics include researching and evaluating resources, planning, marketing, cultivating money resources, and understanding key concepts in law, budgeting, financial statements, and business documentation. (3 hours lecture)

Recommended Preparation: BUS 120 and placement into ENG 100.

The student learning outcomes are:

- Develop a comprehensive business plan for a future business enterprise.
- Apply fundamental economic, financial, and organizational principles to the operation of a sustainable agriculture business.
- Work collaboratively in a group setting to cultivate entrepreneurship and develop solutions to economic issues.
- Apply general entrepreneurial concepts to sustainable agriculture practices in Hawai'i.

Business Technology

BUSN 89 Electronic Calculating (1)

This course gives students practice with real world skills used in the modern business environment; emphasizes proper technique and speed with the ten-key pad found on calculators, computer keyboards, and cash registers; develops the ability to work with numbers and use of a calculator to perform business computations. (1 hour lecture)

The student learning outcomes are:

- Demonstrate speed and accuracy on numeric keypad.
- Demonstrate ability to use common calculator functions.

BUSN 121 Introduction to Word Processing (3)

The course covers proper keyboarding techniques; word processing concepts (Microsoft® Word); and document formatting of letters, memos, tables, reports, and e-mail. Basic file management and operating system functions are included. Keyboarding speed and accuracy are emphasized. (3 hours lecture)

Recommended Preparation: Credit for ENG 21 or higher.

The student learning outcomes are:

- Key by touch when inputting information (alphabetic, numeric, and symbolic), using proper techniques with accuracy.

Course Descriptions

- Use the computer's operating system to manage documents and folders.
- Produce business documents using word processing software. Produce basic mailable business documents in a timely manner using word processing software.

BUSN 123 Word Processing for Business (3)

Uses advanced features from a word processing program to create business documents emphasizing production and proofreading. Integrates knowledge of the Internet and the computer. Includes timed computer keyboarding skills for creating and editing business documents and sending electronic attachments. (3 hours lecture)

Recommended Preparation: 35 gwam or grade of "C" or better in BUSN 121.

The student learning outcomes are:

- Apply advanced features of current word processing software to produce mailable documents, which facilitate timely internal and external business communication.
- Apply ethical and professional practices to perform business tasks, e.g.: a. compliance with copyright laws b. meet deadlines c. adhere to codes of conduct.
- Use electronic operating system software to organize and maintain folders and files.
- Key information accurately and efficiently to meet business standards.

BUSN 160 Telephone Techniques and Communication (1)

Develop customer-oriented telephone communications skills through professional relationships and knowledge of communications technology, including facsimile and mailing options. Emphasis will be on telephone handling, customer service attitude, and effective message taking. (1 hour lecture)

Prerequisite: Placement into ENG 100

The student learning outcomes are:

- Handle incoming and outgoing telephone calls with courtesy and professionalism.
- Learn to select from several methods of communication, including facsimile (Fax), e-mail, text, and voice messaging to fit the need.
- Develop awareness of basic postal and shipping alternatives, including express mail and other delivery systems.

BUSN 164 Career Success (3)

Presents concepts and theories relating to workplace behavior; managing one's attitude and relationships for workplace effectiveness. (3 hours lecture)

Prerequisite: Placement into ENG 100

The student learning outcomes are:

- Model professional behavior acceptable in a business setting.
- Evaluate and apply decision-making components for successful problem solving.
- Analyze business situations and prescribe appropriate solutions to resolve conflicts.
- Evaluate life-long learning resources available and determine appropriate times to use them.

BUSN 166 Professional Employment Preparation (1)

Facilitates employment search by emphasizing professional techniques and standards in the preparation of application forms, resumes, cover letters, and employment interviews. (Cross-listed as IS 105C.) (1 hour lecture)

Recommended Preparation: Credit for ENG 22 or higher, keyboarding skills, and knowledge of word processing.

The student learning outcomes are:

- Integrate job interview preparation techniques into a live interview.
- Utilize resources needed to find a job.
- Assemble a career portfolio for ongoing career development.

BUSN 188 Business Calculations (3)

Introduction to various quantitative computational procedures used in accounting and finance such as present and future value concepts, payroll, inventory, and international currency exchange rates. Utilization of the electronic 10-key pad as a tool for calculating will be stressed. (3 hours lecture)

Recommended Preparation: Placement into MATH 22 or higher and credit for or enrollment in ENG 21 or higher or equivalent.

The student learning outcomes are:

- Apply mathematical functions to arrive at calculations to be used in business decisions.
- Interpret how calculations are used in making business decisions.
- Operate ten-key by touch at a minimum rate of 100 ndpm.

BUSN 191 Veterinary Office and Computer Skills (3)

Veterinary Office and Computer Skills covers the support skills needed in a veterinary office. Because veterinary office skills are critical in the success or failure of a practice, this course will emphasize the following: client communication, public relations, ethical and legal procedures, bookkeeping functions, scheduling, records management, and telephone skills. Students will be introduced to one or more industry-standard veterinary software programs as well as word processing and spreadsheet software. (3 hours lecture)

The student learning outcomes are:

- Contribute to a welcoming office environment that promotes accurate interactions with patients and clients.
- Work as a team member to deliver service in an ethical, compassionate manner, following the Veterinary Technician's Code of Ethics developed by the National Association of Veterinary Technicians Association Ethics Committee.
- Perform introductory office administrative duties to insure up-to-date filing and retrieval of documents, data entry, billing and receipts, and inventory.
- Demonstrate knowledge of an industry-standard veterinary software program.
- Demonstrate introductory skills for a word processing and spreadsheet program.

BUSN 193V Cooperative Education (1-4)

Cooperative Education provides practical career-related work experience through a program used nationally in colleges and universities to apply classroom knowledge and to develop job

competencies. Full-time or part-time work in private and public sectors of the business, government and industrial communities is utilized for this program. The number of credits earned depends upon the number of hours spent at the job station during the semester. To receive credit for cooperative education, the student must complete a minimum of 60 work hours per credit and participate in class activities. Four credits may be applied to the AA degree.

Prerequisite: Instructor approval.

The student learning outcomes are:

- Perform duties at a worksite according to industry standards.
- Evaluate career choice based on personal traits, industry expectations, and work experience.

Chemistry

CHEM 100 Chemistry in Society (3)

Provides a survey of basic concepts and applications of chemistry with emphasis on the role of chemistry in the real world. This is suitable for students who have little or no background in chemistry and serves to fulfill a general education physical science core course for the nonscience major or as a preparatory course for CHEM 151. (3 hours lecture)

DP

The student learning outcomes are:

- Describe the relationship between properties and structure of matter.
- Name chemicals, balance chemical and nuclear equations.
- Solve problems involving mole and mass ratios in chemical reactions.
- Identify the types of chemical reactions (i.e. acid-base, redox, nuclear) and their applications to everyday lives.
- Explain the chemistry of household chemicals, and the composition of air and water.
- Apply knowledge of a specific chemical concept to a current environmental, health, industrial, or technological issue or condition by writing a short research paper.

CHEM 100L Chemistry in Society Laboratory (1)

Experiments in everyday chemistry. (3 hours laboratory)

Prerequisite: Credit for or registration in CHEM 100.

DY

The student learning outcomes are:

- Identify/locate laboratory safety equipment and apply laboratory safety procedures.
- Construct molecular models to determine molecular shape and properties.
- Assemble apparatus to perform common laboratory techniques to verify fundamental chemistry principles in everyday life.
- Make and record accurate observations and precise quantitative measurements.
- Synthesize conclusions based on observations and data in a formal laboratory report.
- Identify sources of error in laboratory experiments.

CHEM 151 Elementary Survey of Chemistry (3)

Provides the student with an adequate background in the fundamentals of chemistry. Covers the basic language and quantitative relationships of chemistry, including atomic structure, chemical bonding, structure-property relationships, chemical reactions. Prerequisite to CHEM 152 for majors in medical technology and nursing and other allied health and science-related fields, or can be taken as a preparatory course for CHEM 161. (3 hours lecture)

Prerequisite: Credit for MATH 24 or higher and grade of "C" or better in ENG 21 or placement in ENG 22 or higher.

DP

The student learning outcomes are:

- Predict properties of chemical elements based on their atomic structure and their location in the Periodic Table.
- Name chemical compounds, balance chemical and nuclear reactions.
- Predict properties of chemical compounds based on chemical bonding, molecular shapes, and polarity.
- Calculate mass relationships in chemical reactions and the quantity of matter in gaseous chemicals and chemical solutions.
- Predict the products of common chemical reactions.
- Apply knowledge of chemical concepts to a current environmental, health, industrial, or technological issue or condition by writing a short research paper.

CHEM 151L Elementary Survey of Chemistry Laboratory (1)

Experiments introducing laboratory techniques and illustrating chemical principles; supplemented by films, demonstrations, and problem sessions. (3 hours laboratory)

Prerequisite: Credit for or registration in CHEM 151.

DY

The student learning outcomes are:

- Identify and locate laboratory safety equipment and apply laboratory safety procedures.
- Assemble apparatus to perform common laboratory techniques to verify basic chemistry laws on gases, chemical stoichiometry, chemical equilibrium and others.
- Use molecular models and technology to investigate chemistry concepts.
- Make and record accurate observations, precise measurements and calculations applying rules on significant figures.
- Develop hypotheses, use critical thinking to process results and identify sources of error.
- Apply and articulate the scientific method by preparing a lab report using the standard scientific format.

CHEM 152 Survey of Organic and Bioorganic Chemistry (3)

Structure, nomenclature, properties and reactions of organic compounds will be studied with emphasis on those compounds of practical importance in life science and related fields. (3 hours lecture)

Prerequisite: Credit for CHEM 151 or equivalent or consent of instructor.

DP

The student learning outcomes are:

- Construct molecular models and use these to describe chemical structure, geometry and physical properties.

Course Descriptions

- Identify, classify and name organic and biochemical compounds.
- Predict products of fundamental organic reactions.
- Use the vocabulary on organic chemicals and reactions in metabolism and other biochemical applications.
- Explain the role of enzymes in metabolism.
- Apply knowledge of biochemistry concepts to discuss the genetic cause of a metabolic disorder in a short research paper.

CHEM 152L Survey of Organic and Bioorganic Chemistry Laboratory (1)

Techniques of preparation, purification, and identification of organic compounds. (3 hours laboratory)

Prerequisite: Credit for CHEM 151L and credit for or registration in CHEM 152.

DY

The student learning outcomes are:

- Develop an appreciation for the methods of scientific inquiry through laboratory experiments.
- Identify functional groups of organic chemicals using tests based on chemical properties.
- Carry out common laboratory methods of separation and purification of materials.
- Prepare polymers, esters, soap and other common organic chemicals.
- Apply laboratory safety procedures, recognize and respond to hazards.
- Gain experience in the use of several techniques to identify unknown chemicals and detect enzyme activity.

CHEM 161 General Chemistry I (3)

Basic principles of inorganic chemistry with an emphasis on problem solving. First course of a two-course sequence designed to meet the one-year General Chemistry requirement for pre-med, science and engineering majors. Topics include chemical calculations, electronic structure, chemical bonding, states of matter and solutions. (3 hours lecture)

Prerequisite: A grade of "C" or better in Math 103 or higher, or placement into Math 135 or consent of instructor.

Corequisite: Registration in CHEM 161L.

Recommended Preparation: Student should have taken high school chemistry, CHEM 100, or CHEM 151.

DP

The student learning outcomes are:

- Use the mole concept in solving stoichiometry problems involving solids, liquids, gases and solutions.
- Balance chemical equations, classify reactions, identify and analyze the role of the chemicals involved in chemical reactions.
- Predict the behavior of gases while undergoing changes in volume, pressure, temperature and quantity.
- Manipulate thermochemical equations and calculate the amount of energy involved in chemical reactions.
- Predict physical and chemical properties of elements based on electronic structure and location in the Periodic Table.
- Predict physical and chemical properties of compounds based on chemical bonding, geometry and intermolecular interactions.

CHEM 161L General Chemistry Laboratory I (1)

Laboratory experiments illustrating fundamental principles of chemistry. (3 hours laboratory)

Prerequisite: Credit for or registration in CHEM 161.

DY

The student learning outcomes are:

- Apply laboratory safety procedures and respond to hazards.
- Use molecular and crystal models, perform common laboratory techniques competently and computer-based experiments to verify chemistry laws on stoichiometry, thermochemistry, behavior of gases and liquids.
- Apply and articulate the scientific method by preparing lab reports using the standard scientific format. Express in writing core chemistry principles, results of experiments and do critical thinking by synthesizing conclusions based on observations and data.
- Make and record precise measurements, calculate results using significant figures, standard deviations and identify sources of error in laboratory experiments.
- Use computer competently, word-processing, spreadsheet and graphing.
- Prepare chemical solutions, perform dilutions, calculate solution concentrations and generate a calibration curve.

CHEM 162 General Chemistry II (3)

Second course of a two-course sequence designed to meet the one-year General Chemistry requirement for pre-med, science and engineering majors. Topics include thermochemistry, kinetics, acid-base equilibrium, solubility equilibrium and electrochemistry. Emphasis on problem solving. (3 hours lecture)

Prerequisite: A grade of "C" or better in CHEM 161, credit for or registration in MATH 135, or consent of instructor.

Corequisite: CHEM 162L.

DP

The student learning outcomes are:

- Predict properties of pure substances using phase diagrams.
- Predict properties (boiling point, melting point, osmotic pressure, vapor pressure) of solutions based on concentration.
- Determine reaction rate law and calculate rate constants and half-life based on experimental data.
- Calculate the equilibrium concentration of chemicals in solution involved in precipitation, and acid-base and reactions.
- Predict spontaneous reactions based on enthalpy and entropy considerations.
- Determine the electrochemical potential of redox reactions.

CHEM 162L General Chemistry Laboratory II (1)

Laboratory experiments illustrating fundamental principles of chemistry. (3 hours laboratory)

Prerequisite: Credit for or registration in CHEM 162.

DY

The student learning outcomes are:

- Develop an appreciation for the methods of scientific inquiry through computer-based laboratory experiments showing real-time data.
- Apply knowledge to determine molar mass of unknown substance using freezing point depression data of solution.

Course Descriptions

- Calculate chemical reaction rate and constant using graphing analysis.
- Predict the effects of concentration and temperature changes on equilibrium mixtures using Le Chatelier's principle.
- Determine whether equilibrium is established and calculate equilibrium concentrations/constants and cell potentials.
- Apply and articulate the scientific method by preparing lab reports using the standard scientific format. Express in writing core chemistry principles, results of experiments and do critical thinking by synthesizing conclusions based on observations and data.

CHEM 272 Organic Chemistry I (3)

This is the first semester course in organic chemistry intended for science majors. Topics to be covered include structure, properties, nomenclature, reactions, reaction mechanisms, stereochemistry and spectroscopy of alkanes, alkenes, alkynes, alkyl halides, alcohols and their applications to biology. (3 hours lecture)

Prerequisite: A grade of "C" or better in CHEM 162 or consent of instructor.

DP

The student learning outcomes are:

- Discuss the bonding and structure of organic compounds.
- Name various organic compounds using IUPAC rules and diagram their structures.
- Use stereochemical concepts in understanding physical and chemical properties.
- Identify chemical structure and physical chemical properties.
- Explain the relationship between structure and physical chemical properties.
- Predict reaction products, deduce starting materials and diagram reaction mechanism.
- Cite applications and important role of organic reactions in biology.

CHEM 272L Organic Chemistry Laboratory I (2)

Laboratory principles of Organic Chemistry I, the first semester course in organic chemistry intended for science majors. Topics to be covered include structure, properties, nomenclature, reactions, reaction mechanisms, stereochemistry and spectroscopy of alkanes, alkenes, alkynes, alkyl halides, alcohols and their applications to biology. (5 hours laboratory)

Prerequisite: A grade of "C" or better or registration in CHEM 272 or consent of instructor.

DY

The student learning outcomes are:

- Perform and develop skills in organic chemistry laboratory methods and techniques used in separation and purification.
- Determine the chemical identity of some organic chemicals through their properties.
- Keep complete and accurate records, manipulate data for mathematical calculations, including reactant recovery and percent yield.
- Apply laboratory safety and safety disposal of waste procedures that can be used in all future laboratory experiences.
- Gain experience in conducting synthesis and functional group conversion.
- Interpret experimental data and formulate conclusions as evidenced in laboratory reports.

CHEM 273 Organic Chemistry II (3)

This is the second semester course in organic chemistry intended for science majors. Topics to be covered include structure, properties, nomenclature, reactions, reaction mechanisms, stereochemistry and spectroscopy of conjugated systems, aromatic compounds, aldehydes, ketones, carboxylic acids and their derivatives, enols, enolates and their applications to biology. (3 hours lecture) (3)

Prerequisite: A grade of "C" or better in CHEM 272 or instructor's consent.

DP

The student learning outcomes are:

- Discuss the bonding and structure of organic compounds.
- Name various organic compounds using the IUPAC rules and diagram their structures.
- Use stereochemical concepts in understanding physical and chemical properties of organic compounds.
- Identify chemical structure based on spectroscopic data.
- Explain the relationship between structure and physical and chemical properties of organic compounds.
- Predict reaction products, deduce starting materials and diagram reaction mechanisms.
- Cite applications and the important role of organic reactions in biology.

CHEM 273L Organic Chemistry II Lab (1)

Laboratory principles of Organic Chemistry II, the second semester course in organic chemistry intended for science majors. Topics to be covered include techniques, synthesis, qualitative organic analysis and applications of spectroscopy. (4 hours laboratory) (4 hrs)

Prerequisite: A grade of "C" or better in CHEM 272L and a grade of $\geq C$ or better or registration in CHEM 273 or instructor's consent.

DY

The student learning outcomes are:

- Perform and develop skills in organic chemistry laboratory methods and techniques used in separation and purification.
- Determine the chemical identity of some organic chemicals through their properties.
- Keep complete and accurate records, manipulate data for mathematical calculations, including reactant recovery and percent yield.
- Apply laboratory safety procedures, including safe disposal of waste.
- Gain experience in organic synthesis and functional group conversion.
- Interpret experimental data and formulate conclusions as evidenced in laboratory reports.

Economics

ECON 120 Introduction to Economics (3)

A one-semester introduction to economics, which combines the macro and micro perspectives and concentrates on application of basic economic principles to analysis of public policy questions. (3 hours lecture)

DS

Course Descriptions

The student learning outcomes are:

- Explain specific tools for microeconomic analysis (e.g. opportunity cost, trade, markets, supply and demand, elasticity, cost-benefit analysis and externalities).
- Analyze, assess and predict the outcome of selected social issues (Globalization, Environment, The Family, Personal Finance, etc.) through the application of specific tools for microeconomic analysis (e.g. opportunity cost, trade, markets, supply and demand, elasticity, cost-benefit analysis and externalities).

ECON 130 Principles of Economics (Microeconomics) (3)

Study of how individuals make decisions which affect their income and wealth; how firms make decisions which affect profits and production. Relationship to demand, supply and prices of goods, and natural resources. (3 hours lecture)

DS

The student learning outcomes are:

- Translate important microeconomic terms and theories into various forms. Skills needed to achieve this outcome: Writing ability, ability to translate economic terms into their own words. Mathematical ability, ability to translate and interpret economic theories in a two dimensional graphical space.
- Explain the basic underpinnings of consumer and producer behavior. Skills needed to achieve this outcome: Research skills Writing skills Ability to formulate a hypothesis Ability to use the scientific method.

ECON 131 Principles of Economics (Macroeconomics) (3)

Study of the economic forces which determine a country's income, employment, and prices. Roles of consumers, businesses, banks, and governments are explored. (3 hours lecture)

DS

The student learning outcomes are:

- Translate important macroeconomic terms and theories into various forms. Skills needed to achieve this outcome: Writing ability, ability to translate economic terms into their own words. Mathematical ability, ability to translate and interpret economic theories in a two dimensional graphical space.
- Identify, explore and analyze macroeconomic concepts using economic analysis and research skills. Skills needed to achieve this outcome: Research skills Writing skills Ability to formulate a thesis statement Ability to back up arguments using published research and to cite that research appropriately

English

ENG 8 Reading and Writing Fundamentals (4)

This course focuses on building basic reading, writing, and life skills for college or employment success. Individualized instruction will supplement regular classroom instruction to provide the necessary practice of reading and writing skills. (3 hours lecture, 3 hours laboratory)

Prerequisite: Placement into ENG 8 or higher; or consent of instructor.

The student learning outcomes are:

- Incorporate newly-learned vocabulary into reading, writing and oral communication activities.

- Apply literal, interpretive, and critical reading skills to comprehend and analyze various types of reading material.
- Produce clear, concise, grammatical sentences.
- Apply appropriate study and learning strategies to support learning and success.

ENG 18 Reading Essentials (3)

This course provides practice in developing basic reading skills and learning strategies to help students succeed in college. Vocabulary development, comprehension skills, and study skills are the focus of this course. (3 hours lecture)

Prerequisite: Placement Into ENG 18 or higher, grade of "C" or better In ENG 8, or consent of instructor.

The student learning outcomes are:

- Demonstrate an increase in reading vocabulary through various ways, such as applying newly learned reading vocabulary in writing assignments.
- Apply literal, interpretive, and critical reading skills to comprehend and analyze various types of reading material.
- Apply various study skills strategies, such as a reading-study system to understand and retain information in informative material, time management, and lecture and textbook notetaking strategies.

ENG 19 Writing Essentials (3)

This course focuses on sentence structure and paragraph development with emphasis on unity, organization, and support. Grammar, mechanics, and punctuation will be covered. (3 hours lecture)

Prerequisite: Placement into ENG 19 or higher, grade of "C" or better in ENG 8, or consent of instructor.

The student learning outcomes are:

- Use a writing process to produce clear, concise, credible, and grammatically correct paragraphs in various organizational patterns.
- Write sentences free of errors in grammar, mechanics, and punctuation.
- Apply various study skills, such a time management, textbook reading and notetaking skills, and lecture notetaking.

ENG 21 Intermediate Reading (3)

Course designed to help the student improve his/her ability to read. Emphasizes vocabulary development, improving reading comprehension, and a more positive attitude toward reading. (3 hours lecture)

Prerequisite: Placement into ENG 21 and 97B or 19 or higher, or grade of C or better in ENG 97A and ENG 97B or ENG 18 and ENG 19; or consent of Instructor.

The student learning outcomes are:

- Incorporate vocabulary in reading and writing assignments.
- Apply literal, interpretive, and critical reading skills to comprehend and analyze various types of reading material in different reading situations.
- Apply appropriate study and learning strategies to promote student learning and success.

ENG 22 Introduction to Expository Writing (3)

A refresher course focusing on grammatical form and writing well-formed sentences and paragraphs. Use of reference materials and dictionaries is stressed. (3 hours lecture)

Prerequisite: Placement into ENG 22 or higher, or grade of "C" or better in ENG 21 and a grade of "C" or better in ENG 97B or ENG 19, or consent of instructor.

The student learning outcomes are:

- Use a writing process to produce organized and grammatically correct papers and summaries.
- Apply analytical study and life skills to course tasks.
- Apply strategies that include finding, evaluating, and documenting information from various sources.

ENG 100 Expository Writing (3)

A composition course on the writing process including description, narration, exposition, and argument. Course stresses unity, development, organization, coherence, and other basic writing skills necessary for college writing. (3 hours lecture)

Prerequisite: Grade of "C" or better in ENG 22 or placement into ENG 100 or approval of designated Language Arts representative.

FW

The student learning outcomes are:

- Write complex and well-reasoned compositions in language, style, and structure appropriate to particular purposes and audiences.
- Engage in a writing process that includes exploring ideas, considering multiple points of view, developing and supporting a thesis, revising with the help of peer and instructor feedback, editing, and proofreading.
- Find, evaluate, integrate, and properly document information from libraries, the internet, and other sources, with an eye for reliability, bias, and relevance.
- Read for main points, perspective, and purpose, and analyze the effectiveness of a variety of rhetorical strategies in order to integrate that knowledge into their writing.

ENG 102 College Reading Skills (3)

Emphasizes speed, vocabulary, comprehension, and critical thinking. Develops skimming, scanning and study reading techniques. Course requires lab work in addition to class time. (3 hours lecture)

Prerequisite: Placement into ENG 100 or 102, or credit for ENG 22, or consent of instructor.

The student learning outcomes are:

- Match an effective reading speed to one's purpose in reading different materials.
- Read with increased speed.
- Read with improved comprehension with an emphasis on critical reading skills.

ENG 204A Introduction to Creative Writing (Fiction) (3)

English 204A Introduction to Creative Writing (fiction) introduces students to the basic practices and principles involved in the writing and publication of short stories and novels. (3 hours lecture)

Prerequisite: Grade of "C" or better in ENG 100, or consent of instructor.

DA

The student learning outcomes are:

- View the world as a writer, with an eye for detail and an ear for dialogue.
- Exercise the imagination as a tool for creation.
- Write short stories or novels.
- Submit writing for publication.
- Gain and deliver useful writing feedback.

ENG 209 Business Writing (3)

A study of business and managerial writing; practice in writing letters, memos, and reports, including a report requiring research and documentation. (3 hours lecture)

Prerequisite: Grade of "C" or better in ENG 100.

DL

The student learning outcomes are:

- Understand the nature and functions of business and managerial writing.
- Apply the principles of effective business writing in composing business messages.
- Adapt a business message to its context, audience, and purpose.
- Prepare business reports, including a research report involving gathering and analyzing information, drawing conclusions, making recommendations, and documenting sources.
- Proofread and edit business writing for grammatical, spelling, punctuation and mechanical errors.
- Prepare and make effective use of presentation software.
- Compose an effective resume and employment letters.

ENG 270 Introduction to Literature: Literary History (3)

This course introduces students to the study of significant works of literature in selected historical periods. Emphasis is on discussion of and writing about characteristics and themes of the works. A student may enroll in this course more than one time (for different historical periods); however, only three credits will be applied toward degree. (3 hours lecture)

Prerequisite: A grade of "C" or better in ENG 100.

DL

The student learning outcomes are:

- Use concepts and terminology particular to literary study to analyze and interpret imaginative literary works orally and in writing.
- Respond to a work of literature as an expression of a culture's values and compare those values with the student's own.
- Enjoy a more creative, enlightened, and fulfilled life through an appreciation of literature's social, cultural, political, and philosophical themes and techniques.
- Exhibit knowledge about selected writers and their characteristic themes and techniques.

ENG 271 Introduction to Literature: Genre (3)

This course introduces students to the study of significant works of literature in selected genres. Emphasis is on discussion of and writing about characteristics and themes of the works. A student may enroll in this course more than one time (for different genres); however, only three credits will be applied toward degree. (3 hours lecture)

Prerequisite: A grade of "C" or better in ENG 100.

DL

Course Descriptions

The student learning outcomes are:

- Use concepts and terminology particular to literary study to analyze and interpret imaginative literary works orally and in writing.
- Respond to a work of literature as an expression of a culture's values and compare those with the student's own.
- Enjoy a more creative, enlightened, and fulfilled life through an appreciation of literature's social, cultural, political, and philosophical themes and techniques.
- Exhibit knowledge about selected writers and their characteristic themes and techniques.

ENG 272 Introduction to Literature: Culture and Literature (3)

This course introduces students to the study of significant works of literature in selected cultures and cultural formations. Emphasis is on discussion of and writing about characteristics and themes of the works. A student may enroll in this course more than one time (for different cultures); however, only three credits will be applied toward degree. (3 hours lecture)

Prerequisite: A grade of "C" or better in ENG 100.

DL

The student learning outcomes are:

- Use concepts and terminology particular to literary study to analyze and interpret imaginative literary works orally and in writing.
- Respond to a work of literature as an expression of a culture's values and compare those with the student's own.
- Enjoy a more creative, enlightened, and fulfilled life through an appreciation of literature's social, cultural, political, and philosophical themes and techniques.
- Exhibit knowledge about selected writers and their characteristic themes and techniques.

Family Resources

FAMR 230 Human Development (3)

This course provides students with theories of biological, cognitive, and psycho-social development from infancy to adulthood and with similarities and differences among individuals and their cultures. (3 hours lecture)

Recommended Preparation: PSY 100.

DS

The student learning outcomes are:

- Compare and contrast the various theories of human development and behavior.
- Describe biological, cognitive, and psychosocial development for each life-span period.
- Investigate the existence of similarities, differences, and uniqueness in human development among individuals and their culture.
- Apply human development theories and concepts to personal, social, educational, and occupational experiences.

Food Science and Human Nutrition

FSHN 185 Human Nutrition (3)

An introductory level biological science course which integrates basic concepts of science with the study of human nutrition. Designed for students who want an introduction to nutrition, as well as those who later choose to major in it. (3 hours lecture)

Prerequisite: Placement into ENG 100 and MATH 25 or higher, or consent of instructor.

DB

The student learning outcomes are:

- Describe the six categories of nutrients and evaluate the nutrient adequacy of a diet.
- Identify factors influencing eating habits.
- Correctly interpret and evaluate information on food labels, packages and product advertising based on generally accepted scientific methods and standards.
- Define various types of malnutrition and discuss their causes, cures, and associated health effects.
- Discuss current issues related to the safety of the food supply, using concepts from toxicology.
- Describe physiological changes that occur during the life cycle and explain the changes in nutrient needs that accompany these changes.
- Discuss various environmental and ecological conditions, which interact with human nutrition, both locally and globally.

Geographic Information Systems

GIS 150 Introduction to GIS/GPS (3)

An introductory course in the applications of geographic information systems (GIS) with a special emphasis on using ArcView GIS. Includes database construction and techniques for spatial data manipulation, analysis and display. Students will also gain basic experience with the use of Global Positioning System (GPS). Applications will be cross-disciplinary in nature, including such fields as the environmental sciences, business marketing, geopolitical demography, health/epidemic monitoring and real estate management. (3 hours lecture)

Recommended Preparation: Familiarity with basic computer operations and databases.

DS

The student learning outcomes are:

- Use basic ArcGIS desktop software functions such as displaying, modifying, and analyzing maps.
- Independently plan, organize, and present a GIS research project.
- Use a GPS unit to find locations, and import obtained GPS data into ArcGIS for further investigations.

Geography

GEOG 101 The Natural Environment (3)

Survey of the natural environment; distribution and interrelationships of climates, vegetation, soil, and land forms. (3 hours lecture)

DP

Course Descriptions

The student learning outcomes are:

- Describe the components (inputs), processes (actions) and resulting spatial patterns (outputs) of the physical environment (atmosphere, hydrosphere, lithosphere and biosphere) as a system.
- Apply the scientific method, and theories and concepts of geography to explain a physical environment.
- Explain critically the interaction of humans and the physical environment.
- Illustrate how his/her views of the physical environment have (or have not) changed.

GEOG 101L The Natural Environment Laboratory (1)

Analysis by use of maps, air photos, field and laboratory observation, and experimentation. Emphasis on Hawai'i and on human modification of environment. Required field trips during regular class hours. (3 hours laboratory)

Prerequisite: Credit for or registration in GEOG 101.

DY

The student learning outcomes are:

- Apply the scientific method to study a physical environment: Define a problem for a study, gather and record data, analyze the data, arrive at appropriate conclusions, and report the findings in written form.
- Use various instruments, such as a compass, GPS unit and thermometer, to gather environmental data.
- Use the metric system, scientific notation, graphs, and geographic and basic statistical measurements.
- Write a lab report using the standard scientific format.

GEOG 102 World Regional Geography (3)

Geography 102 is a survey of the world's major cultural regions. Environmental, cultural, political, and economic characteristics of each region and regional interactions are explored from a geographic perspective. (3 hours lecture)

DS

The student learning outcomes are:

- Demonstrate knowledge of basic geographic terms, locations, concepts, theories, and methodology.
- Demonstrating an understanding of historical, social and environmental processes shaping the world's major cultural regions.
- Apply the knowledge of basic geographic terms, locations, concepts, theories, and methodology to critically explain current world events and issues and daily events.

GEOG 122 Geography of Hawai'i (3)

This course is designed to acquaint the student with basic geographic principles and aid in understanding and appreciating the Hawaiian environment. Fundamental concepts of physical and cultural geography are presented with emphasis on Hawai'i volcanic land forms, coastal features, climate, and vegetation. Geographic aspects of population, settlement, agriculture economics, and land use are also investigated. (3 hours lecture)

DS

The student learning outcomes are:

- Describe the physical, biological and cultural elements and processes responsible for Hawai'i's current environment applying theories and concepts of geography.
- Compare and contrast the Hawaiian environment with that of a middle latitude region, such as the US mainland, Europe and East Asia.
- Evaluate the Hawaiian environment in terms of how the student would survive on a pre-human Hawaiian island.

GEOG 151 Geography and Contemporary Society (3)

Elements of population geography and urban studies, economic geography and resource management; application to current problems of developed and underdeveloped countries. (3 hours lecture)

DS

The student learning outcomes are:

- Describe and map major themes in human society and culture: population, economy, politics, language, religion, customs, and conflict.
- Apply scientific method, and theories and concepts of geography to explain the nature, history, and diffusion of the major themes.
- Synthesize cross-cultural perspectives on current issues in the major themes.
- Communicate the achievement in written form and/or in other artistic expressions such as photograph.

Geology and Geophysics

GG 101 Introduction to Geology (4)

Man's natural physical environment; the landscape, rocks and minerals, rivers and oceans, volcanism, earthquakes, and other processes inside the earth; effects of man's use of the earth and its resources. Laboratory study of minerals, rocks, and topographic and geologic maps. Lecture/laboratory/field trip course. (3 hours lecture)

DP

The student learning outcomes are:

- Understand the importance of plate tectonics in creating, modifying and recycling the surface of the earth.
- Understand the structure of the earth and how that is known, and its relationship to geophysical, geological, atmospheric and oceanographic processes.
- Comprehend the vastness of geological time and how time is measured thus the time-scale known, in addition to the history recorded in rocks of geological/atmospheric/oceanographic processes in conjunction with those that influenced the organic evolution of life.
- Realize geological hazards and the mitigation of those hazards, as well as the politics of managing a changing landscape.
- Describe the formation of mineral deposits and hydrocarbon accumulations, with an appreciation of their impermanence as resources.
- Know formational processes, types and uses of soils, minerals, fossils and rocks.

Course Descriptions

- Understand the rock cycle, its driving mechanisms, rates of cyclicity, and consequent products for interpreting the 15 billion years of earth history, and applying that knowledge towards predicting the planet's future.
- Explain the relevance of geology and geophysics to human needs, including those appropriate to Hawai'i, and be able to discuss issues related to geology and its impact on society and planet Earth.
- Apply technical knowledge of relevant computer applications, laboratory methods, and field methods to solve real-world problems in geology and geophysics.
- Use the scientific method to define, critically analyze, and solve a problem in earth science.
- Reconstruct, clearly and ethically, geological knowledge in both oral presentations and written reports.
- Evaluate, interpret, and summarize the basic principles of geology and geophysics, including the fundamental tenets of the sub-disciplines, and their context in relationship to other core sciences, to explain complex phenomena in geology and geophysics.

GG 101L Dynamic Earth Laboratory (3)

Hands-on study of minerals, rocks, and topographic maps. Examine volcanism, hydrology, coastal processes and hazards, geologic time and earthquakes. Field trips to investigate landslides, beaches and O'ahu geology. (3 hours laboratory)

DY

The student learning outcomes are:

- Explain the relevance of geology and geophysics to human needs, including those appropriate to Hawai'i, and be able to discuss issues related to geology and its impact on society and planet Earth.
- Apply technical knowledge of relevant computer applications, laboratory methods, and field methods to solve real-world problems in geology and geophysics.
- Use the scientific method to define, critically analyze, and solve a problem in earth science.
- Reconstruct, clearly and ethically, geological knowledge in both oral presentations and written reports.
- Evaluate, interpret, and summarize the basic principles of geology and geophysics, including the fundamental tenets of the sub-disciplines, and their context in relationship to other core sciences, to explain complex phenomena in geology and geophysics.

GG 103 Geology of the Hawaiian Islands (3)

Hawaiian geology and geologic processes: origin of Hawaiian Islands, volcanism, rocks and minerals, land forms, stream and coastal processes, landslides, earthquakes and tsunamis, ground water, geologic and environmental hazards. Field trips arranged. (3 hours lecture)

DP

The student learning outcomes are:

- Understand formational and evolutionary processes, as well as time-scales for these processes in the construction, modification and destruction of a Hawaiian island and its landscape.

- Relate Hawaiian volcanism to other types of volcanism in terms of plate tectonics, magma/rock types, magmatic plumbing systems, edifice construction/destruction, eruption types, and eruptive products.
- Describe how volcanoes are monitored and eruptions predicted.
- Realize the significance of volcanism in the rock cycle.
- Appreciate the benefits of volcanism to Hawai'i as in geothermal energy, ground water, soils, and more.
- Appreciate volcanic hazards and mitigation of those hazards with a focus on Hawai'i.
- Comprehend the vastness of geological time and how time is measured thus the time-scale known.
- explain the relevance of geology and geophysics to human needs, including those appropriate to Hawai'i, and be able to discuss issues related to geology and its impact on society and planet Earth.
- Apply technical knowledge of relevant computer applications, laboratory methods, and field methods to solve real-world problems in geology and geophysics.
- Use the scientific method to define, critically analyze, and solve a problem in earth science.
- Reconstruct, clearly and ethically, geological knowledge in both oral presentations and written reports.
- Evaluate, interpret, and summarize the basic principles of geology and geophysics, including the fundamental tenets of the sub-disciplines, and their context in relationship to other core sciences, to explain complex phenomena in geology and geophysics.

GG 166 Planetary Geology (3)

Study of the geology and geophysics of earthlike planets and satellites in the solar system, with emphasis on understanding terrestrial geology in a broader, astronomical context. Topics covered: major processes determining structure and surface features of planets and techniques for remote sensing. (3 hours lecture)

Prerequisite: Credit for ASTR 110 and GG 101 or consent of instructor.

DP

The student learning outcomes are:

- Discuss the general characteristics of objects in the solar system and discuss the nature of the sun and its influence planetary systems.
- Outline evolution of planetary surfaces and discuss comparative planetology from a geological perspective.
- Assess the effects and implications of collisional impacts on planetary surfaces.
- Compare and contrast terrestrial and jovian planets and their moons.
- Classify meteorite and discuss their mineral contents; and compare and contrast comets and asteroids.
- Summarize the findings of manned and unmanned space flight.
- Identify the appropriate instruments, detectors and space probes used by astronomers and space scientists to explore the solar system, especially the techniques of remote sensing in planetary exploration.
- Discuss the evidence for extraterrestrial life in the solar system.

GG 210 O'ahu Field Geology (1)

Field trip and laboratory sessions relating to the Geology of O'ahu.

Prerequisite: Credit for or registration in GG 101, GG 103, or consent of instructor.

DY

The student learning outcomes are:

- Understand through field observation, with field and laboratory exercises, geological processes that construct, modify, and destroy the Hawaiian landscape.
- Realize the hazards, mitigation of these hazards and benefits of Hawaiian volcanism, and its relationship to island culture(s).
- Appreciate current research and studies of Hawaiian volcanism through visits to appropriate museums and research laboratories.
- Understand the vastness of geological time applied to Hawai'i, and how time is measured thus the time-scale known.

GG 211 Big Island Field Geology (1)

A four-day field trip on the island of Hawai'i. A survey of Hawaiian volcanic processes is illustrated by studying Kilauea, Mauna Kea, Mauna Loa, Hualalai, and Kohala volcanoes. Students are responsible for air and ground transportation, meals, and lodging.

Prerequisite: Credit for or registration in GG 101, GG 103, or consent of instructor. Must have medical clearance.

DY

The student learning outcomes are:

- Understand through field observation, with field and laboratory exercises, geological processes that construct, modify, and destroy the Hawaiian landscape.
- Realize the hazards, mitigation of these hazards and benefits of Hawaiian volcanism, and its relationship to island culture(s).
- Appreciate current research and studies of Hawaiian volcanism through visits to appropriate museums and research laboratories.
- Understand the vastness of geological time applied to Hawai'i, and how time is measured thus the time-scale known.

GG 212 Maui Field Geology (1)

A four-day field trip on the island of Maui. A survey of Hawaiian volcanology and geomorphology illustrated by field studies of Haleakala and West Maui volcanoes. Students are responsible for air and ground transportation, meals, and lodging.

Prerequisite: Credit for or registration in GG 101, GG 103, or consent of instructor. Must have medical clearance.

DY

The student learning outcomes are:

- Understand through field observation, with field and laboratory exercises, geological processes that construct, modify, and destroy the Hawaiian landscape.
- Realize the hazards, mitigation of these hazards and benefits of Hawaiian volcanism, and its relationship to island culture(s).
- Appreciate current research and studies of Hawaiian volcanism through visits to appropriate museums and research laboratories.
- Understand the vastness of geological time applied to Hawai'i, and how time is measured thus the time-scale known.

GG 213 Moloka'i, Lana'i, and Kaho'olawe Field Geology (1)

A four-day field trip on the islands of Moloka'i and Lana'i. Field studies of East Moloka'i, West Moloka'i, Mokolua (Kalaupapa) and Lana'i volcanoes, and directed reading on Kaho'olawe volcano. Students are responsible for air and ground transportation, meals, and lodging.

Prerequisite: Credit for or registration in GG 101, GG 103, or consent of instructor. Must have medical clearance.

DY

The student learning outcomes are:

- Understand through field observation, with field and laboratory exercises, geological processes that construct, modify, and destroy the Hawaiian landscape.
- Realize the hazards, mitigation of these hazards and benefits of Hawaiian volcanism, and its relationship to island culture(s).
- Appreciate current research and studies of Hawaiian volcanism through visits to appropriate museums and research laboratories.
- Understand the vastness of geological time applied to Hawai'i, and how time is measured thus the time-scale known.

GG 214 Kaua'i and Ni'ihau Field Geology (1)

A four-day field trip on the island of Kaua'i to study the volcanological evolution and continuing geological history of Kaua'i and Ni'ihau volcanoes. Students are responsible for air and ground transportation, meals, and lodging.

Prerequisite: Credit for or registration in GG 101, GG 103, or consent of instructor.

DY

The student learning outcomes are:

- Understand through field observation, with field and laboratory exercises, geological processes that construct, modify, and destroy the Hawaiian landscape.
- Realize the hazards, mitigation of these hazards and benefits of Hawaiian volcanism, and its relationship to island culture(s).
- Appreciate current research and studies of Hawaiian volcanism through visits to appropriate museums and research laboratories.
- Understand the vastness of geological time applied to Hawai'i, and how time is measured thus the time-scale known.

Hawaiian Language

HAW 101 Elementary Hawaiian I (4)

An elementary course in the Hawaiian language which focuses on rules of grammar, pattern drills, the building of an adequate vocabulary to facilitate conversation, and reading of selected materials at an elementary level. (4 hours lecture, 1 hour laboratory)

The student learning outcomes are:

- Recognize and reproduce the correct pronunciation of consonants, semivowels, vowels, diphthongs, words and names in Hawaiian.
- Demonstrate the ability to comprehend and respond to basic directions, requests, questions and answers.

Course Descriptions

- Demonstrate the ability to generate basic phrases and sentences for everyday situations with a vocabulary of 400-500 Hawaiian words, plus idiomatic expressions.
- Demonstrate the ability to read and write Hawaiian sentences at an elementary level on subject matter covered in class.
- Speak Hawaiian with the proper inflection, intonation, and rhythm.

HAW 102 Elementary Hawaiian II (4)

Continuation of HAW 101. (4 hours lecture, 1 hour laboratory)

Prerequisite: Credit for HAW101 or consent of instructor.

The student learning outcomes are:

- Demonstrate the increased ability to comprehend and respond to basic spoken Hawaiian about daily activities, about the student's life and interests and to narrate past, present and future events.
- Demonstrate the increased ability to read and write Hawaiian sentences using more grammatical patterns and a working vocabulary of some 1,000 words, plus idiomatic expressions.
- Speak Hawaiian with increasing fluency and with correct inflection, intonation and rhythm.

HAW 201 Intermediate Hawaiian I (4)

Continuation of HAW 102 with emphasis on increasing proficiency in use of major sentence patterns in reading, writing, conversation, and translation. (4 hours lecture, 1 hour laboratory)

Prerequisite: Credit for HAW 102 or consent of instructor.

The student learning outcomes are:

- Demonstrate the ability to comprehend and respond to sentence structures of greater length and complexity on a variety of topics.
- Demonstrate the ability to comprehend, speak, read and write at the intermediate level with a working vocabulary of some 1,500 words, plus idiomatic expressions.
- Write original expositions and communicate on a variety of topics within the student's experience.

HAW 202 Intermediate Hawaiian II (4)

Continuation of HAW 201. Further refinement of basic language skills including vocabulary development beyond the 201 level. Increased control over structures and idioms. Includes readings about history, culture, and diverse forms of literature. (4 hours lecture, 1 hour laboratory)

Prerequisite: Credit for HAW 201 or consent of instructor.

The student learning outcomes are:

- Listen and sustain comprehension of connected discourse on a variety of topics.
- Demonstrate oral and written proficiency in grammatical patterns of greater complexity, with a working vocabulary of some 2,000 words, plus idiomatic expressions.
- Demonstrate the ability to initiate, sustain and close a general conversation with a number of strategies appropriate to a range of circumstances and topics.
- Demonstrate a basic familiarity with Hawaiian verbal art forms; 'ōlelo no'eau, mele, oli, pule, mo'olelo, and ka'ao.

Hawaiian Studies

HWST 107 Hawai'i: Center of the Pacific (3)

An introduction to Hawai'i and Hawaiian culture in the context of the larger Pacific, including Hawaiian origins, settlement, language, land, history, society, religion and the arts. (3 hours lecture)

DH

The student learning outcomes are:

- Compare and contrast cultures and histories of Pacific island peoples in relation to their languages, religious traditions, artistic expressions, material culture, and political and economic development.
- Identify ways in which the environment has shaped Hawaiian and Pacific island culture.
- Describe the integration of land in Hawaiian culture and the historic changes in the relationship between people and land through written and oral communication.
- Describe aspects of Hawaiian relationship with other groups of people in and outside of Hawai'i.
- Identify, access, and evaluate major Hawaiian studies sources.
- Identify implications of the relationships and develop proposals for possible ways to affect positive change.

HWST 115 Mo'okūauhau: Hawaiian Genealogies (3)

This is a course in which students will learn about the centrality of genealogy to Hawaiian history, culture, and family. Students of any ancestry or background will gain value in learning about a central aspect of Hawaiian culture, and in doing research that is geared toward either their own family genealogy or the researching of the genealogies of public figures, or historical figures. Students will be guided through a research process and set of research methodologies for vital statistics, land, tax, census, historical material, and online resources. Students will also learn chiefly and family genealogies of Hawai'i, which is a Hawaiian method through which some of the history of Hawai'i is also explored. By completion of the semester, students will be expected to assemble a genealogy and family history beyond what they might already have completed before enrollment in this class for either themselves or a public figure cleared by the instructors of this course. (3 hours lecture)

DH

The student learning outcomes are:

- demonstrate knowledge of the centrality and importance of genealogy to Hawaiian culture.
- show knowledge of some of the major genealogies of Hawaiian chiefs and large families in Hawai'i.
- demonstrate the ability to conduct research in public and private institutions in Hawai'i, and through the use of internet genealogy websites.
- show that they are able to research and construct a genealogy and family history.

HWST 130 Hula 'Ōlapa: Traditional Hawaiian Dance (3)

In this class students will learn various beginning traditional hula interpretations. Students will be taught the basic footwork and hand gestures of traditional hula accompanied by chanting, Ipu

Heke (double gourd) or Pahu (drum). Students may also be required to make accompanying instruments like Ipu (smaller single gourd), Kala'au (sticks), 'Ili'ili (stones), and Pū'ili (split bamboo), and learn accompanying oli (chants) under the direction of the class instructor. Students will be taught different historical aspects of specific hula, associated hula mythology, ali'i (chiefly) genealogies, plants and place names. (2 hours lecture, 2 hours laboratory)

DA

The student learning outcomes are:

- Learn a basic understanding of the differences between traditional and more modern styles of hula including the significance of hula as part of Hawaiian culture in traditional times.
- Learn the histories and mythologies behind the creation and performance of various hula.
- Learn how to perform several hula in unison, and the relationship between movements with the significance of lyrical content in a mele or oli combined with the occasions for which one is dancing.
- Learn how to prepare adornments for their specific hula.

HWST 131 Hula Ōlapa 'Elua: Traditional Hawaiian Dance II

Continuation of HWST 130. In this second class students will learn intermediate traditional hula interpretations. Foot work and hand gestures of traditional hula will be reinforced accompanied by chanting, Ipu Heke (double gourd) or Pahu (drum). Students will be exposed to chants, and pule of traditional and ceremonial protocols related to the discipline of hula. Students may also be required to make accompanying instruments, like Ipu (smaller single gourd), Kala'au (sticks), 'Ili'ili (stones), and Pū'ili (split bamboo) under the direction of the class instructor. Students will be taught different historical aspects of specific hula, associated hula mythology, ali'i (chiefly) genealogies; plants, and place names. (2 hours lecture, 2 hours lecture/lab)

Prerequisite: Credit for HWST 130, and enrollment in or credit for HAW 101 or HWST 107

DA

The student learning outcomes are:

- Describe and discuss the stories behind the creation and performance of various hula.
- Perform several hula demonstrating the relationship between movements and the significance of lyrical content in mele.
- Prepare and use adornment for specific hula.

HWST 135 Kālai Lā'au: Hawaiian Woodwork and Wood Carving (3)

This is a Hawaiian cultural woodwork and wood carving project class. This class will involve the development of two to three introductory woodworking projects of Hawaiian cultural significance or ceremonial use. Through this class the students will develop both the skills needed to work effectively and safely with wood, and the cultural knowledge important to the pieces developed. As a project class, there will be specific projects and themes set by the instructor of general Hawaiian cultural interest. Students will learn different aspects and solutions in carving and creating Hawaiian cultural projects. (6 hours lecture/lab)

DA

The student learning outcomes are:

- Learn to plan and create wood working projects of Hawaiian cultural relevance or significance.
- Gain a deeper insight into Hawaiian cultural use of wood.
- Gain a deeper understanding of the cultural significance of the wood-working project the student has undertaken.
- Learn to work with wood in an effective and safe manner.

HWST 136 Kālai Lā'au: Hawaiian Woodwork and Wood Carving (3)

This is a Hawaiian cultural carving class that is a continuation of the themes and techniques learned in HWST 135 Kālai Lā'au. Students will be required to complete at least one large piece and two highly finished smaller pieces. Students will be expected to have a basic understanding of carving upon entering the class and will spend their time tuning and working on a larger scale. Through this class students will develop skills and techniques with more advanced tools needed to work effectively and safely with wood, bone, and/or stone, and students will acquire the cultural knowledge important to the pieces developed. Students will also learn how to make some of the tools required for use in the class. (6 hours lecture/lab)

Prerequisite: Credit for HWST 135 with a grade of "B" or better, or consent of the instructor.

DA

The student learning outcomes are:

- Students will plan and complete carving projects using advanced tools on wood, stone, and bone in an effective and safe manner.
- Students will research and analyze Hawaiian cultural use of wood, bone, and stone.
- Students will be able to design, forge and finish a tool for use in carving projects.

HWST 222 Ma'awe No'eau: Hawaiian Fiber Work (3)

This is a Hawaiian cultural fiber arts project class. This class will involve the development of three to four introductory fiber arts projects of Hawaiian cultural significance or ceremonial use. Through this class students will learn how to procure the materials needed to complete various fiber arts projects, including learning related protocol and methods for gathering, understanding of Native Hawaiian gathering rights, and the type of environments in which specific materials grow and can be gathered. Students will develop the skills needed to work effectively and safely with various fiber arts materials on introductory projects, and students will learn the cultural knowledge important to the pieces created. As a project class, there will be specific projects and themes set by the instructor of general Hawaiian cultural interest. (6 hours lecture/lab)

DA

The student learning outcomes are:

- Plan, create, and finish, in a safe and effective manner, fiber arts projects of Hawaiian cultural relevance or significance.
- Explain issues and history of fiber material use in Hawaiian culture and, observing cultural protocols, apply these to gathering materials for a fiber arts project.

Course Descriptions

HWST 255 Introduction to the Hawaiian Kingdom (3)

This course covers the origins and features of the Hawaiian state. Starting with Hawai'i's roots as a navigator society, this course explores the island kingdoms of Kaua'i, O'ahu, Maui and Hawai'i island. Detailed interaction between Hawaiians and navigators from other countries around the world such as Cook and Vancouver open up an investigation through the reign of Kamehameha I and his powerful wife Ka'ahumanu. The decision to construct a constitutional monarchy, achieve state recognition and develop a modern nation-state are examined further through the eighty-eight year period of Kingdom of Hawai'i statecraft. Using tools from history, linguistics, political science and law, students will engage the transition of Hawaiian political systems as they emerged across specific periods with an eye towards developing theoretical frameworks for understanding why Hawaiian political systems progressed as they did. (3 hours lecture)

DH

The student learning outcomes are:

- Identify and analyze key narratives, historical figures and events in the discovery and settlement of the Hawaiian Islands.
- Identify and analyze key historical figures and events in the formation and development of the Hawaiian nation and state through the 19th century.
- Describe and analyze the historical interaction between Hawaiian and European values, ideas and technology as they relate to political systems.

HWST 270 Hawaiian Mythology (3)

A survey of gods, 'aumakua, kupua, mythical heroes, heroines and their kinolau as the basis of traditional Hawaiian metaphor. (3 hours lecture)

Prerequisite: Credit for HWST 107 or HAW 102.

DH

The student learning outcomes are:

- Evaluate and analyze the relationship between Hawaiian mo'olelo, Hawaiian religion, and Hawaiian social structure.
- Analyze how Hawaiian mo'olelo illustrate and set precedents for Hawaiian cultural values.
- Compare and contrast Hawaiian and Western concepts of 'history' and 'myth'.
- Identify and access major written and oral sources for Hawaiian mo'olelo.
- Recount with details at least one Hawaiian mo'olelo and illustrate similarities with others.
- Describe and classify different characters from Hawaiian mo'olelo.

HWST 273 Tattoo Traditions of Polynesia (3)

An overview of the traditional tattoo practices of the various Polynesian islands within the context of the great Pacific. (3 hours lecture)

DH

The student learning outcomes are:

- Compare and contrast the migrations and the peopling of the Pacific focusing on ancestral connections and continuities in the tattoo practices of the Pacific peoples.

- Identify primary and secondary source material and incorporate original documents in their analysis whenever possible.
- Identify the cultural contexts and differences (both traditional and modern) among the tattoo styles of the primary Polynesian groups.

HWST 275 Wahi Pana: Mythology of the Hawaiian Landscape (3)

Wahi Pana: Mythology of the Landscape, is designed to illuminate Hawaiian intelligence regarding the geographic features of these islands. Students will undertake a basic study of the natural sciences from a Western/modern perspective. They will then look at various Hawaiian chants and epic tales to explore the connections with indigenous knowledge forms found in a Hawaiian worldview. Cross-cultural comparisons are made with the goal of bringing forth specific, physical information about important Hawaiian places. Students will gain cultural awareness of their surroundings through the bridging of geography and the mythology studied, thus creating a more Hawaiian sense-of-place in our community. (3 hours lecture)

Prerequisite: Grade of "C" or better in HWST 107, or HWST 270.

Recommended Preparation: REL 205.

The student learning outcomes are:

- Students will compare and contrast landscape descriptions, mythology, and human behavior from different cultural perspectives.
- Students will analyze Hawaiian mythology as it applies to Hawaiian place names, Native Hawaiian social history, and Native Hawaiian relationship to the natural environment.
- The student will explain the importance of place in the island ecosystem and the values of environmental sustainability.

HWST 275L Wahi Pana: Mythology of the Hawaiian Landscape Field Lab (1)

This field lab supports HWST 275. Together, they illuminate Hawaiian intelligence regarding the geographic features of these islands. The course highlights the Ko'olau districts (Waimānalo to Waimea) or O'ahu as a living classroom resource where the Wahi Pana (sacred places) and mythology of the landscape can be seen and appreciated. Students will explore connections between the social and natural sciences, and indigenous knowledge forms found in a Hawaiian worldview from observing their physical surroundings. Cross-cultural comparisons are made with the goal of bringing forth specific, physical information about important Hawaiian places. (3 hours laboratory)

Prerequisite: Enrollment or credit in HWST 275 lecture component

DH

The student learning outcomes are:

- Students will examine the physical properties of the geographic landscape to identify their place in Hawaiian myths.
- Students will observe the physical properties of the physical landscape and describe them from a Hawaiian worldview.

HWST 285 Lā'au Lapa'au I: Hawaiian Medicinal Herbs (4)

In this class students will learn the basic philosophy and traditions surrounding Hawaiian healing herbs. Students will also learn how to identify, grow, harvest, prepare, store and use these herbs for various human ailments. (3 hours lecture, 3 hours laboratory)

Course Descriptions

Prerequisite: Credit for HWST 107 or BOT 105.

DH

The student learning outcomes are:

- Learn Hawaiian and introduced medicinal herbs and be able to identify them by name, color, smell, taste, and sight.
- Learn the beliefs and practices of Hawaiian herbal healing.
- Learn planting, growing and harvesting techniques used to raise traditional Hawaiian herbal healing plants.
- Prepare, use and store Hawaiian herbal remedies.

Health

HLTH 125 Survey of Medical Terminology (1)

HLTH 125 familiarizes the student with medical terminology used in both human and animal medicine through analysis of prefixes, suffixes, and word roots. This course covers the pronunciation, spelling, and definitions of selected medical words dealing with mammalian body systems. Commonly used medical abbreviations and pharmacological terms are also discussed. (1 hour lecture)

Prerequisite: Grade of "C" or better in ENG 21 or placement into ENG 22 or higher.

The student learning outcomes are:

- Correctly define, spell and pronounce selected medical terms dealing with anatomical planes and regions, anatomy of major body systems and associated diseases and disorders.
- Correctly use plural endings for medical terms.
- Apply knowledge of root words, prefixes and suffixes to identify meaning of novel medical terms.
- Define and give examples of terminology used to describe common surgical and diagnostic procedures.
- Recognize and define common medical and pharmacological abbreviations.

History

HIST 151 World Civilization I (3)

A survey course focusing on significant historical events and patterns of development in world civilizations from the prehistoric period to the 1500's. (3 hours lecture)

FGA

The student learning outcomes are:

- Identify important individuals, events, places, organizations and concepts in pre-modern world history.
- Arrange, in chronological order, significant events in world history.
- Describe and analyze global processes from prehistory to 1500 C.E. (e.g. human migration, ecological forces, spread of world religions, creation of empires).
- Explain cause and effect relationships in history.
- Compare and contrast historical experiences across cultures and time.
- Relate historical events to contemporary issues and events.

HIST 152 World Civilization II (3)

A survey course focusing on the historical development of selected areas of the world from the 16th century to the present. Emphasis placed on analysis of the impact of industrialization, East-West interaction, and the rise of nationalism. (3 hours lecture)

FGB

The student learning outcomes are:

- Identify important individuals, events, places, organizations and concepts in modern world history.
- Arrange, in chronological order, significant events in world history.
- Describe and analyze global processes from 1500 C.E. to the present (e.g. human migration, ecological forces, imperialism, decolonialism, industrialism, nationalism, globalization).
- Explain cause and effect relationships in history.
- Compare and contrast historical experiences across cultures and time.
- Relate historical events to contemporary issues and events.

HIST 230 Pre-Modern European Civilization (3)

A survey of Pre-Modern Europe to 1500 CE. Focus is given to the political evolution and the major economic, social, and cultural development of European states. (3 hours lecture)

Recommended Preparation: HIST 151

DH

The student learning outcomes are:

- Analyze the individuals' roles, events, ideas, and processes (i.e., human migrations, ecological forces, cross-cultural encounters, spread of world religions) that gave rise to a distinct European civilization.
- Synthesize primary sources in order to evidence an argument dealing with a significant issue in Pre-Modern European history.
- Evaluate contemporary issues and events in terms of Pre-Modern European events (i.e., historical roots).

HIST 231 Modern European Civilization I (3)

HIST 231 is a survey of European history from 1500 to 1800. Focus is given to the political evolution and the major economic, social, and cultural development of European States. (3 hours lecture)

Prerequisite: Credit for ENG 100.

Recommended Preparation: HIST 151 and 152.

DH

The student learning outcomes are:

- Identify important individuals, events, places, organizations and concepts in modern European history.
- Arrange, in chronological order, significant events in modern European history.
- Describe and analyze the processes that both allowed Europe to transform into a modern state and play a dominant role in the world (e.g., overseas exploration, trade, cross-cultural interactions, colonialism, capitalism, etc.).
- Explain cause and effect relationships in history.
- Relate historical events to contemporary issues and events.

Course Descriptions

HIST 232 Modern European Civilization II (3)

HIST 232 is a continuation of HIST 231. It is a survey of the political evolution and major economic, social, and cultural development of European States from Napoleon (1800) to the present. (3 hours lecture)

Prerequisite: Credit for ENG 100.

Recommended Preparation: HIST 151 and 152.

DH

The student learning outcomes are:

- Identify important individuals, events, places, organizations and concepts in modern European history.
- Arrange, in chronological order, significant events in modern European history.
- Describe and analyze the processes that shaped modern Europe (e.g., industrialization, nationalism, cross-cultural interactions, imperialism, colonialism, migration, decolonialism, etc.).
- Explain cause and effect relationships in history.
- Relate historical events to contemporary issues and events.

HIST 241 Civilizations of Asia I (3)

A survey course covering the development of the major civilizations of East Asia, South and Southeast Asia, and historical personages and events from the earliest periods to the 1500's. (3 hours lecture)

DH

The student learning outcomes are:

- Identify important individuals and events in premodern Asian history, i.e. demonstrate historical literacy.
- Describe cause and effect relationships in Asian history.
- Order chronologically significant events in Asian history.
- Describe major Asian historical processes (e.g. the agricultural revolution, the rise and spread of religions, the development of political institutions, etc.)
- Acquire a sense of historical perspective.
- Demonstrate an understanding of historical concepts as they relate to premodern Asian historical issues and events.

HIST 242 Civilizations of Asia II (3)

A survey course focusing on the changes/development of the major civilizations of East Asia, South and Southeast Asia from the Sixteenth Century to the present. Particular emphasis placed on an analysis of representative Asian societies, the Asian response to the West, and Asian nationalism. (3 hours lecture)

DH

The student learning outcomes are:

- Identify important individuals and events in modern Asian history, i.e. demonstrate historical literacy.
- Describe cause and effect relationships in history.
- Order chronologically significant events in modern Asian history.
- Describe modern Asian historical processes (e.g. human migration, disease, ecological imperialism, de-colonization, industrialization, nationalism, etc.).
- Acquire a sense of historical perspective.
- Demonstrate an understanding of historical concepts as they relate to historical issues and events in Asia during the past five centuries.

HIST 281 Introduction to American History I (3)

An introduction to American history covering significant events in U.S. history from the colonial to Civil War period. (3 hours lecture)
DH

The student learning outcomes are:

- Describe, analyze and interpret the major themes in American history from the pre-Columbian period, through the colonial era, the American Revolution, early 19th century and the Civil War period.
- Identify important individuals and events in American history through the Civil War.
- Critically analyze primary sources.
- Make connections between contemporary events and American history.

HIST 282 Introduction to American History II (3)

Continuation of HIST 281 focusing on significant events in American history from Reconstruction (1865) to the present. (3 hours lecture)
DH

The student learning outcomes are:

- Describe, analyze and interpret the major themes in American history from Reconstruction through the 20th century to the present.
- Identify important individuals and events in American history from Reconstruction to the present.
- Critically analyze primary sources.
- Make connections between contemporary events and American history.

HIST 284 History of Hawai'i (3)

A general study of the social, political and economic development of Hawai'i from the ancient Hawaiians to the present. (3 hours lecture)
DH

The student learning outcomes are:

- Describe, analyze and interpret the major themes in history of Hawai'i from the pre-contact period to the present.
- Critically analyze primary sources.
- Identify important individuals and events in the history of Hawai'i.
- Make connections between contemporary events and Hawai'i's history.

HIST 285 Environmental History of Hawai'i (3)

This course investigates human interactions with the natural world in the Hawaiian Islands. It is interdisciplinary, drawing on insights from history, geography, anthropology and the natural sciences. Topics covered will include island biogeography and evolution; the natural and human histories of Hawai'i; Hawaiian and American attitudes toward the environment; the impact of introduced diseases, plants and animals in Hawai'i. (3 hours lecture)

Prerequisite: Credit for HIST 151 or HIST 152 or consent of the instructor.

The student learning outcomes are:

- Describe cause and effect relationships in the interaction between humans and their environment.
- Understand global processes as humans, plants, animals and diseases move around the world.

- Investigate traditional Hawaiian attitudes toward nature.
- Understand the evolution of American attitudes toward nature.
- Apply outcomes 1 through 4 to historical events specific to Hawai'i and the Windward side of O'ahu.
- Acquire a sense of historical perspective for current environmental problems.

Humanities

HUM 100 Introduction to Humanities (3)

HUM 100 is for students seeking a multicultural integration of the arts. It is a global, historical and comparative exploration of music, art, literature, drama, philosophy, religion, architecture and related artistic expressions. It is designed to deepen awareness of how human beings symbolize essential ideas. (3 hours lecture)

DA

The student learning outcomes are:

- Describe the similarities and differences between Eastern and Western art forms.
- Explain how the arts symbolize cultural identity.
- Trace the historical development of an area of the humanities (art, music, literature, architecture, drama, dance, philosophy or religion).

HUM 269V Study Abroad (Designated Region) (1-6)

An on-site study of designated society's values, arts and culture. (30 hours lecture/laboratory per credit trip total)

Prerequisite: Meet with instructor for approval.

DA

The student learning outcomes are:

- Demonstrate understanding of and sensitivity to the peoples and culture of the designated location(s) visited.
- Demonstrate awareness of internationalism and an interdependency of cultures.
- Compare cultural values and methods of coping with our changing world.
- Discuss orally and in writing, ways in which the humanities enrich daily life in the societies visited, and in his or her own society.

Information and Computer Sciences

ICS 50 Basic Computer Skills (3)

In this introductory computer course, students will learn basic file management, e-mail, word processing, and presentation software. Students will learn to find and evaluate information found on the Web. This course is recommended for students with few or no computer skills. (3 hours lecture)

The student learning outcomes are:

- Use e-mail to send and receive messages with attachments.
- Navigate a computer's file management system and perform basic file management tasks.
- Create, edit, format and print word processing documents and presentations.
- Identify what information is needed for a given situation; find and evaluate information.

ICS 100 Computing Literacy and Applications (3)

This course is an introduction to information technology. Upon completion of the course, the student should be able to: Describe the process of changing data into information; Identify the benefits of being computing literate and how computing competency will affect their future; Describe how computers have affected society; Discuss computer ethics; Demonstrate an understanding of computer terminology; Identify hardware components; Identify and describe a variety of software programs; Produce word processing, spreadsheet and database documents; Manipulate graphical objects in the above; Demonstrate an understanding of online and multimedia communication; Manage assignments using the World Wide Web and the Internet. (3 hours lecture)

Recommended Preparation: ENG 22 and MATH 22 or higher.

DS

The student learning outcomes are:

- Utilize the basic features of computer applications to communicate effectively (major content area).
- Utilize operating system interfaces to manage computer resources effectively.
- Utilize online resources for research and communication.
- Define, explain, and demonstrate proper computer terminology usage in areas such as hardware, software, and communications.
- Describe ethical issues involved in the use of computer technology.

ICS 101 Digital Tools for the Information World (3)

Hands-on computer class with emphasis on producing professional-level documents, spreadsheets, presentations, database, and web pages for problem solving. Includes concepts, terminology, and a contemporary operating system. Meets requirement for College of Business (UH Mānoa and UH Hilo) and UH Mānoa's Biology and Botany Department. (3 hours lecture)

Recommended Preparation: College algebra.

The student learning outcomes are:

- Utilize the appropriate computer applications to produce professional-level documents, spreadsheets, presentations, databases, and web pages for effective communication (major content area).
- Produce documents in a variety of formats.
- Create, edit, and format electronic spreadsheets using formulas, functions, and charts.
- Utilize a database with queries and reports that display required data.
- Create and organize a variety of electronic slides using templates, background styles, graphics, photos, and animation effects.
- Create web pages that contain hyperlinks and images that are suitable for publication.
- Utilize operating system interfaces to manage computer resources effectively.
- Extract and synthesize information from available Internet resources using intelligent search and discrimination.

Course Descriptions

- Define, explain, and demonstrate proper computer terminology usage in areas such as hardware, software, and communications to effectively interact with other computer users and to prepare for higher-level computer courses.
- Describe ethical issues involved in the use of computer technology.

ICS 107 Web Site Development (3)

An introduction to the concepts and skills for developing websites from planning through publishing. Design, usability, accessibility, markup and styling language, and integrating media will be emphasized. Web development software utilized. (3 hours lecture)

Recommended Preparation: Intermediate computing skills including file management and common computing skills: cut, copy, paste, open/save files, web search.

The student learning outcomes are:

- Demonstrate the Web development cycle of defining, planning, building, testing, publishing, and maintenance.
- Recognize the differences between browsers, monitor size and resolutions, and other aspects which affect website design.
- Evaluate and utilize Web development software tools.
- Create an effective Web site incorporating usability and ADA accessibility standards and utilizing appropriate multimedia elements.
- Describe ethical issues involved in the development and use of websites.
- Demonstrate the website development cycle.
- Use appropriate web development software to create an effective website that communicates a message, incorporates appropriate media, and adheres to usability and accessibility standards.
- Describe ethical issues involved in the development and use of websites.

ICS 111 Introduction to Computer Science (4)

This is an introductory course for students intending to major in computer science and requiring a computer programming course. Emphasis will be on problem solving, algorithm/pseudocode development, structured programming, computer language coding, implementation and debugging/testing. Students will develop application programs in an IBM microcomputer/DOS/Windows operating system environment. Students will be taught to develop appropriate programs using accepted standards and methodologies. Actual programming is a part of this course. (3 hours lecture, 1 hour laboratory)

Prerequisite: Credit for MATH 103 or higher; or consent of instructor.

The student learning outcomes are:

- Use an appropriate programming environment to design, code, compile, run and debug computer programs.
- Demonstrate basic problem solving skills: analyzing problems, modeling a problem as a system of objects, creating algorithms, and implementing models and algorithms in an object-oriented computer language (classes, objects, methods with parameters, abstract classes, interfaces, inheritance and polymorphism).
- Illustrate basic programming concepts such as program flow and syntax of a high-level general purpose language.
- Identify relationships between computer systems programming and programming languages.

- Demonstrate working with primitive data types, strings and arrays.

ICS 113 Database Fundamentals (3)

This course examines file organization and the use of computer databases. It also examines the handling of information through its organization, management and control. A substantial part of the course develops an understanding of the data processing building blocks: files, records and fields. Techniques to report and maintain data are also covered. (3 hours lecture)

Prerequisite: ICS 100 or 101; placement in MATH 24 or higher.

The student learning outcomes are:

- Show conversion of computer files into a database system by creating a simple database.
- Compare a relational database to a flat database.
- Dissect a database into tables, records, fields, keys, views and relationships.
- Demonstrate the normalization process.
- Find records using Structured Query Language (SQL) in a database.
- Create reports with specific records.

ICS 115 Advanced Computing Applications (3)

Expands the concepts of computing introduced in ICS 101 or ICS 100. Develops greater proficiency in creating and modifying word processing documents, spreadsheets, database queries, reports, forms and presentation software. Broadens knowledge of the above packages by integrating the applications with one another and utilizing timely Internet Web technologies with each. Web technologies will include creating online blogs, dynamic Web spreadsheets, basic Web pages, Web podcasts, and videos. (3 hours lecture)

Prerequisite: ICS 100 or ICS 101 or consent of faculty.

Recommended Preparation: High School Algebra

The student learning outcomes are:

- Define technical terminology relating to application packages and their relationship with Web 2.0 tools.
- Demonstrate file management competency in a networked environment.
- Use backup and recovery programs necessary to safeguard user data files in a networked environment.
- Use a word processor to produce a desktop publishing document.
- Use a spreadsheet to analyze and present dynamic interactive numeric information, graphs and charts.
- Use a database program to create forms, queries and reports that can retrieve Web-based data.
- Use a presentation graphics program with appropriate audio and visual components that can be viewed on the Web.
- Use integration tools for sharing information between different applications programs.
- Use data acquisition tools such as scanners, optical character recognition, and Internet searching to retrieve data.

ICS 119 Introduction to Social Media (3)

This computing course explores the foundations of building a presence on the Web, developing an entity's brand and creating a social channel to share ideas, expertise and business philosophies.

Course Descriptions

Topics covered: choosing a domain name, securing a content hosting service, initiating content creation, and constructing a social web channel. (3 hours lecture)

Recommended Preparation: Write well-formed sentences and organized paragraphs using proper grammar and correct spelling. Have computing skills including file management, uploading/downloading files and Internet search skills.

The student learning outcomes are:

- Use the appropriate social media tools to create an online identity.
- Create content that uniquely represents an entity's image.
- Plan and implement a social media campaign and analyze its effectiveness.
- Analyze the ethical roles and responsibilities of a content creator.

ICS 120 Spreadsheet Fundamentals (3)

Students who complete this course will be able to accomplish the following: Simulate "what if" scenarios; Create spreadsheet templates; Design worksheets to solve complex tasks; Develop spreadsheet workbooks composed of several related worksheets; Minimize redundant data by linking information among worksheets; Utilize complex spreadsheet functions to solve problems; Utilize spreadsheet tools to analyze data; Create macros to complete repetitive tasks; Integrate spreadsheet data to the World Wide Web or a corporate Intranet. (3 hours lecture)

Prerequisite: credit for ICS 100 or 101; placement in MATH 25 or higher.

The student learning outcomes are:

- Create a spreadsheet to solve a complex problem.
- Link data in workbook worksheets to minimize redundant data.
- Solve mathematical, statistical, logical problems using built-in spreadsheet functions.
- Publish data to the WWW or an intranet to show a dynamic vs. static worksheet.

ICS 121 Computing Topics (1-4)

This course covers current computing topics. The course is designed to have variable credits to coincide with the rigor of the topic. A student may enroll and receive credit for this course more than one time (for different topics). A course description will be on record to designate the various topics for a student's transcript. (1-4 lecture hours)

Prerequisite: The present prerequisites of ICS 100 or ICS 101 will be deleted. New prerequisites will be stated with each new topics course offered. The course outline will state its prerequisite (if any) and will be relevant to the rigor of the topic proposed. (See department chair or instructor for more information.)

The student learning outcomes are:

- Produce a final project to demonstrate knowledge of the computer topic
- Study a computer topic offered at WCC.
- Produce a final project to demonstrate knowledge of the computer topic.

ICS 123 Introduction to Audio and Video Editing (3)

This is an introductory computer course covering digital audio and video editing. This introduction to digital software includes

principles of recording and editing, and preparing products for publishing to the Web. Subjects include basic editing techniques, customizing settings, capturing video and audio, and final output. The course also covers basic shooting techniques for video.

Recommended Preparation: Intermediate computing skills including file management and common computing skill including cut,copy, paste,open/save files and web search.

The student learning outcomes are:

- Use audio and visual editing terminology.
- Contrast differences between digital and analog terminology.
- Apply media principles in recording, editing and printing to video.
- Incorporate different editing components to develop an effective product.
- Compare and contrast the different modes of capturing data and various file formats.
- Apply ethical practices in the use of multimedia.
- Apply media best practices in recording and editing.

ICS 140 Elementary Operating Systems (3)

This course examines and compares several operating systems used on computers. Comparisons of graphics user interface and command user interface operating systems will be made. Students will work with the Windows and Unix systems. Other systems will be researched. (3 hours lecture)

Recommended Preparation: ICS 100 or ICS 101.

The student learning outcomes are:

- Identify and utilize current popular operating systems and interactions.
- Describe and evaluate hardware, software and operating system in meeting user objective.
- Describe the processes of installing, configuring and troubleshooting software problem.
- Demonstrate effective file management and develop backup strategies.
- Illustrate network interconnectivity.

ICS 141 Discrete Mathematics for Computer Science I (3)

This course covers logic, sets, functions, matrices, algorithmic concepts, mathematical reasoning, recursion, counting techniques, and probability theory. (3 hours lecture)

Prerequisite: Grade of "C" or better in MATH 103 or placement into MATH 135 or higher, or consent of instructor.

FS

The student learning outcomes are:

- Upon completion of ICS 141, the student will be able to analyze issues and apply mathematical problem solving skills to plan courses of action in decision-making situations, using basic mathematical formal logic, proofs, recursion, analysis of algorithms, sets, combinatorics, relations, functions, matrices and probability.

ICS 163 Design for Print (3)

Upon completion of this course, the student will (1) understand how to design professional print materials which integrate typography, images, space, and color theory; (2) be able to use desktop publishing

Course Descriptions

software; (3) have developed familiarity with manipulating digital images; and (4) be able to produce materials such as business cards, fliers, brochures, and multi-page documents.

Recommended Preparation: Intermediate computing skills, including file management and common computer skills: cut, copy, paste, open/save files, web search.

The student learning outcomes are:

- Produce documents and other projects for a target audience, using desktop publishing software and applying creative and aesthetic elements.
- Use the computer's operating system to manage document and folders, print hard copies, and scan graphics.
- Produce professional documents to meet business needs.
- Demonstrate awareness of design principles in the creation of projects from initial design to final production.
- Create projects from initial design to final production.

ICS 193V Cooperative Education/Internship/Practicum (1-3)

Cooperative program between the student, an employer, and the College that integrates classroom learning with supervised practical experience. Reflects the student's major interest area and availability of job assignments. Offers the opportunity to develop workplace employability skills dependent on job assignments and course of study. (1-3 hours lecture)

Prerequisite: Various as determined by the particular course of study and placement of the cooperative education/internship practicum in the sequence of courses.

The student learning outcomes are:

- Complete computer assignments in a job that is cooperatively supervised by the employer and College.
- Demonstrate the skills in the above assignments to both the College and the employer.

ICS 211 Introduction to Computer Science II (3)

Reinforce and strengthen problem solving skills using more advanced features of programming languages and algorithms such as recursion, pointers, and memory management. Emphasize the use of data structures such as arrays, lists, stacks and queues. (3 hours lecture)

Prerequisite: A grade of "C" or better in ICS 111 or consent of instructor.

The student learning outcomes are:

- Recognize the use of arrays, lists, stacks, queues, and other data structures.
- Select the appropriate searching and sorting algorithm based on the algorithm's behavior.
- Develop recursive algorithms and programs.
- Select appropriate data structure for a given application.
- Use advanced object-oriented programming techniques (polymorphism, inheritance, and encapsulation) and standard libraries.
- Produce robust programs using exception handling and extensive program testing.
- Create simple graphical user interface (GUI) program.

ICS 214 Fundamentals of Design for Print and Web (3)

Introduces development principles related to graphic design terminology, tools and media, and layout and design concepts. Topics include integration of type, images and other design elements, developing computer skills in industry standard computer programs, and study of design development pertaining to color theories, publications, and advertising. Projects will emphasize relating form to content through selection, creation and integration of typographic, digital imaging, illustrative and design elements in print and Web environments. (3 hours lecture)

Prerequisite: Credit for ICS 100 or ICS 101.

The student learning outcomes are:

- Demonstrate understanding of important design techniques, visual thinking, concept development and composition.
- Understand conceptual knowledge about elements of art such as objects, texture, color theory, space, and character design.
- Learn next generation image editing tools, edit and retouch images, apply special affects, adjust color balance to produce images that resemble water color and oils, rapidly produce dynamic graphics for the web with interactive buttons and rollovers.
- Create graphics that heighten the appearance of web content, product design, business graphics, logo designing, graphics for print brochures, artwork and corporate presentations.
- Develop a personal style and vision, and design.
- Integrate and produce professional publishing, create graphic-intensive documents with precision and control for pre-press.
- Create projects based on case studies in the following areas: Print and Publishing Broadcast and Web Media.
- Use planning and appropriate processes in website designing, and then apply to the design and creation of web pages.
- Use planning and appropriate processes in publication designing, and then apply to the design and creation of publications.
- Present information based on work done for projects.
- Create animated graphics, designing interactive elements, add sound and integrate movies into websites.

Interdisciplinary Studies

IS 103 Introduction to College (3)

This course is designed to orient first-time students to a college setting. Students will learn (1) the tools, techniques, methods, procedures, processes, skills, resources, and attitudes for success; (2) the programs and services of a postsecondary institution of higher education; and (3) to design a personal, comprehensive, postsecondary academic plan. (3 hours lecture)

Prerequisite: Placement in ENG 22 or higher or consent of instructor.

The student learning outcomes are:

- Use the tools, techniques, methods, procedures, processes, skills, and resources for academic success.
- Describe the various programs and services of a post-high school institution.
- Identify short and long-term goals post WCC, and prepare an educational plan to meet those goals.
- Use college-level note taking, critical reading, test taking, memory, and concentration techniques.

- Use time-management, personal organization, stress management and study skills.
- Communicate effectively in writing and in speech.
- Find information from library, Internet, and other sources.
- Use strategies to complete out of class work efficiently and effectively.

IS 105B Career Decision Making (2)

An introductory course designed to prepare students to make more focused career/life decisions through self analysis and world of work examinations. (2 hours lecture)

Recommended Preparation: Placement in ENG 22 or higher.

The student learning outcomes are:

- Describe the career development process, current labor market trends, and issues related to economic self-sufficiency.
- Identify personal, family, cultural, and financial influences that relate to their career and educational decisions.
- Apply career knowledge by exploring their interests, skills, values, personality traits.
- Illustrate how their career search relates to job shadowing and service learning activities choices.
- Evaluate the effectiveness of the career decision making process by keep a journal and responding to evaluations of the instructor.

IS 105C Professional Employment Preparation (1)

Facilitates employment search by emphasizing professional techniques and standards in the preparation of application forms, resumes, cover letters, and employment interviews. (Cross-listed as BUSN 166.) (1 hour lecture)

Recommended Preparation: Credit for ENG 22 or higher, keyboarding skills, and knowledge of word processing.

The student learning outcomes are:

- Integrate job interview preparation techniques into a live interview.
- Utilize resources needed to find a job.
- Assemble a career portfolio for ongoing career development.

IS 152 The Common Book (1)

The Common Book Program encourages students, faculty and staff at the College to read a single book and participate in a semester-long discussion of different themes that are raised. The course will offer a sustained engagement with the Common Book program. Additional readings and course assignments will be designed to enrich the appreciation of the book. (1 hour lecture)

The student learning outcomes are:

- Identify and describe several important themes in the Common Book.
- Clearly explain and evaluate how one important theme in the Common Book is addressed by different academic disciplines.
- Examine and interpret social, political and moral issues through the Common Book.
- Relate at least three diverse academic disciplines to themes in the Common Book.
- Carefully justify one's own interpretation of the Common Book.

IS 160A Polynesian Voyaging and Seamanship (3)

This course focuses on the fundamentals of voyaging and seamanship by blending the traditions of Polynesian culture, history and skills with modern science and technology. An interdisciplinary approach is used in treating topics in Hawaiian studies, astronomy, geology, oceanography, meteorology, marine biology, ethnobotany and archaeology of Polynesia and Hawai'i. (3 hours lecture)

DH

The student learning outcomes are:

- Describe the basic geography of Polynesia.
- Apply the fundamental concepts in positional astronomy (including the seasons) and identify of two of the four recognized star lines used for navigation.
- Explain the basic principals in wayfinding (non-instrument navigation).

IS 160B Polynesian Voyaging and Seamanship (3)

This course focuses on the fundamentals of voyaging and seamanship by blending the traditions of Polynesian culture, history and skills with modern science and technology. An interdisciplinary approach is used in treating topics in Hawaiian studies, astronomy, geology, oceanography, meteorology, marine biology, ethnobotany and archaeology of Polynesia and Hawai'i. (3 hours lecture)

Corequisite: IS 160L

DH

The student learning outcomes are:

- Describe the basic geography of Polynesia.
- Apply the fundamental concepts in positional astronomy (including the seasons) and identify of two of the four recognized star lines used for navigation.
- Explain the basic principals in wayfinding (non-instrument navigation).
- Discuss Polynesian migration as gleaned from archaeological findings.
- Discuss Polynesian mythology and cosmology, especially as related to voyaging.
- Apply the basic concepts in geology, especially of the Pacific area.
- Discuss fundamentals of weather forecasting as related to the Pacific Ocean.
- Identify native and Hawaiian plants, especially those used in voyaging.

IS 160L Polynesian Voyaging and Seamanship Lab (1)

Laboratory/field trip course designed to acquire seamanship skills and apply knowledge of astronomy, geology, oceanography, meteorology, marine biology, ethnobotany and archaeology through sailing and environmental exploring activities. Optional coastal and/or inter-island voyaging field trips may be offered. (Students will be responsible for fees for each activity.) (3 hours laboratory)

Prerequisite: 1. Minimum water skills and survival requirements: Pass the following water survival tests, which will be administered by the second lab: ability to swim a minimum of 500 yards in the open ocean using any strokes; ability to tread water for 30 minutes in the open ocean. 2. Health clearance: A written statement must be signed by

Course Descriptions

a medical physician certifying that the student is physically capable of participating in the sailing activities scheduled for the lab. Health clearance must be submitted by the date of the first sailing lab.

Corequisite: IS 160B

DH

The student learning outcomes are:

- Apply both traditional Polynesian skills and modern scientific methods when engaged in sailing and environmental exploring activities.
- Apply basic sailing and navigational skills to prepare and carry out a sailing plan.
- Apply water safety skills.
- Conduct basic canoe operations, including rigging, sailing and maintenance.
- Identify Polynesian-introduced plants and native plants that are valuable for voyaging and discuss their value as food source, medicine, building material, and cordage.

IS 201 The Ahupua'a (3)

Study of the traditional Hawaiian approaches to natural resource development, utilization, exploitation, and management. The ahupua'a, as the traditional Hawaiian unit of land and sea subdivision, beginning in the upland forests, stretching across lower elevations, past the shoreline to the edge of the reef, will be evaluated as a microcosm of an integrated ecosystem and as a model for natural resource management and sustainability. (2 hours lecture, 3 hours laboratory and fieldwork)

Recommended Preparation: BIOL 101 or BIOL 124 or similar preparation.

DB DY

The student learning outcomes are:

- Describe how the Hawai'i's unique geological formation affects its sustainable natural resources.
- Describe how the ancient migration begins to affect the management of its natural resources and the socio-political fabric of the "new land."
- Describe the agri-spiritual relationship between plant and mahi'ai; and the fish and the lawai'a.
- Discuss the ancient and present management value of water.
- Describe and assist in the reconstruction of lo'i kalo and loko'i'a.
- Describe and discuss the current resources management practices, which augment or negate ancient practices.
- Research and replicate an artifact of his or her choice.

IS 204 Themes in Popular Culture (3)

An interdisciplinary study of a specific event, person, idea, or process in popular culture which will bring together various methodologies and conceptual tools to create a complex analysis. Topics covered will include: the concept of popular culture, how elements of popular culture are created and circulated, how elements of popular culture connect to historical, political, social, symbolic and intellectual history, how different groups in society are related to the elements of popular culture, and how popular culture plays a role in the lives of individuals. (3 hours lecture)

The student learning outcomes are:

- Identify the connection between the theme in popular culture with larger political, social, and intellectual patterns in society.

- Analyze the connection between the theme in popular culture and other themes, either contemporary or historical.
- Participate effectively in group discussions, given evidence of thoughtfulness and an engagement with other people's positions.
- Connect local elements of popular culture to global economic and political systems.
- Explain and justify an evaluation of the role of popular culture in the student's life.

IS 205 Advanced Career Seminar (3)

This course is designed to serve the needs of the adult learner and worker with life and/or work experience. Topics such as career assessment and planning, career transition, work alternatives and personal marketing will be covered. The course will be taught using a combination of seminar style group meetings and independent studies. (3 hours lecture)

Prerequisite: Placement into ENG 100.

The student learning outcomes are:

- Describe the career development process for adults and returning students, concerns of dislocated workers, current labor market trends affecting career transition, and issues related to economic self-sufficiency.
- Identify cultural influences, personal values, relevance of life stages, and financial factors influencing career needs of adults in transition.
- Apply information related to concerns and needs of adults in transition by exploring their interests, skills, values, personality traits, and in participating in relevant service learning activities.
- Illustrate how their career exploration is part of an on-going and life-long process.
- Evaluate the effectiveness of their career decision making process by keep a journal and responding to evaluations of the instructor.

IS 260A Polynesian Voyaging and Stewardship (3)

This course focuses on the fundamentals of voyaging and the impact of human activity on the environment of Hawai'i, with emphasis on Kane'ohe Bay and the Windward coast. An interdisciplinary approach is used in blending the traditions of Polynesian culture, history and skills with modern science and technology. Topics covered include Hawaiian studies, astronomy, geology, oceanography, meteorology, marine biology, ethnobotany and archaeology of Polynesia and Hawai'i. (3 hours lecture)

Prerequisite: Credit for IS 160A or IS 160B or consent of instructor.

DH

The student learning outcomes are:

- Identify the remaining two of the four recognized star lines used for navigation.
- Contrast and compare wayfinding, celestial navigation and GPS.
- Discuss and explain the lunar phases and the causes and effects of tides.
- Explain and apply the physics of sailing, as related to Bernoulli's principle and Newtonian physics.
- Discuss the settlement of Hawai'i with emphasis on the Kane'ohe Bay area, including place names and voyaging chiefs.

Course Descriptions

- Apply the basic concepts in oceanography and meteorology, especially of the Pacific area.
- Apply basic sailing and navigational skills to prepare and carry out a sail plan.

IS 260B Polynesian Voyaging and Stewardship (3)

This course focuses on the fundamentals of voyaging and the impact of human activity on the environment of Hawai'i, with emphasis on Kāne'ōhe Bay and the Windward coast. An interdisciplinary approach is used in blending the traditions of Polynesian culture, history and skills with modern science and technology. Topics covered include Hawaiian studies, astronomy, geology, oceanography, meteorology, marine biology, ethnobotany and archaeology of Polynesia and Hawai'i. (3 hours lecture)

Prerequisite: Credit for IS 160B or consent of instructor.

Corequisite: IS 260L.

DH

The student learning outcomes are:

- Identify the remaining two of the four recognized star lines used for navigation.
- Contrast and compare wayfinding, celestial navigation and GPS.
- Discuss and explain the lunar phases and the causes and effects of tides.
- Explain and apply the physics of sailing, as related to Bernoulli's principle and Newtonian physics.
- Discuss the settlement of Hawai'i with emphasis on the Kane'ōhe Bay area, including place names and voyaging chiefs.
- Apply the basic concepts in oceanography and meteorology, especially of the Pacific area.
- Apply basic sailing and navigational skills to prepare and carry out a sail plan.

IS 260L Polynesian Voyaging and Stewardship Lab (1)

Laboratory/field trip course designed to apply knowledge of Polynesian skills and modern science to the impact on the environment due to human settlement, especially in Hawai'i. Laboratory activities will further develop student skills in sailing, sail planning and navigation. Students are expected to undertake mentorship roles in disseminating their newly acquired knowledge and skills to the community. Optional coastal and/or inter-island voyaging field trips may be offered. (Students will be responsible for fees for each activity.) (3 hours lecture)

Prerequisite: 1. Credit for IS 160L or consent of instructor. 2. Minimum water skills and survival requirements: Students must demonstrate an ability to swim a minimum of 500 yards in the open ocean using any strokes, except back stroke; ability to tread water for 30 minutes in the open ocean. (Note. Accredited water skill and survival tests passed within the past year are acceptable upon instructor approval. The 'swim test' must be completed by the date of the first sailing lab.) 3. Health clearance: from a licensed physician must be provided. (Note. Health clearance submitted within the past year is acceptable upon instructor approval. Health clearance must be submitted by the date of the first sailing lab.)

Corequisite: IS 260B.

DY

The student learning outcomes are:

- Respond to navigational and environmental problems using knowledge of constellations, wayfinding geology, oceanography, weather forecasting, and ecology.

- Apply basic sailing and navigational skills to prepare and carry out a sailing plan.
- Plan and prepare a balanced diet for voyaging.
- Strengthen swimming skills and water safety skills.
- Mentor others in the basics of Polynesian sailing and environmental stewardship.

Japanese Language

JPNS 101 Elementary Japanese I (4)

Covers rules of grammar, vocabulary sufficient to maintain conversation and understanding at an elementary level. Provides for recognition and writing of kana. (4 hours lecture, 1 hour laboratory)

The student learning outcomes are:

- Understand learned phrases and sentences in various social and academic contexts.
- Read and understand learned materials written in hiragana, katakana and approximately 50 kanji with references.
- Write short phrases and sentences using the three learned writing systems with one reference. Compose short notes and memos.

JPNS 102 Elementary Japanese II (4)

Continuation of JPNS 101. (4 hours lecture, 1 hour laboratory)

Prerequisite: Credit for JPNS 101 or consent of instructor.

The student learning outcomes are:

- Understand sentences in combinations of learned and new vocabulary and grammatical structures in various contexts.
- Perform basic communication and exchanges in the context of learned material.
- Read material in hiragana, katakana and learned kanji, such as menus, short memos and messages and postcards. Have a functional command of approximately 125 essential kanji.
- Write sentences and paragraphs integrating new and learned material and structures, with master of hiragana, katakana, and a good grasp of kanji.

JPNS 201 Intermediate Japanese I (4)

Continuation of JPNS 102. Emphasis on increasing proficiency in reading, speaking and writing. (4 hours lecture, 1 hour laboratory)

Prerequisite: Credit for JPNS 102 or consent of instructor.

The student learning outcomes are:

- Understand written material previously learned and new vocabulary and kanji in the context of various experiences.
- Understand and write paragraphs on topics grounded in personal experience or from learned material.
- Handle basic communicative tasks and social situations within given contexts.
- Read with increasing understanding longer material based on learned contexts. Material is written in the three writing systems with approximately 225 kanji, including 100 new ones learned each semester.

JPNS 202 Intermediate Japanese II (4)

Continuation of JPNS 201. (4 hours lecture, 1 hour laboratory)

Prerequisite: Credit JPNS 201 or consent of instructor.

Course Descriptions

The student learning outcomes are:

- Sustain understanding on topics, such as automobiles and its parts; houses and household furnishings and appliances; the body, its parts, health and medicine; education, careers and the workplace.
- Handle most communicative tasks and social situations.
- Initiate, sustain and close most communicative tasks or general conversation, in given and learned contexts.
- Read written material in the three writing systems in learned and new contexts with an additional number of kanji now totaling approximately 325.
- Write simple letters, paragraphs on personal experiences, summaries, and paraphrases of written materials.

Journalism

JOUR 205 News Writing (3)

An introductory course in news writing, news gathering and journalistic ethics. (3 hours lecture)

Prerequisite: Credit for ENG 100.

The student learning outcomes are:

- Analyze the quality of coverage in stories produced by the mass media and other students to become a more informed consumer of news.
- Identify basic journalistic concepts and principles, including news values, news and feature story structures and issues relating to communication law and ethics.
- Apply basic journalistic concepts and principles to produce a range of articles (press release, short news, profile, timed deadline pieces, news story and in-depth news or feature) that meet standards for readability, accuracy, news style and mechanics.
- Conduct background research and interviews to gather information accurately and comprehensively.
- Edit and proofread their own and others' stories for readability, clarity, accuracy, news value, conciseness and mechanics.

JOUR 285V Newspaper Laboratory (1-3)

Complete production of the student newspaper, including fact gathering, writing, layout, editing, and photography. Six credits may be applied to the AA degree.

Prerequisite: Credit for ENG 100. Credit for or registration in JOUR 205 or consent of instructor.

The student learning outcomes are:

- Apply basic journalistic concepts and principles to produce a range of articles that meet standards for publication, including readability, accuracy, news style and mechanics.
- Demonstrate a working knowledge of page design principles and software to produce pages for a tabloid publication.
- Apply knowledge of photography to take pictures using a digital camera, crop photos and adjust them using PhotoShop software.
- As part of a team, produce a monthly publication that meets journalistic standards for news value, readability, accuracy, objectivity, clarity, balance and fairness.
- Demonstrate an ability to generate story ideas, meet deadlines, gather and organize information, and follow through on assignments.

Learning Skills

LSK 110 College Study Skills (3)

This course assists students to deal more effectively with the rigors of the academic expectations of college. Students will carefully assess their work habits, attitudes, and learning styles and will learn specific strategies to achieve academic success. (3 hours lecture)

Prerequisite: Placement in ENG 21 or higher or consent of instructor.

The student learning outcomes are:

- Analyze and evaluate one's own academic strengths and weaknesses in processing information, preparing for learning, textbook and lecture note taking techniques and strategies, and test taking skills.
- Apply various study skills strategies and techniques.
- Complete the required library research units in order to write a short research paper involving strategies that include finding, evaluating, and documenting information from various sources.

Linguistics

LING 102 Introduction to Language (3)

An investigation of the nature and function of language, its sounds, structures and semantics, oral and written expression, acquisition and change. General linguistic principles applicable to all languages will be covered. We will learn ways of talking about language that will enable us to discuss language and understand what linguists do and say. (3 hours lecture)

Prerequisite: Credit for ENG 22 or higher or consent of instructor.

DH

The student learning outcomes are:

- Examine and appreciate humanity's supreme achievement—human language—and its repercussions.
- Articulate an appreciation of human languages and how they work.
- Articulate the diversity of communication systems in daily lives.
- Examine and assess one's own language beliefs, capabilities, and learning.

Management

MGT 120 Principles of Management (3)

This course is a practical introduction to and study of management principles and practices. The student will learn the elements needed to manage effectively as well as better understand the decision making process in business. (3 hours lecture)

The student learning outcomes are:

- Understand and be able to apply the basic functions of management (i.e. planning, organizing, staffing, leading, and controlling).
- Demonstrate and understand the skills necessary to become a successful manager (i.e. technical, human relations, administrative, communications and problem-solving).
- Describe and recognize the changing nature of the supervisor's environment including information availability, workforce demographics and managing diversity.

- Recognize the ethical dilemmas faced by managers and the social responsibilities of businesses.
- Understand why people resist change and how to develop strategies to reduce the resistance to change.

Math

MATH 19 Developmental Mathematics I (3)

This course is designed to help student review and master the basics of mathematics. Topics include an introduction to expressions and equations with whole numbers, fractions, decimals, ratios and proportions, percents, and similar triangles. (3 hours lecture)

Prerequisite: Grade of "C" or better in MATH 20 or Math 21A or equivalent, satisfactory math placement test score, or consent of instructor.

The student learning outcomes are:

- Demonstrate proficiency in the skills and competencies for this level of mathematics.
- Apply concepts and principles to solve applied problems related to the topics covered in this course.
- Utilize precise language and symbols in written and oral forms.

MATH 20 Basic Mathematics (3)

This course is designed to help students review and master the basics of mathematics. Emphasis will be placed on numeration, whole numbers, fractions, mixed numbers, and decimals. Also includes the concept of variables; ratios; proportions; solving simple equations in one variable; percents; basic geometry; solving basic applied problems; and basic operations with integers. (3 hours lecture)

Prerequisite: Satisfactory math placement test score or consent of instructor.

The student learning outcomes are:

- Utilize precise mathematical language and symbols in written and/or oral form.
- Demonstrate proficiency in performing operations with whole numbers, fractions, mixed numbers, decimal numbers and integers.
- Utilize fundamental properties to solve simple questions.
- Use algebraic techniques to analyze and solve basic applied problems.
- Apply concepts and principles of percents to solve basic applied problems.
- Apply concepts and principles of basic geometry to determine measurements in geometric figures.

MATH 21A Basic College Mathematics I (2)

This course is designed to help students review and master the basics of mathematics. Emphasis will be placed on numeration, whole numbers, fractions, mixed numbers, decimals, and ratios and proportions. (2 hours lecture)

Prerequisite: Satisfactory math placement test score or consent of instructor.

The student learning outcomes are:

- Utilize precise mathematical language and symbols in written and/or oral form.
- Demonstrate proficiency in performing operations with whole numbers, fractions, mixed numbers, and decimal numbers.

- Utilize fundamental properties to solve simple equations.
- Use algebraic techniques to analyze and solve applied problems.

MATH 21B Basic College Mathematics II (2)

This course prepares students who want to strengthen computation and problem-solving skills before proceeding to an elementary algebra course. Includes the concept of variables, using rational numbers, solving simple equations in one variables, percent, and word problems. (2 hours lecture)

Prerequisite: Grade of "C" or better in Math 21A, satisfactory math placement test score or consent of instructor.

The student learning outcomes are:

- Utilize precise mathematical language and symbols in written and/or oral form.
- Demonstrate proficiency in performing operations with integers, rational numbers, real numbers, and variable expressions.
- Utilize fundamental properties to solve equations.
- Use algebraic techniques to analyze and solve applied problems.
- Employ mathematical formulas to determine measurements in geometric figures.
- Apply concepts and principles of percents to solve applied problems.

MATH 22 Pre-Algebra Mathematics (3)

This course prepares students who want to strengthen computation and problem solving skills before proceeding to an elementary algebra course. Includes a brief review of arithmetic, the concept of variables, using rational numbers, solving simple equations in one variable, percent, measure, ratio and proportion, geometry formulas, square roots and word problems. (3 hours lecture)

Prerequisite: Grade of "C" or better in MATH 20, MATH 21A, or equivalent, satisfactory math placement test score, or consent of instructor.

The student learning outcomes are:

- Utilize precise mathematical language and symbols in written and/or oral form.
- Demonstrate proficiency in performing operations with whole numbers, fractions, mixed numbers, decimal numbers, integers, real numbers, and variable expressions.
- Utilize fundamental properties to solve equations.
- Use algebraic techniques to analyze and solve applied problems.
- Employ mathematical formulas to determine measurements in geometric figures.
- Apply concepts and principles of percents to solve applied problems.

MATH 24 Elementary Algebra I (3)

This course represents approximately half of a typical year algebra course. Topics include real numbers and their properties, linear equations and inequalities in one variable, the coordinate plane, linear systems in two variables, and exponents. (3 hours lecture)

Prerequisite: Grade of "C" or better in MATH 22, MATH 21B, MATH 19 or equivalent; satisfactory placement test score, or consent of instructor.

Course Descriptions

The student learning outcomes are:

- Utilize precise mathematical language and symbols in written and/or oral form.
- Demonstrate proficiency in performing operations with rational numbers, and variable expressions.
- Interpret equations/inequalities geometrically and find solutions to equations/inequalities algebraically.
- Use algebraic techniques to analyze and solve applied problems.
- Find slope and apply it to finding the equation of a line.
- Utilize introductory function concepts.
- Demonstrate familiarity in the use of the rules of exponents and its applications.

MATH 25 Elementary Algebra II (3)

This course is a continuation of MATH 24 Elementary Algebra I representing approximately the second half of a typical first year course in algebra. Topics include exponents, polynomials, factoring, rational expressions and equations, radical expressions and equations and quadratic equations. (3 hours lecture)

Prerequisite: Grade of "C" or better in MATH 24 or MATH 28 or equivalent, satisfactory math placement test score, or consent of instructor.

The student learning outcomes are:

- Utilize precise mathematical language and symbols in written and/or oral form.
- Demonstrate proficiency in performing operations with real numbers and variable expressions.
- Interpret quadratic equations geometrically and identify key characteristics.
- Employ algebraic techniques to find the solution for equations.
- Use algebraic techniques to analyze and solve applied problems.
- Demonstrate proficiency in the use of the rules of exponents and its applications to scientific notation.
- Employ algebraic techniques to factor a polynomial.
- Graph a linear equation in two variables, find slope and apply it to finding the equation of a line.

MATH 28 Developmental Mathematics II (3)

This course is a continuation of Developmental Mathematics I and a preparation for students to take Math 100, Math 101 or Philosophy 110 to fulfill the Symbolic Reasoning requirement. Topics include an introduction to Real numbers (including basic roots, signed numbers and properties) and algebraic expressions (including geometric formulas), linear equations and inequalities in one variable, linear equations and inequalities in two variables, and selected topics - Quadratic Formula, parabola, systems of equations and inequalities, scientific notation, and variation. (3 hours lecture)

Prerequisite: Grade of "C" or better in MATH 19, MATH 21 B, MATH 22 or MATH 24 or equivalent; satisfactory math placement test score, or consent of instructor.

The student learning outcomes are:

- Demonstrate proficiency in the skills and competencies for this level of mathematics.
- Apply concepts and principles to solve applied problems related to the topics covered in this course.
- Utilize precise language and symbols in written and oral forms.

MATH 29 Developmental Mathematics III (3)

This course is a continuation of Developmental Mathematics II. Topics include exponents and polynomials, factoring polynomials and applications, functions, rational expressions and equations, and roots and radicals (including the Square Root Property). (3 hours lecture)

Prerequisite: Grade of "C" or better in MATH 24 or MATH 28 or equivalent, satisfactory math placement test score, or consent of instructor.

The student learning outcomes are:

- Demonstrate proficiency in the skills and competencies for this level of mathematics.
- Apply concepts and principles to solve applied problems related to the topics covered in this course.
- Utilize precise language and symbols in written and oral forms.

MATH 100 Survey of Mathematics (3)

An introduction to quantitative and logical reasoning for the nonscience/nonmathematics major. The question, "What is mathematics?" is explored, while focusing on mathematical systems or models, cultivating an appreciation for mathematics as an aesthetic art, and developing skills in problemsolving and analysis. (3 hours lecture)

Prerequisite: Grade of "C" or better in MATH 25 or MATH 28 or equivalent, satisfactory math placement test score, or consent of instructor.

FS

The student learning outcomes are:

- Construct diagrams that will facilitate the visual conception of a phenomenon or problem.
- Utilize basic properties and/or operations related to Set Theory, Logic, Statistics, Linear and Quadratic functions and Counting methods.
- Employ symbolic/mathematical techniques to solve applied problems.
- Utilize precise mathematical language and symbols to effectively communicate mathematics in written and/or oral form.

MATH 101 Mathematics for Veterinary Assistants & Technicians (3)

An introduction to clinical calculations used in veterinary medicine. Topics include the application of mathematical skills to solve applied problems in veterinary nursing and pharmaceutical dispensing with emphasis on dosage, concentration, dilution and drip rates. Also included is mathematical and laboratory terminology. This course is intended for students entering veterinary technology, veterinary assisting or other animal-related fields. (3 hours lecture)

Prerequisite: Grade of "C" or better in MATH 25 or MATH 28 or equivalent, satisfactory math placement test score, or consent of instructor.

The student learning outcomes are:

- Define terminology and abbreviations used in measurements and convert from one measurement to another with accuracy on the fly.
- Understand oral and written requests to calculate dosages accurately and quickly.

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- Use mathematical formulas to calculate stock solutions to a desired concentration with accuracy.
- Demonstrate proficiency in calculating infusion rates for fluid replacement therapy and for surgery.
- Identify parts of a basic graph to understand medical charts.
- Identify basic statistical terms to make informed decisions from numerical data and information.
- Demonstrate proficiency in performing operations with fractions, decimals, percentages, ratios and proportions without the use of a calculator.

MATH 103 College Algebra (4)

Linear equations, inequalities, systems of equations, polynomials, functions, fractional expressions and equations, exponents, powers, roots, quadratic equations and functions; rational, exponential and logarithmic functions. (4 hours lecture)

Prerequisite: Grade of "C" or better in MATH 25 or MATH 29 or equivalent, satisfactory math placement test score, or consent of instructor.

FS

The student learning outcomes are:

- Demonstrate proficiency in writing math expressions into different forms.
- Employ algebraic techniques to find the solutions to equations and/or inequalities, using complex numbers where appropriate.
- Use algebraic techniques to analyze and solve applied problems.
- Interpret equations geometrically and use geometrical information to obtain the equation of lines and circles.
- Utilize introductory function concepts and draw the graphs of selected functions.
- Utilize the definition of a logarithm and the properties of logarithms to simplify logarithmic expressions or to solve logarithmic and exponential equations.
- Demonstrate proficiency in solving systems of linear and second degree equations and inequalities.
- Utilize precise mathematical language and symbols to effectively communicate mathematics in written and/or oral form.

MATH 111 Mathematics for Elementary Teachers I (3)

Math 111 is the first of a two-course sequence designed to give prospective elementary education majors the depth of understanding necessary to teach mathematics in the elementary classroom. Topics include number (natural numbers, integers, fractions, and real numbers) and operations, sets, patterns, functions and algebra. Emphasis will be on communication, connections and problem solving, representations, and reasoning and proof. (3 hours lecture)

Prerequisite: Grade of "C" or better in MATH 25 or MATH 29 or equivalent, satisfactory placement test score, and grade of "C" or better in ENG 22 or placement in ENG 100.

FS

The student learning outcomes are:

- Explain and utilize numbers, ways of representing numbers, relationships among numbers, and number systems.
- Explain the meaning of operations and how they relate to each other.

- Describe various types of patterns and functional relationships.
- Utilize symbolic forms to represent, model, and analyze mathematical situations to solve problems.
- Communicate mathematical ideas verbally, in writing, and through mathematical representations to various audiences.

MATH 112 Mathematics for Elementary Teachers II (3)

Math 112 is the second of a two-course sequence designed to give prospective elementary education majors the depth of understanding necessary to teach mathematics in the elementary classroom. Topics include the representation of and operations on the natural numbers and properties of those operations. Emphasis will be on communication, connections and problem solving, representation and reasoning. (3 hours lecture)

Prerequisite: Grade of "C" or better in MATH 111.

FS

The student learning outcomes are:

- Communicate about arithmetic operations using set theory and counting in written and/or oral form.
- Explain the relationship between addition and subtraction; and between multiplication and division.
- Represent operations of addition and multiplication using translations along a line and composition of translations.
- Interpret new functions created by magnification and reflection.
- Discuss primes and their relationship to composite numbers.
- Interpret a rational number as a ratio when connected to probabilities, or as a rate such as speed and averages.
- Use dimensional analysis to help solve a problem.
- Define an irrational number and explain the significance of specific irrational numbers such as pi.

MATH 115 Statistics (3)

An introduction to topics in statistics, with a brief look at elementary probability. This is a valuable course for business, natural science, social science, health science and computer science majors. (3 credits lecture)

Prerequisite: Grade of "C" or better in MATH 25 or MATH 29 or equivalent, satisfactory math placement test score, or consent of instructor.

FS

The student learning outcomes are:

- Demonstrate proficiency in graphing, statistical data, calculating measures of central tendency, measures of variation, percentiles, correlation coefficients, and regression line.
- Interpret statistical information provided in graphs, in summary measures (central tendency, dispersion, percentile), and in the correlation coefficient.
- Solve probability problems involving compound events, independent events, mutually exclusive events, and conditional probability.
- Calculate and interpret probabilities for normal or binomial distributions, including the use of the Central Limit Theorem.
- Demonstrate the use of inferential statistics.
- Utilize appropriate statistical terminology and mathematical symbols to effectively communicate mathematics in written and/or oral form.

Course Descriptions

MATH 135 PreCalculus: Elementary Functions (3)

An analysis of elementary functions. A study of polynomial, rational, exponential and logarithmic functions. Topics also include graphing techniques, transformations, applications and related topics. Emphasis is placed on topics which will prove useful to students planning to take calculus and also to those who are interested in pursuing math-related careers. (3 hours lecture)

Prerequisite: Grade of "C" or better in MATH 103 or equivalent, satisfactory math placement test score, or consent of instructor.

FS

The student learning outcomes are:

- Demonstrate proficiency in writing math expressions into different forms and finding the solutions to an equation and inequality using complex numbers where appropriate, by applying formal rules or algorithms.
- Use appropriate symbolic techniques (such as algebraic techniques) to analyze and solve applied problems, and in the critical evaluation of evidence.
- Interpret equations geometrically and use geometrical information to obtain the equation of lines and circles.
- Utilize function concepts.
- Draw the graphs of functions utilizing behavior information and/or transformations.
- Utilize precise mathematical language and symbols to effectively communicate mathematics in written and/or oral form and in the presentation of evidence.
- Traverse the bridge from theory to practice by using theorems related to polynomial functions and demonstrate proficiency in working with polynomial functions.
- Apply concepts and properties of the logarithm functions.
- Understand the concept of proof as a chain of inferences by doing some proofs.

MATH 140 Precalculus: Trigonometry and Analytic Geometry (3)

Study of the elements of trigonometry and analytic geometry including trigonometric functions and their inverses, relations, graphs, and applications; conic sections; vector applications; cartesian and polar coordinate systems; parametric equations and applications; and related topics. (3 hours lecture)

Prerequisite: Grade of "C" or better in MATH 135 or equivalent, satisfactory math placement test score, or consent of instructor.

FS

The student learning outcomes are:

- Utilize precise mathematical language and symbols to effectively communicate mathematics in written and/or oral form and in the presentation of evidence.
- Traverse the bridge from theory to practice by applying concepts and properties of trigonometry, vectors, and complex numbers to solve problems.
- Analyze and graph trigonometric functions, inverse trigonometric functions, conics, polar equations, and parametric equations.
- Apply formal rules or algorithms by demonstrating proficiency in performing operations with trigonometric expressions and equations.

- Use appropriate symbolic techniques to analyze and solve application problems requiring the use of trigonometry and analytical geometry and in the critical evaluation of evidence.
- Understand the concept of proof as a chain of inferences by demonstrating proficiency at proving trigonometric identities and other types of proofs.

MATH 203 Calculus for Business and the Social Sciences (3)

Basic mathematical concepts, topics in differentiation and introductory integration of algebraic, exponential and logarithmic functions. Related applications to management, finance, economics and social science will be considered. (3 hours lecture)

Prerequisite: Grade of "C" or better in MATH 135 or equivalent, satisfactory math placement test score or consent of instructor.

FS

The student learning outcomes are:

- Understand and use the intuitive definition of limits and apply them in limit calculations and in determining continuity.
- Demonstrate proficiency in determining derivatives and apply different interpretations of the derivative.
- Utilize precise mathematical language and symbols to effectively communicate mathematics in written and/or oral form.
- Use calculus techniques to analyze and solve applied problems.
- Use derivatives to analyze graphs and sketch graphs.
- Demonstrate proficiency in determining antiderivatives and integrals.
- Utilize integration in applied problems.
- Utilize techniques of differentiation with functions of several variables.

MATH 205 Calculus I (4)

Basic mathematical concepts, topics in differentiation, and introductory integration of algebraic and trigonometric functions. Applications of differentiation and integration will be demonstrated. (4 hours lecture)

Prerequisite: Grade of "C" or better in MATH 140 or equivalent, satisfactory math placement test score, or consent of instructor.

FS

The student learning outcomes are:

- Understand and use the formal and intuitive definitions of limits and apply them in limit calculations and in determining continuity.
- Demonstrate proficiency in determining derivatives and apply different interpretations of the derivative.
- Utilize precise mathematical language and symbols to effectively communicate mathematics in written and/or oral form.
- Use calculus techniques to analyze and solve applied problems.
- Use derivatives to analyze and sketch graphs and/or to solve related problems.
- Demonstrate proficiency in determining antiderivatives and integrals.
- Utilize integration in applied problems.

Course Descriptions

MATH 206 Calculus II (4)

Differentiation and integration concepts of trigonometric, exponential, logarithmic and hyperbolic functions. Integration implements, infinite series, and applications of derivatives and integrals are also featured. (4 hours lecture)

Prerequisite: Grade of "C" or better in MATH 205 or equivalent or consent of instructor.

The student learning outcomes are:

- Apply limits, derivatives, and integrals to inverse functions, logarithmic, exponential, hyperbolic, and inverse trigonometric functions.
- Utilize various techniques of integration.
- Determine whether a sequence or series converges.
- Use concepts from the course to solve problems.
- Solve differential equations.
- Utilize precise mathematical language and symbols to effectively communicate mathematics in written and/or oral form.

MATH 231 Calculus III (3)

Vector-oriented study of functions of several variables; partial differentiation and line integrals; multiple integrals. (3 hours lecture)

Prerequisite: Grade of "C" or better in MATH 206 or equivalent or consent of instructor.

The student learning outcomes are:

- Analyze and apply principles, concepts, and properties from algebra, geometry, trigonometry, and calculus to solve problems.
- Apply concepts and calculus properties of Cartesian space coordinates and vectors.
- Apply principles and concepts from calculus to multivariable functions.
- Use various strategies from this course to solve problems.
- Utilize precise mathematical language and symbols and effectively communicate in written and/or oral form.

MATH 232 Calculus IV (3)

Math 232 is the fourth course in the calculus sequence. Topics include multiple integrals, line integrals, Green's Theorem, surface integrals, Stokes' Theorem, Gauss' Theorem and differential equations. (3 hours lecture)

Prerequisite: "C" or better in Math 231 or equivalent or consent of instructor.

The student learning outcomes are:

- Compute multiple integrals in various coordinate systems.
- Use multiple integrals or vector calculus techniques to solve application and/or theoretical problems.
- Solve basic differential equations and applications.
- Utilize precise mathematical language and symbols and effectively communicate in written and/or oral form.

Meteorology

MET 101 Introduction to Meteorology (3)

Introduction to Meteorology (MET 101) studies basic atmospheric physics, Sun-Earth-atmosphere-ocean-human interrelationships,

major weather systems and forecasting, with special emphasis on Hawai'i. For both science and non-science majors and prospective science teachers. (3 hours lecture)

DY

The student learning outcomes are:

- Describe the components, processes and resulting weather patterns in the atmosphere.
- Interpret the components of weather maps, and forecast weather.
- Apply the scientific method and theories and concepts of meteorology (atmospheric physics) to explain major weather systems.
- Explain critically the relationship between humans and the atmospheric environment.

MET 101L Introduction to Meteorology Lab (1)

Introduction to Meteorology Lab is an introductory lab intended for non-science majors and prospective science teachers. This lab includes exercises with meteorological data and measurement systems. Characteristics of Hawaiian winds, temperatures, and rainfall will be covered. (3 hours laboratory)

Prerequisite: Credit for or registration in MET 101.

DY

The student learning outcomes are:

- Apply the scientific method to study Earth's atmosphere: Define a problem for a study, gather and record data, analyze the data, arrive at appropriate conclusions, and report the findings in written or other appropriate form.
- Use various meteorological data, such as satellite imagery, radar imagery, Stüve diagrams and surface pressure maps, to analyze the atmosphere and forecast weather.
- Use the metric system, scientific notation, graphs, and meteorological and basic statistical measurements.
- Write a lab report using the standard scientific format.

Microbiology

MICR 130 General Microbiology (3)

Fundamentals of microbiology, growth, development, and classification of bacteria, viruses, protozoa, fungi and algae; roles of microorganisms in the environment and human affairs: medical microbiology, immunology, and applied microbiology for food sanitation and public health. (3 hours lecture)

DB

The student learning outcomes are:

- Describe the main morphological characteristics, growth, reproduction and classification of algae, bacteria, fungi, protozoa, viruses and helminths.
- Discuss etiologies, reservoirs of infection, modes of transmission, signs, symptoms, and treatments and/or methods of prevention of common infectious diseases of humans.
- Describe the basic principles of molecular genetics as they relate to cell division, mutation, genetic engineering, protein synthesis, bacterial virulence, and antibiotic resistance.
- Describe pathogenicity, immunity and allergies.

Course Descriptions

MICR 140 General Microbiology Laboratory (2)

Laboratory course illustrating fundamental techniques and concepts of microbiology, such as microscopic observations, aseptic transfer, microorganism classification and identification, environmental factors influencing microorganisms, biochemistry of microorganisms, ecological microbiology, and medical microbiology. This course is designed to complement MICR 130. Primarily for students in nursing, dental hygiene and nutrition. Science laboratory course. (4 hours laboratory)

Prerequisite: Credit for or registration in MICR 130; placement into MATH 24 or higher.

DY

The student learning outcomes are:

- Operate equipment used in microbiology laboratory.
- Prepare growth media.
- Perform aseptic transfer.
- Identify microorganisms using morphological and physiological tests.
- Follow biosafety procedures.
- Produce lab reports using the standard scientific format.

Music

MUS 106 Music Appreciation (3)

Elements, styles, and forms of music, from the listener's standpoint. Focus on classical music literature. Concert attendance and written critique required for two live performances during semester. (3 hours lecture)

DH

The student learning outcomes are:

- Identify masterpieces of classical music repertoire.
- Distinguish the essential compositional characteristics of the several stylistic periods in music/art history and representative composers from each period, which help place unfamiliar repertoire into familiar periods.
- Contrast/compare music of any type (i.e., classical, popular, ethnic, seasonal) for texture, form, melodic contour, harmonic orientation and time of composition.
- Compare/contrast the live performances seen during the semester.
- Define the elements that make up classical performance tradition and etiquette.

MUS 107 Music in World Cultures (3)

Music as organized sound and as a cultural object. Role of music in various societies: ancient and modern, sophisticated and non-sophisticated, child and adult, Western and non-Western. Representative styles and regional characteristics viewed in terms of musical characteristics and related cultural factors; a conceptual introduction to music and culture. Attendance at one ethnic performance is required. (3 hours lecture)

DH

The student learning outcomes are:

- Describe the role of music in different cultures.
- Describe the distinctive aural features and music aesthetics of a music culture.

- Describe the historical, religious, social, and political aspects of a society that contribute to the development of a music culture.
- Affirm the validity of other music traditions.
- Contrast/compare one's own music within the broader context of other music traditions.

MUS 108 Fundamentals of Western Music (3)

A basic music theory course. Emphasis on learning basic concepts involved in reading and writing music. Notation and reading of simple and compound rhythm, pitch, intervals and triads. Application to performance. (3 hours lecture)

DA

The student learning outcomes are:

- Identify and write the basic components of Western music notation.
- Apply basic theoretical components of Western music notation to written examples of music.
- Notate and read basic melodic and rhythmic patterns in both simple and compound meters.
- Use the components of music in both the performance and creation of music.
- Compose and harmonize two melodies of at least 32 measures.

MUS 114 College Chorus (1)

Rehearsal and performance of classical, popular, and Polynesian/ethnic choral literature. Elementary Polynesian dance may be included as part of performance. Open to all students. No previous choral experience required. Extra curricular concert attendance required. Student will complete one level of MusicLab Melody (8 modules of 10 quizzes each). Up to 7 credits applicable toward AA degree. (3 hours rehearsal)

DA

The student learning outcomes are:

- Read pitch and rhythmic notation in simple choral parts.
- Learn choral parts using basic music elements.
- Demonstrate the importance of ensemble singing in terms of musicianship and performance practice by learning all choral parts thoroughly and attending all rehearsals and performances.
- Experience the transformative nature of choral performance in the human experience.

MUS 121B Voice 1 (2)

Performance class designed for students with little or no vocal experience. Deals with vocal production and literature for voice. Student will complete one level of MusicLab Melody (8 modules of 10 quizzes each). May be repeated up to 4 credits; only 2 credits applicable towards the AA degree. (3 hours lecture and studio)

DA

The student learning outcomes are:

- Demonstrate basic vocal techniques of physical alignment, breath support, breath control, and tone production in performances of several songs.
- Apply basic concepts of rhythm and pitch accuracy in performances.

Course Descriptions

- Employ basic concepts of sight reading in learning music for performance.
- Perform in class and the semester recital with some confidence.

MUS 121C Piano 1 (2)

Basic principles of performance. Relevant problems in piano literature at elementary level. MUS 121C, 122C must be taken in sequence. Student will complete one level of MusicLab Melody (8 modules of 10 quizzes each). May be repeated up to 6 credits; only 2 credits applicable towards the AA degree. (1 hour lecture, 2 hours lecture/lab)

DA

The student learning outcomes are:

- Identify and write the basic concepts of music notation.
- Demonstrate knowledge of basic concepts in accurate performances.
- Demonstrate knowledge of the history of piano development.
- Perform in class and the semester recital with some confidence.

MUS 121D Beginning Classical Guitar (2)

Basic principles of classical guitar performance; relevant problems in literature. Repeatable to a total of 2 credits that may be applied to the AA degree. (1 hour lecture, 2 hours lecture/lab)

DA

The student learning outcomes are:

- Identify and write the basic concepts of music notation.
- Apply knowledge of basic concepts in accurate performances.
- Demonstrate knowledge of the history of classical guitar development.
- Perform with growing confidence in class performances.

MUS 121F Beginning Slack Key Guitar (2)

Basic principles of performance; relevant problems in literature. Student learns to play two G tunings. This course is intended for students with little or no background in this style of guitar playing. Ability to read music is not required. (3 hour lecture/studio)

DA

The student learning outcomes are:

- Demonstrate knowledge of the history of slack key guitar development.
- Apply knowledge of basic concepts in accurate performances.
- Use knowledge of slack key techniques and music concepts (music theory) to complete in-class recitals.
- Perform with growing confidence in class performances.

MUS 122B Voice 2 (2)

Performance class designed for students with previous vocal experience or training. Deals with vocal production and literature for voice. Student will complete one level of MusicLab Melody (8 modules of 10 quizzes each). May be repeated up to 4 credits; only 2 credits applicable towards the AA degree. (1 hour lecture, 2 hours lecture/lab)

Prerequisite: Credit for MUS 121B or consent of instructor.

DA

The student learning outcomes are:

- Discuss the origin and development of vocal music.

- Demonstrate intermediate level vocal techniques of diction, tone production, and breath control in performance situations.
- Sight read and learn music at an intermediate level.
- Perform with greater confidence in public performances.

MUS 122C Piano 2 (2)

Designed for further study of principles and basic skills of piano performance established in first semester piano. Continues the group participation chord approach with greater emphasis on ensemble playing and improvisation. MUS 121C and 122C must be taken in sequence. Student will complete one level of MusicLab Melody (8 modules of 10 quizzes each). (1 hour lecture, 2 hours lecture/lab)

Prerequisite: Credit for MUS 121C.

DA

The student learning outcomes are:

- Incorporate additional theoretical concepts in the performance of piano music.
- Display intermediate level concepts in performances.
- Sight read music with increasing accuracy and musicianship.
- Exhibit greater confidence in performing level-two repertoire.

MUS 122D Intermediate Classical Guitar (2)

Continuation of MUS 121D. Increased emphasis on guitar literature. Recommended that students register for MUS 101 concurrently. (1 hour lecture, 2 hours lecture/lab)

Prerequisite: Credit for MUS 121D or consent of instructor.

DA

The student learning outcomes are:

- Incorporate additional theoretical concepts in the performance of classical guitar music.
- Demonstrate knowledge of intermediate level concept in performances.
- Sight read music with increasing accuracy and musicianship.
- Exhibit greater confidence in performing level-two repertoire.

MUS 122F Intermediate Slack Key Guitar I (2)

Intermediate slack key guitar: level I. Student learns to play solos in C tunings and intermediate solos at level I in tunings learned in the elementary class. (3 hour lecture/studio)

Prerequisite: Credit for MUS 121F or consent of instructor.

DA

The student learning outcomes are:

- Incorporate additional theoretical concepts in the performance of slack key music.
- Demonstrate knowledge of intermediate level concepts on performances.
- Sight read tablature notation with increasing accuracy and musicianship.
- Exhibit greater confidence in performing level-two repertoire.

MUS 121Z Beginning Ukulele (2)

Basic principles of performance; relevant problems in literature. Introductory course in ukulele. Focus on principles of performance. Course is intended for students with little or no experience in playing the ukulele. (1 hour lecture, 2 hours lecture/lab)

Course Descriptions

DA

The student learning outcomes are:

- Demonstrate knowledge of the history of ukulele development.
- Apply knowledge of basic concepts in accurate performances.
- Strum chords for three (3) Hawaiian songs (in different keys) that demonstrate an understanding of major scale (music theory) applications.
- Perform with growing confidence in class performances.

MUS 122Z Intermediate Ukulele (2)

Continuation of MUS 121Z. Increased emphasis on ukulele literature. Focus on principles of performance. Emphasis on ensemble playing. (3 hour lecture/studio)

Prerequisite: Grade of "C" or better in MUS 121Z or consent of instructor.

DA

The student learning outcomes are:

- Be able to perform a traditional mele (song) in three different keys.
- Be able to pick two (2) solos, one of which will be a chord solo.
- Be able to strum accompaniment for a song that has six (6) chords in it.
- Be able to apply the principles and basic skills of ukulele performance to ukulele literature.

MUS 130F Slack Key Guitar Ensemble (2)

Continuation of Music 122F. Increased emphasis on slack key literature, techniques, and tunings. Advanced intermediate techniques of slack key guitar as applied to ensemble playing. (3 hour lecture/studio)

Prerequisite: Credit for MUS 122F.

DA

The student learning outcomes are:

- Analyze repertoire for articulation, phrasing and fingering difficulties.
- Incorporate intermediate level theoretical and technical concepts in the performance of chosen repertoire.
- Sight read tablature notation with greater accuracy and musicianship.
- Exhibit confidence in performing intermediate-level repertoire.

MUS 166 Popular Music in America (3)

A survey of Pop Music (including Blues, Jazz, Rock and Folk), in the United States in the twentieth century. Activities will include listening to recordings, writing lyrics and tunes and learning various aspects of the business of music. Field trips and concert attendance required. (3 hours lecture)

DH

The student learning outcomes are:

- Describe the role of music in different communities.
- Describe and compare the distinctive aural features and music aesthetics of the various style of popular music.
- Describe the historical, religious, social and political aspects of a society that contribute to the development of diverse musical styles.
- Compare/contrast different styles of popular music.

MUS 177 Introduction to Hawaiian Music (3)

A survey of Hawaiian music from Polynesian origins and pre-contact traditional forms to acculturated and contemporary forms and expressions including vocal, instrumental and dance music in their social, cultural and religious contexts. (3 hours lecture)

The student learning outcomes are:

- Identify and define the basic concepts, terminology and distinguishing features of Western European and Hawaiian music.
- Identify (a) the distinguishing features of indigenous Hawaiian music, (b) the musical instruments indigenous to Hawai'i, (c) acculturated Hawaiian music, and (d) acculturated musical instruments.
- Explain or discuss the functions of music in pre-contact Hawaiian society and in contemporary Hawai'i.
- Discuss the interplay of Hawaiian music and Hawaiian dance performance.
- Identify and discuss important events and personalities in the evolution of Hawaiian music.
- Discuss the composition, recording, production, and commercialization of Hawaiian music.

MUS 221C Piano 3 (2)

Continuation of MUS 122C. Increased emphasis on piano literature up to the intermediate level. MUS 221 and MUS 222C must be taken in sequence. Student will complete one level of MusicLab Melody (8 modules of 10 quizzes each). May be repeated up to 6 credits; only 2 credits applicable towards the AA degree. (1 hour lecture, 2 hours lecture/lab)

Prerequisite: Credit for MUS 122C or consent of instructor.

DA

The student learning outcomes are:

- Analyze repertoire for articulation, phrasing and fingering difficulties.
- Incorporate intermediate level theoretical and technical concepts in the performance of chosen repertoire.
- Sight read music with greater accuracy and musicianship.
- Exhibit confidence in performing intermediate-level repertoire.

MUS 222C Piano 4 (2)

Continuation of MUS 221C. Increased emphasis on piano technique and literature up to the intermediate level. Introduction to accompanying. MUS 221C and MUS 222C must be taken in sequence. Student will complete one level of MusicLab Melody (8 modules of 10 quizzes each). (1 hour lecture, 2 hours lecture/lab)

Prerequisite: MUS 221C

DA

The student learning outcomes are:

- Analyze and discuss the form, articulation, harmonic rhythm, and phrasing of performance repertoire.
- Provide logical fingering for repertoire pieces when needed.
- Apply advanced theoretical and technical concepts to performance of chosen repertoire.
- Perform with poise and confidence in front of an audience.

Course Descriptions

MUS 240 Introduction to Digital Music Production (3)

Introduction to digital music and sound production on the Macintosh platform: MIDI sequencing, audio recording, music arranging, editing, mixing and mastering; preparing audio files for CD, video and web applications; sound synthesis and programming using virtual instruments. (3 hours lecture)

Prerequisite: MUS 108, 121 (alpha) or 253; or consent of instructor.

Recommended Preparation: Basic Keyboard (piano) skills, computer (Mac) skills.

The student learning outcomes are:

- Use MIDI sequencing and audio recording software, and/or notation software, as tools for music composition, arranging and performance.
- Apply basic skills in MIDI sequencing and editing, and digital audio recording and editing to audio mixing and mastering projects.
- Prepare audio files for CD burning, and video and web applications.
- Apply understanding of sound synthesis to create original sounds for music projects.
- Transfer skills to other MIDI sequencing and digital audio software programs across PC and Mac platforms.

MUS 241 Digital Music Production II (3)

Continuation of principles and skills introduced in MUS 240. Digital music composition and audio production on the Macintosh platform with emphasis on advanced MIDI and mixing techniques, audio editing, sound synthesis, and programming of virtual instruments and effects. (3 hours lecture)

Prerequisite: MUS 240 or consent of instructor.

The student learning outcomes are:

- Advanced use of MIDI sequencing and audio recording software, or notation software, as tools for music composition, arranging and performance.
- Apply advanced skills in MIDI sequencing and editing, and digital audio editing to music composition projects.
- Effectively mix, bounce and prepare audio files for appropriate media and applications.
- Create and edit original sounds and effects for music projects.
- Transfer skills to other MIDI sequencing and digital audio software programs across PC and Mac platforms.

MUS 253 Elementary Music In Action (3)

Deals with musical concepts, philosophy & pedagogy; the use of media, singing, movement, and instruments; and resources for an active elementary classroom. Presents correlation between music and brain development in early childhood. Intended for Education majors. Music is a vital stimulus to the developmental process and contributes to the emergence of positive self-esteem. Elementary education candidates learn to apply appropriate strategies in order to provide music making as part of everyday classroom activities. (3 hours lecture)

DA

The student learning outcomes are:

- Identify and write the basic components of Western music notation.

- Apply basic theoretical components of Western music notation to written examples of music.
- Notate and read basic rhythm and melodic patterns, both in simple and compound meters.
- Apply basic knowledge of basic theoretical concepts to performance on various instruments.
- Teach a mini model lesson, demonstrating a grade-appropriate musical concept.
- Harmonize simple melodies.

Natural Resource and Environmental Management

NREM 250 GIS Application in Environmental Science and Natural Resource Management (2)

An overview of geographic information system (GIS) applications in environmental science and natural resource management by examining case histories and completion of a GIS project. Students are also introduced to the basics of integrating the global position system (GPS) and remote sensing (RS) into a GIS to solve problems in environmental science and natural resource management. (1 hour lecture, 3 hours laboratory)

Prerequisite: Credit for GIS 150, equivalent coursework, working knowledge of GIS, or consent of the instructor.

Recommended Preparation: BIOL 124, GEOG 101, or similar environmental science coursework.

DY

The student learning outcomes are:

- Describe and analytically discuss specific case histories in the application of GIS, GPS and RS in environmental science and natural resource management.
- Use GPS technologies and remotely sensed imagery in GIS development to understand and solve environmental science and natural resource management problems.
- Develop and explain a GIS that deals with a problem in environmental science and/or natural resource management.

Oceanography

OCN 101 Introduction to the Marine Option Program (1)

This course provides an overview of statewide issues and organizations involved with ocean and freshwater activities, including management, education, research and business. It also provides an orientation to the Marine Option Program (MOP) and reviews the requirements of the MOP certificate. The course explores opportunities for internships, projects and careers related to water environments. The course will present guidelines on proposal writing, project implementation, data collection and interpretation, and final report preparation and presentation. This course is taught via HITS interactive television with participation of students and faculty throughout the UH system. (1 hour lecture)

Recommended Preparation: Grade of "C" or better in ENG 21 or higher, and MATH 24.

The student learning outcomes are:

Course Descriptions

- Develop a curriculum/program to facilitate the completion of a Marine Option Program (MOP) Certificate at WCC and other MOP campuses.
- Describe the ocean and freshwater related activities that are being undertaken statewide and on other UH campuses.
- Find information about statewide/nationwide/international projects, organizations, and career opportunities relating to marine and freshwater systems.
- Find information about internship and scholarship opportunities relating to water environments.
- Identify an appropriate MOP project topic.
- Identify appropriate mentors and experts in the project area.
- Complete a written MOP project proposal.
- Prepare and deliver an oral presentation.

OCN 201 Science of the Sea (3)

An introductory course to oceanography covering the dimensions of the science of oceanography, the physical and chemical properties of sea water, waves, tides, currents, life in the ocean, and the geologic structure of the ocean floor, environmental concerns, and human use of the oceans. (3 hours lecture)

DP

The student learning outcomes are:

- Understand how the scientific method works, how it has been applied in Earth science, and how it differs from other ways of acquiring knowledge.
- Articulate how the Earth is in integrative system across many scientific disciplines.
- Understand the internal structure of the Earth and the dynamic processes of plate tectonics that shape its surface, including seafloor spreading, subduction, and continental drift.
- Understand the causes of rising sea level and its impacts on coastal areas, including erosion and beach loss.
- Identify the major pathways of chemicals to the oceans and the effect that biological processes have on redistributing and removing chemicals from the oceans.
- Describe the major processes that cause the deep and shallow circulation of water in the oceans.
- Identify the major marine habitats, the types of organisms that live in those habitats, and give examples of how organisms are adapted to their habitat.
- Describe the types of interactions that occur among organisms in the marine food web and between organisms and their environment.

OCN 201L Science of the Sea Laboratory (1)

Experiments, computer exercises and field trips demonstrating the geological, physical, chemical and biological principles, and equipment, of earth and ocean sciences. (3 hours laboratory)

Prerequisite: Credit for or registration in OCN 201 or equivalent preparation or consent of instructor.

Recommended Preparation: High school algebra and chemistry; ability to use a computer.

DY

The student learning outcomes are:

- Develop a practical understanding of the principals of oceanography.

- Use the methodology of marine biology and oceanography to define and solve problems independently and collaboratively.
- Use a wide variety of laboratory and field techniques with accuracy, precision and safety.
- Accurately interpret biological and oceanographic information.
- Demonstrate proficient library, mathematical and computer skills in data gathering and analysis.
- Apply scientific concepts to environmental and societal issues.
- Apply their learning in an off-campus professional setting.

OCN 260 Pacific Surf Science and Technology (3)

Pacific Surf Science and Technology is a lecture-based course that showcases scientific and industry aspects of the surfing world for surfers and non-surfers. The course takes a scientific approach to understanding the natural processes that create and influence waves and surf conditions, while also introducing many ocean safety concepts relating to the environment and the popularity of ocean recreation. A weather and surf journal along with weekly campus field excursions dedicated to studying weather phenomena adds an essential experiential component to the course. (3 hours lecture)

Recommended Preparation: Ability to access information from the Internet.

The student learning outcomes are:

- Discuss the basic principles of meteorology, oceanography, and geology as they apply to the creation and shaping of waves and surf.
- Predict surf conditions using Internet websites and local weather station reports.
- Compare and contrast past and present surfboard technology and production.
- Apply the principles of design, production, and retail marketing within surfing related industries.
- Assess the various multimedia applications related to surfing.
- Demonstrate water safety issues related to surfing.
- Apply the basic techniques of surfing.
- Maintain logs of weather and surf observations to use in future forecasts.

OCN 260L O'ahu Surf Science and Technology Lab (3)

OCN 260L is a field lab designed to run concurrently with OCN 260, Pacific Surf Science and Technology. The course presents the surfing world through laboratory and field activities, including surfing demonstrations and instruction, learning water safety techniques, studying board design at surfboard manufacturing shops, and speaking with local industry professionals. Meteorology and surf forecasting techniques are covered through onsite weather observation activities, and physical processes involved in shaping waves as they approach a shoreline will be examined through several coastal studies. (3 hours lecture)

Prerequisite: Credit for or registration in OCN 260.

The student learning outcomes are:

- Distinguish between pre-historic, traditionally built papa he'e nalu, historic-era, and modern surfboards.
- Outline the procedures involved in surfboard production.
- Operate safely a surfboard using the basic techniques of surfing.
- Access information on and identify local weather phenomena and ocean/surf conditions around O'ahu.

Course Descriptions

- Describe at least five ocean and surf industries.
- Identify wave-generating facilities.
- Maintain a journal of surfing experiences.

Pharmacology

PHRM 203 General Pharmacology (3)

Covers a wide range of drugs with emphasis on sites and mechanism of action, toxicity, fate and uses of major therapeutic agents. This course is intended for students in nursing and allied health fields. (3 hours lecture)

Prerequisite: Grade of "C" or better in ZOOL 141 and ZOOL 142.

Recommended Preparation: College level chemistry.

The student learning outcomes are:

- Describe the basic mechanisms of drug action.
- Demonstrate knowledge of the terminology and special concepts useful in the study of pharmacology.
- Describe how differences between individuals govern their response to drugs.
- Define how drugs are processed and biotransformed by the body.
- Identify frequent complications and side effects associated with the major drug classes.
- Describe significant interactions between drugs.
- Use information from the pharmacokinetics of a specific drug to determine dosing schedules and best route of drug administration.
- State the therapeutic uses for each major drug group.

Philosophy

PHIL 100 Introduction to Philosophy: Survey of Problems (3)

Great philosophical issues, theories, and controversies. Course will focus on issues such as the problem of determinism, the problem of induction, the problem of distributive justice, the problem of the highest good, and the problem of the function of government. (3 hours lecture)

DH

The student learning outcomes are:

- Analyze contemporary issues and events using philosophical concepts and theories.
- Defend a position on a philosophical problem in philosophy.
- Identify important individuals, events, theories, and concepts in Western philosophy.
- Apply critical thinking skills (i.e. clarify concepts, raise normative questions, evaluate ideas presented in the text and handouts, and identify philosophical issues and concerns).

PHIL 101 Introduction to Philosophy: Morals and Society (3)

Social and individual values, obligations, rights, and responsibilities. Course will cover normative theories and their applications to business, medicine, ethics and sexual relations. (3 hours lecture)

Recommended Preparation: College level reading ability.

DH

The student learning outcomes are:

- Recognize the major views that have defined the Western debate on ethical matters to include: virtue ethics, teleological theory, and deontological theory.
- Use logical reasoning and ethical concepts to analyze contemporary ethical problems.
- Defend a position on a fundamental problem in ethics.
- Compare, contrast, and evaluate virtue ethics, teleological theory, and deontological ethics in terms of their respective views of (a) human nature, (b) the nature of goodness, (c) the good life.

PHIL 102 Introduction to Asian Philosophy: Asian Traditions (3)

Introductory course in selected schools of Asian thought. Universal issues/problems examined from Asian perspective. Focus will be on Indian, Chinese, and Japanese traditions. (3 hours lecture)

DH

The student learning outcomes are:

- Compare, contrast, and evaluate Indian, Chinese, Japanese, and European thought in terms of their respective views of (a) human nature, (b) the nature of goodness, (c) the good life.
- Identify and discuss contributions of schools of Asian philosophy and the influence of each on the other through a historical perspective.
- Discuss terms and concepts like "satori", "anatta", "jen" and evaluate their relevance (significance) for the West.
- Analyze Indian, Chinese, and Japanese thought in terms of (a) methodology, metaphysics, and ethics in order to better understand Asian concerns.

PHIL 110 Introduction to Logic (3)

A study of the foundations and development of rational thought and communication and their applications. Includes analysis of deductive reasoning, formal and informal fallacies, and the use of symbolic systems. (3 hours lecture)

FS

The student learning outcomes are:

- Recognize fallacies of relevance, presumption, and ambiguity.
- Employ rules of logic in deductive analysis.
- Construct truth tables for deductive analysis.
- Use symbolic systems for deductive analysis.

PHIL 211 Ancient Philosophy (3)

The philosophical traditions of Greece and Rome between the 5th century BCE and the 5th century CE. Important works by four representative figures (two from Classical Greece and two from the Roman tradition). (3 hours lecture)

Recommended Preparation: Completion of ENG 100 or equivalent.

DH

The student learning outcomes are:

- Discuss terms and concepts like the "doctrine of homomensura" and the "doctrine of ideas or forms" and evaluate their relevance (significance) for modern times.
- Identify and discuss contributions of selected philosophers and the influence of each on the other through a historical perspective.

Course Descriptions

- Trace some of the roots of present day thought through the application of concepts and points of view forwarded in this class.
- Discuss the major tenets of the “classical mind” as well as those that made up the “medieval mind” in order to characterize these periods of time in an orderly and meaningful pattern.

PHIL 213 Modern Philosophy (3)

Introduction to the history of philosophy based on texts or translations of “modern” works, that is works originally written in a modern European language. (3 hours lecture)

DH

The student learning outcomes are:

- Describe the nature and significance of major controversies in epistemology, ethics, metaphysics, aesthetics, and method that define the period of modernity.
- Clearly explain, synthesize, and compare the arguments put forward by the modern philosophers studied in the course.
- Carefully evaluate the positions of the philosophers studied by employing the methods of philosophical inquiry such as critical thinking, critical reading, and critical writing.
- Clearly, concisely, and convincingly articulate reasons that support personal judgments about major controversies in epistemology, metaphysics, ethics, aesthetics, and method.

Physics

PHYS 122 Introduction to Science: Physical (3)

Characteristics of science, historical development of scientific concepts, and interactions with society illustrated by topics from physical sciences, with emphasis in physics and chemistry. Designed for non-science majors. (3 hours lecture)

Prerequisite: Credit for MATH 25 or higher or equivalent or consent of instructor.

Corequisite: PHYS 122L.

DP

The student learning outcomes are:

- Recognize the fundamental principles and philosophy upon which the scientific method is based.
- Apply the basic concepts of physics and chemistry.
- Apply the concept of conservation laws in problem solving.
- Apply basic mathematics to problems in physics and chemistry.
- Define the common terms used in the physical sciences.
- Assess the limitations of the scientific method and apply error analysis.
- Recognize the physical science principles as applied to everyday situations.

PHYS 122L Introduction to Physical Science Lab (1)

Lab experiments illustrating topics and methods in the Physical Sciences with emphasis in Physics and Chemistry. Designed for non-science majors. (3 hours laboratory)

Prerequisite: Credit for or registration in PHYS 122 or consent of instructor.

DY

The student learning outcomes are:

- Apply the scientific method to a selected group of topics in physics and chemistry.
- Collect, report and analyze data obtained in a laboratory setting in a manner exhibiting organization, proper documentation and critical thinking.
- Manipulate data and apply quantitative techniques, such as graphing and statistical analysis.
- Demonstrate a basic understanding of the standard instruments used in physics and chemistry.
- Identify environmental factors, which affect the outcome of an experiment or observation and apply basic error analyses techniques.

PHYS 151 College Physics I (3)

A noncalculus one semester course for preprofessional or nonengineering majors. Study of the basic concepts of physics, including the fundamental principles and theories in mechanics, energy, and waves. (3 hour lecture)

Prerequisite: Credit for or registration in MATH 140 or higher, or consent of instructor.

Corequisite: PHYS 151L.

DP

The student learning outcomes are:

- Demonstrate a general understanding of the underlying philosophy of the physics, including the scientific method.
- Apply the basic concepts of physics, including mechanics, energy, simple oscillatory systems, gas laws and fluid dynamics.
- Apply the concept of conservation laws in problem solving.
- Apply basic algebraic and graphical analysis techniques to physics problems.
- Compare and contrast macroscopic and microscopic systems in physics.
- Define quantitatively and qualitatively the common terms used in physics.
- Assess the limitations of the scientific method and apply error analysis.
- Determine when to apply physics principles to everyday situations.

PHYS 151L College Physics Laboratory I (1)

Experiments in statics, mechanics, energy, waves, and friction. (3 hours laboratory)

Prerequisite: Credit for or registration in PHYS 151.

DY

The student learning outcomes are:

- Apply the scientific method to physical science systems involving mechanics, energy, simple oscillatory systems, gas laws and fluid dynamics.
- Collect, report and analyze data obtained in a laboratory setting in a manner exhibiting organization, proper documentation and critical thinking.
- Manipulate data and apply quantitative techniques, such as graphing and statistical analysis.
- Demonstrate a basic understanding of the standard instruments used in physics.

Course Descriptions

- Identify environmental factors, which affect the outcome of an experiment or observation and apply basic error analyses techniques.

PHYS 152 College Physics II (3)

A noncalculus, one-semester course for pre-professional or nonengineering majors. Study of the basic concepts of physics, including the fundamental principles and theories in electricity, magnetism, optics, and modern physics. (3 hours lecture)

Prerequisite: Credit for PHYS 151 or equivalent, or consent of instructor.

Corequisite: PHYS 152L.

DP

The student learning outcomes are:

- Demonstrate a general understanding of the underlying philosophy of the physics, including the scientific method.
- Apply the basic concepts of physics, including thermodynamics, static and dynamic laws of electricity and magnetism, circuit analysis, electromagnetic radiation, optical systems, and the fundamentals of atomic and nuclear physics.
- Apply the concept of conservation laws in problem solving.
- Apply basic algebraic and graphical analysis techniques to physics problems.
- Compare and contrast macroscopic and microscopic systems in physics.
- Define quantitatively and qualitatively the common terms used in physics.
- Assess the limitations of the scientific method and apply error analysis.
- Recognize the physical science principles as applied to everyday situations.

PHYS 152L College Physics Laboratory II (1)

Experiments in electricity, magnetism, optics, and modern physics. (3 hours laboratory)

Prerequisite: Credit for or registration in PHYS 152.

DY

The student learning outcomes are:

- Apply the scientific method to physical science systems involving thermodynamics, static and dynamic laws of electricity and magnetism, electrical and electronic circuit analysis, electromagnetic radiation, optical systems, and the fundamentals of atomic and nuclear physics.
- Collect, report and analyze data obtained in a laboratory setting in a manner exhibiting organization, proper documentation and critical thinking.
- Manipulate data and apply quantitative techniques, such as graphing and statistical analysis.
- Demonstrate a basic understanding of the standard instruments used in physics.
- Identify environmental factors, which affect the outcome of an experiment or observation and apply basic error analyses techniques.

PHYS 170 General Physics I (4)

This is the first of a rigorous, calculus-based course in physics for the professional or engineering majors. The study of the concepts of physics including the fundamental principles and theories of

mechanics, energy, waves and thermodynamics. (4 hours lecture)

Prerequisite: Credit for MATH 205 or higher or equivalent or consent of instructor.

Corequisite: PHYS 170L and credit for or registration in MATH 206 or equivalent, or consent of instructor.

DP

The student learning outcomes are:

- Demonstrate a solid conceptual understanding of kinematics, dynamics, wave phenomena, and thermodynamics.
- Solve applicable problems using differential calculus and vector analysis.
- Apply the laws of physics to computational problems in kinematics, dynamics, wave phenomena, and thermodynamics.

PHYS 170L General Physics I Laboratory (1)

This laboratory course is a rigorous, calculus-based study for professional or engineering majors. Laboratory exercises are designed to reinforce the fundamental concepts of kinematics, mechanics, energy, waves and thermodynamics. (3 hours laboratory)

Corequisite: Credit for or registration in PHYS 170.

DY

The student learning outcomes are:

- Demonstrate an experimental understanding of some basic physical concepts and theories.
- Demonstrate familiarity with various instruments and their use in making reliable and precise measurements.
- Calculate a result with the appropriate number of significant figures.
- Analyze data using calculation and graphical methods.
- Organize an accurate and complete laboratory notebook.

PHYS 272 General Physics II (3)

This is the second in a rigorous, calculus-based physics course for the professional or engineering major. The study of the concepts of physics including the fundamental principles and theories of electricity, magnetism, light, and optical theory. (3 hours lecture)

Prerequisite: Credit for MATH 206 or higher or equivalent and a grade of "C" or better in PHYS 170 or consent of instructor.

Corequisite: PHYS 272L.

DP

The student learning outcomes are:

- Demonstrate a solid conceptual understanding of electricity, magnetism, light, and optical theory.
- Solve applicable problems using calculus and vector analysis.
- Apply the laws of physics to computational problems in electricity, magnetism, and wave phenomena.

PHYS 272L General Physics II Laboratory (1)

This laboratory course is a rigorous, calculus-based study for professional or engineering majors. Laboratory exercises are designed to reinforce the fundamental concepts of electricity, magnetism, light and optical theory. (3 hours laboratory)

Prerequisite: Credit for or registration in PHYS 272.

DY

Course Descriptions

The student learning outcomes are:

- Demonstrate experimental understanding of some basic physical concepts and theories.
- Demonstrate familiarity with various instruments and learn to make reliable measurements.
- Calculate a result with the appropriate number of significant figures.
- Analyze data using calculation and graphical methods.
- Organize an accurate and complete laboratory notebook.

Political Science

POLS 110 Introduction to Political Science (3)

Introduction to politics as a human activity. Discusses theories, ideologies, systems, and processes of politics. (3 hours lecture)

DS

The student learning outcomes are:

- Identify and describe the structure of political issues and political relationships.
- Clearly explain and evaluate complex political thought and the positions of several thinkers in political theory.
- Examine and interpret contemporary political issues through the application of political theory.
- Relate media, technology, and language to the formation and maintenance of the political order.
- Carefully justify one's own political position.

POLS 120 Introduction to World Politics (3)

Power economics and world politics from cross-national perspectives. Discussion of U.S. foreign policy since 1945. (3 hours lecture)

DS

The student learning outcomes are:

- Explain basic terms, concepts, and principles of international relations.
- Analyze political processes, institutions, and issues in the foreign policy environment.
- Apply basic terms, concepts, and principles to everyday life.
- Assess his or her personal effectiveness in the political process.

POLS 130 Introduction to American Government (3)

Focus on American politics and government on the basis of tradition and continuity. Covers: overview of constitutional development, institutions, processes, and participants of the American political system and alternative interpretations. (3 hours lecture)

DS

The student learning outcomes are:

- Explain basic terms, concepts, and principles of politics.
- Analyze political processes, institutions, and issues.
- Apply basic terms, concepts, and principles to everyday life.
- Assess his or her personal effectiveness in the American political process.

POLS 180 Introduction to Hawaiian Politics (3)

Introduction to the study of political institutions, processes, and issues in Hawai'i. (3 hours lecture)

DS

The student learning outcomes are:

- Explain basic terms, concepts, and principles of politics.
- Analyze political processes, institutions, and issues in Hawai'i.
- Apply basic terms, concepts, and principles to everyday life.
- Assess his or her personal effectiveness in the political process.

POLS 243 Introduction to Politics and Film (3)

The course introduces students to the analysis of the relationship between politics and film. Topics covered in the course will include the impact of films and the film industry on politics, the impact of politics on film, and methods for understanding the representational practices of film. (3 hours lecture)

DS

The student learning outcomes are:

- Identify and describe the narrative and compositional structure of film.
- Clearly explain and evaluate the political thoughts, assumptions and implications of several key films.
- Examine and interpret contemporary political issues in film through the application of political thought.
- Relate media, technology, and language to the formation and maintenance of the political order.
- Carefully justify one's own political position.

Psychology

PSY 100 Survey of Psychology (3)

An introductory course with emphasis on principles of human behavior. Topics covered include motivation, learning, perception, emotion, development, personality, states of consciousness, group processes, problem solving and thinking, and methods of inquiry. (3 hours lecture)

DS

The student learning outcomes are:

- Recognize the study of psychology as a science.
- Discuss the biological and environmental basis of human behavior.
- Integrate the basic perspectives, concepts, principles, and general information comprising the field of psychology.

PSY 170 Psychology of Adjustment (3)

Focus is on understanding, evaluating and improving adjustment. Includes study of theories, concepts and techniques concerning personal growth and behavior change. (3 hours lecture)

DS

The student learning outcomes are:

- Identify and evaluate important issues in her or his own past and present.
- Integrate the basic perspectives, concepts, principles, and general information comprising the field psychology.
- Utilize the various psychology adjustment models and concepts in understanding his or her life.

Course Descriptions

PSY 202 Psychology of Women (3)

Study of theories, concepts and issues relevant to the psychological development of women. Topics include: gender differences, personality, achievement motivation, moral development, autonomy, mental health, domestic violence. (Cross-listed as WS 202.) (3 hours lecture)

Prerequisite: Credit for PSY 100 or consent of instructor.

DS

The student learning outcomes are:

- Articulate and illustrate an understanding that psychological gender differences are typically small.
- Identify and discuss important areas of culture where women are less visible than men.
- Demonstrate understanding that people react differently to men and women.
- Compare and contrast the wide variations among women.

PSY 224 Abnormal Psychology (3)

Concepts and principles used in clinical practice: dynamics, diagnosis, and treatment of abnormal behavior. Compares and contrasts the different patterns of abnormal behavior. Examines the differences in theoretical models for understanding maladaptive behavior. (3 hours lecture)

Recommended Preparation: PSY 100.

DS

The student learning outcomes are:

- Compare and contrast historical and current theories of abnormal behavior.
- Identify and describe different types of abnormal behavior and the "best practice" therapies associated with each type.
- Apply the principles of psychology to their own thoughts and feelings.
- Illustrate understanding of the role of culture, ethnicity, and socio-economic factors in defining abnormal behavior.

PSY 240 Developmental Psychology (3)

This course examines the emotional, mental, physical, and social development of individuals from infancy to adulthood with special attention to interests abilities and critical issues at successive developmental stages. (3 hours lecture)

Prerequisite: Credit for PSY 100 or consent of instructor.

DS

The student learning outcomes are:

- Recognize the study of psychology as a science.
- Discuss the biological and environmental basis of human behavior.
- Integrate the basic perspectives, concepts, principles, and general information comprising the field of developmental psychology.
- Utilize the various developmental psychology models and concepts in explaining human behaviors.

PSY 250 Social Psychology (3)

This course will provide students with an understanding of the relationship of social roles on human behaviors and how interpersonal relationships, attribution theories, attitudes, group

behaviors, and stereotypes affect human behaviors. (3 hours lecture)

Prerequisite: Grade of "C" or better in PSY 100.

DS

The student learning outcomes are:

- Recognize the study of social psychology as a science.
- Integrate the basic perspectives, concepts, principles, and general information comprising the field of social psychology.
- Utilize the various social psychology models and concepts in explaining human behaviors.

PSY 260 Psychology of Personality (3)

An introduction to the basic theoretical approaches to personality, how they are developed, changed and analyzed. (3 hours lecture)

Prerequisite: Credit for PSY 100.

DS

The student learning outcomes are:

- Recognize the study of personality psychology as a science.
- Discuss the basic perspectives, concepts, principles, and general information comprising the field of personality psychology.
- Utilize the various personality psychology models and concepts in explaining human behaviors.

PSY 270 Introduction to Clinical Psychology (3)

This course will provide students with an understanding of the history, theories and current developments in clinical psychology and different methods of assessment, forms of intervention and types of psychological problems. (3 credits lecture)

Prerequisite: Grade of "C" or better in PSY 100.

DS

The student learning outcomes are:

- Critique the foundation of knowledge, skills, professional attitudes and values associated with clinical psychology.
- Integrate the basic perspectives, concepts, principles, practices and general information comprising the field of clinical psychology.
- Utilize the various clinical psychology models and concepts in explaining human behaviors.

Religion

REL 150 Introduction to World's Major Religions (3)

Introduction to the world's major religions: Primitive, Hinduism, Buddhism, Shinto, Confucianism, Taoism, Judaism, Christianity, and Islam. Field trips may be required outside classtime. (3 hours lecture)

FGC DH

The student learning outcomes are:

- Identify the following elements or dimensions: origin, doctrines, ethics, sacred literature, important figures/founders, rituals, worship, and institutions for each of the world's major religious traditions.
- Identify the similarities and differences between two or more religions on the basis of the aforementioned dimensions.
- Examine the relationship between religion and culture/society.
- Question and think critically.

Course Descriptions

REL 151 Religion and the Meaning of Existence (3)

Introduction to basic issues of the question of the meaning of human existence. Emphasis is placed upon the student analyzing his/her own beliefs and exploring alternative answers. (3 hours lecture)

DH

The student learning outcomes are:

- Identify the various understandings of experience, existence, and/or the Ultimate/Absolute Reality in the world's religious traditions.
- Compare and contrast the similarities and differences between these meanings of existence in two or more religions.
- Identify the rituals, myths, and symbols/art that shape these worldviews.
- Analyze their belief systems.

REL 201 Understanding the New Testament (3)

Analysis of the origin and development of the early Christian message as set forth in the New Testament. Special attention will be given to the message of Jesus and Paul and its relevance to the modern world. (3 hours lecture)

DH

The student learning outcomes are:

- Demonstrate awareness of the historical and literary context of the New Testament.
- Show knowledge of modern Biblical interpretation and criticism.
- Show an understanding of the major parts and types of literature contained in the New Testament.
- Demonstrate recognition of how New Testament teachings have shaped modern society and human understanding of self.

REL 202 Understanding Indian Religions (3)

Historical survey of the teachings and practices of the major religious traditions of India. (3 hours lecture)

Prerequisite: Placement in ENG 100, or consent of instructor.

Recommended Preparation: REL 150 or 151.

DH

The student learning outcomes are:

- Identify the myths, histories, doctrines, and practices of Hinduism, Jainism, Buddhism, and Sikhism.
- Identify each religion's understanding of the human condition, ethics, knowledge, death, the afterlife, and conceptions of the divine.
- Identify common themes within the religions studied.
- Interpret primary sources (such as epics, devotional poetry, mystical instruction, myths, and hymns).
- Examine the relationship between religion and culture/society.
- Question and think critically.

REL 205 Understanding Hawaiian Religion (3)

Major Hawaiian religious teachings and practices from ancient times to the present. Investigation of cultural influence of Hawaiian religious beliefs; analysis of religious texts and relation to other traditions. This course may be applied to the BA language/culture core requirements at UH at Mānoa. (3 hours lecture)

DH

The student learning outcomes are:

- Identify and access major sources on Hawaiian religion.
- Express thoughts on Hawaiian religion in oral and written form.
- Compare and contrast elements of the Hawaiian religious experience with others or with their own.
- Identify ways in which Hawaiian religious thought and practice continues in the present.
- Interpret some symbolism of Hawaiian religious ritual and poetry.

REL 207 Understanding Buddhism (3)

Survey of major forms and practices of Buddhism. (3 hours lecture)

Recommended Preparation: ENG 100 and either REL 150 or REL 151.

DH

The student learning outcomes are:

- Identify the myths, histories, doctrines, and practices of the major schools of Buddhism.
- Identify each school's understanding of the human condition, ethics, knowledge, death, the afterlife, and conceptions of the divine.
- Interpret primary sources.
- Examine the relationship between religion and culture/society.
- Question and think critically.

REL 296 Special Topics in Religion (3)

Students will investigate important topics in the study of religion such as Sacred Places, Religion and the Media, or Religion and Politics. A specific course description will be printed in the schedule of classes. (3 hours lecture)

Recommended Preparation: REL 150 or REL 151

The student learning outcomes are:

- Identify the important concepts and facts associated with the topic under examination.
- Explain cause and effect relationships in connection to the topic discussed.
- Compare and contrast various religions' ideas of the topic.
- Relate the topic to contemporary events.

Social Sciences

SSCI 193 Cooperative Arts and Science Education (CASE) (1-4)

A workstudy course providing opportunities to reinforce skills learned in the Social Science areas and to apply those skills in actual job situations. Six credits may be applied to the AA degree.

Prerequisite: Minimum of 12 credit hours of general curricula.

The student learning outcomes are:

- Integrate the foundations of knowledge, skills, professional attitudes and values associated with a career field in the helping and human resource professions.
- Discuss the dynamics and multiple causes of interpersonal, family, and organizational dysfunction.
- Utilize a range of helping strategies and skills appropriate for prevention and early intervention work in a variety of settings.

- Apply the basic knowledge and practice of counseling and problem solving skills.

SSCI 200 Social Science Research Methods (3)

Focus on various ways social scientists undertake research. The course introduces the student to decision making with statistics research design methods and computers to assist analysis. (3 hours lecture)

Prerequisite: Successful completion of one social science course at 100 level, and placement in MATH 24 or consent of instructor.

DS

The student learning outcomes are:

- Critique the foundation of knowledge, skills, professional attitudes and values associated with research design and application.
- Apply current research methods and interpretation of research findings.
- Utilize a range of strategies and skills appropriate for gathering and analyzing research data.
- Write a research project using the basic knowledge and practice research.

SSCI 293 Cooperative Arts and Science Education (1-4)

A work-study course providing opportunities to upgrade and diversify knowledge and skills learned in the behavioral and social sciences, and to apply these in job situations. (Practicum)

Prerequisite: SSCI 193V.

The student learning outcomes are:

- Integrate the foundations of knowledge, skills, professional attitudes and values associated with a career field in the helping and human resource professions.
- Discuss the dynamics and multiple causes of interpersonal, family, and organizational dysfunction.
- Utilize a range of helping strategies and skills appropriate for prevention and early intervention work in a variety of settings.
- Apply the basic knowledge and practice of counseling and problem solving skills.

Social Work

SW 200 The Field of Social Work (3)

Orientation to the profession of social work; the nature and scope of social work, historical development, values and philosophy, methods of practice, scope, and aims. (3 hours lecture)

Prerequisite: ENG 22 or Placement in ENG 100

The student learning outcomes are:

- Describe the historical development and identify professional characteristics of social work as a profession.
- Explain social work values and their applications in the field.
- Analyze social problems affecting individuals, families, groups, and communities.
- Explain the theories and skills of social problems and their applications.
- Identify personal characteristics and analyze their implications in the practice of social work.

Sociology

SOC 100 Survey of General Sociology (3)

This course is an introduction to the scientific discipline of sociology. It will focus on key concepts, main theoretical perspectives, and research findings used by sociologists to explain the social world and social interaction. The course examines the fundamental components and institutions that make up the structure of human societies as well as the basic processes and direction of social change. (3 hours lecture)

DS

The student learning outcomes are:

- Summarize and distinguish the three main theoretical perspectives in sociology.
- Analyze and apply specific sociological theories and perspectives to human behavior and social issues.
- Explain and evaluate how society and culture affect our beliefs, values, behavior, and thinking patterns.
- Express and communicate ideas and opinions clearly in writing.

SOC 218 Introduction to Social Problems (3)

This course is a theoretical and substantive survey of the nature and causes of social problems; selected topics may vary from semester to semester. (3 hours lecture)

DS

The student learning outcomes are:

- Demonstrate an objective approach to the identification, observation, and analysis of social problems in society.
- Identify and apply sociological perspectives to social problems.
- Apply critical thinking skills to evaluate the causes of social problems.
- Detail and evaluate proposed solutions to social problems.

SOC 231 Introduction to Juvenile Delinquency (3)

Study of types, conditions, processes, and theories relating to juvenile delinquency. Study of the development of alienation and deviance by youth and study of the juvenile correction systems in society. (3 hours lecture)

DS

The student learning outcomes are:

- Apply a sociological perspective to juvenile delinquency.
- Display an understanding of the multiple causes of juvenile delinquency.
- Identify differences in male and female offenders.
- Show an awareness of the family and the school system as both malfunctioning institutions as well as preventative institutions.
- Express and communicate ideas and opinions clearly in writing.

SOC 250 Community Forces in Hawai'i (3)

This course is designed to acquaint the student with sociological principles and the application of these principles to aid in the awareness, understanding, and appreciation of the unique social environment of the State of Hawai'i. Fundamental concepts of sociology in the area of race relations are presented with emphasis on Hawai'i's unique potential "melting pot" social environment and

Course Descriptions

the development of an “unorthodox race doctrine” for Hawai‘i. Sociological aspects of the various cultural contributions by the ethnic groups to Hawai‘i including values, concepts, practices, history, and language are also investigated. (3 hours lecture)

DS

The student learning outcomes are:

- Demonstrate an understanding of the historical factors that affect inter-ethnic relationships in Hawai‘i.
- Describe how the structure of inter-ethnic relationships functions, and how it affects the lives of Hawai‘i residents.
- Explain the various factors that develop, maintain, and weaken inter-ethnic relationships in Hawai‘i.
- Identify the changes in inter-ethnic relations in Hawai‘i through time.

SOC 251 Introduction to Sociology of the Family (3)

SOC 251 is the study of human relationships within courtship, marriage, and the family as influenced by culture and society. It is designed to challenge students to re-examine assumptions regarding behavior, decisions, choices, and motivations in interpersonal relationships. The course places particular emphasis on diverse family forms, and the changing nature of how we define family. (3 hours lecture)

DS

The student learning outcomes are:

- Identify, describe, and analyze major trends in the family from a sociological perspective.
- Describe and analyze the connections between individual family experiences and larger social institutions.
- Display a critical awareness of contemporary social and political issues and how they affect the family.

Spanish Language

SPAN 101 Beginning Spanish I (4)

Introduction to basic structures of the Spanish language emphasizing speaking, writing, listening and reading. Oral communication emphasized to provide students with the right pronunciation vocabulary and the control of basic grammar. Introduction to Hispanic culture. (4 hours lecture, 1 hour laboratory)

The student learning outcomes are:

- Use appropriate pronunciation, structure and vocabulary to communicate orally with speakers of Spanish, answering questions or making simple descriptions.
- Read and understand authentic documents in Spanish for cultural information.
- Write simple texts (shopping lists, descriptions, postcards, forms) using knowledge of vocabulary, culture and basic grammatical structures.
- Analyze oral, written and visual sources (phone messages, menus, advertisements, cartoons) of information about Hispanic culture and compare and contrast with what the students know of their own culture.

SPAN 102 Beginning Spanish II (4)

Continues SPAN 101 through reading, speaking, writing and listening. Oral communication emphasized. Utilizes videos, stories and songs. Deals with Hispanic culture and the basic knowledge

of the history, geography, and the traditions of Spanish speaking countries. (4 hours lecture, 1 hour laboratory)

Prerequisite: Credit for SPAN 101 or consent of instructor.

The student learning outcomes are:

- Use appropriate pronunciation, structure and vocabulary to communicate orally with speakers of Spanish with greater proficiency, using role playing to create dialogues based on real-life situations.
- Read and understand authentic documents in Spanish (simple articles, poems, newspaper articles) for cultural information with greater proficiency.
- Write simple texts (letters, diaries, simple essays) using knowledge of vocabulary, culture and basic grammatical structures with greater proficiency.
- Analyze oral, written and visual sources (dialogues, articles, film clips, Internet sites) of information about Hispanic culture and compare and contrast with what the students know of their own culture.

SPAN 201 Intermediate Spanish I (3)

Continuation of SPAN 102. Further refinement of basic language skills. Increased control over structures and idioms in written and oral expression. Reading about Hispanic culture, society, history and literature. (3 hours lecture)

Prerequisite: Credit for SPAN 102 or consent of instructor.

The student learning outcomes are:

- Use appropriate pronunciation, structure and vocabulary to communicate orally with speakers of Spanish.
- Read and understand authentic documents (menus, recipes, itineraries, articles) in Spanish for cultural information.
- Compose dialogues and do research on some aspect of Hispanic culture or history and present it orally.
- Analyze oral, written and visual sources of information about Hispanic culture and compare and contrast with what the students know of their own culture.
- Write descriptions, letters, diaries, showing knowledge of vocabulary, appropriate structures and knowledge of Hispanic culture.
- Use Spanish to communicate personal information and experience and narrate past events and future aspirations.

SPAN 202 Intermediate Spanish II (3)

Continuation of SPAN 201. Further refinement of basic language skills including vocabulary development beyond the 201 level. Increased control over structures and idioms. Includes reading about literature, culture and society. (3 hours lecture)

Prerequisite: Credit for SPAN 201 or consent of instructor.

The student learning outcomes are:

- Use accurate pronunciation, structure and vocabulary to communicate orally with speakers of Spanish, creating dialogues based on real-life situations.
- Read and understand authentic documents in Spanish (articles, poems, short stories, film scripts, plays) for cultural information and critical thinking.
- Write texts (poems, essays, diaries, reports) using knowledge of vocabulary, culture and increasingly sophisticated syntax and grammatical structure, with increasing fluency and proficiency.

- Analyze oral, written and visual sources (dialogs, articles, film clips, feature length films, Internet sites) of information about Hispanic culture and compare and contrast with what the students know of their own culture.
- Create short film clips in the u-tube genre, containing both visual and verbal information about Hispanic culture.

Speech

SP 151 Personal and Public Speech (3)

Introduction to major elements of speech. Enables students to acquire competence in two person, small group, and public situations. Models and concepts are used to explain the speech act. (3 hours lecture)

Prerequisite: Placement in ENG 21 or higher.

OC DA

The student learning outcomes are:

- Choose and narrow a topic appropriately for the audience and occasion.
- Communicate the thesis/specific purpose in a manner appropriate for audience and occasion.
- Provide appropriate supporting material based on the audience and occasion.
- Use an organizational pattern appropriate to topic, audience, occasion, and purpose.
- Use language that is appropriate to the audience, occasion, and purpose.
- Use vocal variety in rate, pitch, and intensity to heighten and maintain interest.
- Use pronunciation, grammar, and articulation appropriate to the designated audience.
- Use physical behaviors that support the verbal message.

SP 181 Introduction to Interpersonal Communication (3)

Introduction to basic principles of interaction between two people. Emphasis is on enhancement of skills in a variety of interpersonal contexts. (3 hours lecture)

Prerequisite: Placement in ENG 21 or higher.

OC

The student learning outcomes are:

- Analyze situations in terms of communication models, identifying perspective and perception.
- Demonstrate improvement in listening skills through tests and critical analysis of other students by avoiding listening problems and practicing guidelines for listener feedback.
- Determine the source of individual values and development in understanding and analyzing self-image as the communicator.
- Recognize nonverbal communication identifying body language, gesture, facial expression, and posture.
- Apply effectively specific skills to improve assertiveness.
- Define conflict/stress and identify steps in reaching a mutually acceptable decision.
- Trace the development of relationships, identifying major steps of each level, and analyzing the progression of these levels.

SP 231 Performance of Literature (3)

Introduction to the study of literature through performance. Practice in rhetorical and literary analysis culminating in and performance of literary selections for an audience. The nature of performance criticism. (3 hours lecture)

Prerequisite: Credit for ENG 100 or SP 151.

OC DA

The student learning outcomes are:

- Use an in-depth process of written literary analysis to understand and appreciate various selections from prose, poetry and dramatic literature.
- Utilize voice, speech and body to interpret and communicate effectively to an audience selections from prose, poetry and dramatic literature.
- Use emotion and imagination through recall and transference to bring the literary happenings alive in a creative experience.
- Listen critically and appreciatively to the oral presentation of various selections from prose, poetry and dramatic literature and give evaluation feedback to peers as well as analyze in writing one's own performances.

SP 251 Principles of Effective Speaking (3)

Theory and practice of public speaking. Emphasizes practical skills in communicating with today's audiences, planning, and delivering speeches. (Offered occasionally) (3 hours lecture)

Prerequisite: Credit for ENG 100 or SP 151.

OC DA

The student learning outcomes are:

- Independently research some aspect of Aristotle's life and times, contributing to a composite view.
- Apply the principles of Aristotle's Rhetoric to contemporary speeches, evaluating the validity of those principles.
- Identify resources with the use of an annotated bibliography.
- Use group process to create evaluation formats for Public Speaking.
- Present speeches investigating the results or process of their research in the areas of Aristotle's context and application of Rhetoric.
- Write and deliver a Special Occasion Speech, using Rhetoric as a guide.
- Participate in a group discussion using a symposium format.

Theatre

THEA 101 Introduction to Drama and Theatre (3)

An introduction to the art of drama and theatre. Students study selected plays that are representative of important playwrights and historical periods. These plays are studied in their historical context and provide a basis for understanding elements and styles of drama. Theatre production will also be explored by considering the functions of actors, audiences, designers, playwrights and technicians. (3 hours lecture)

DA

The student learning outcomes are:

- Discuss the origin and development of the theatre from its beginnings to the present.

Course Descriptions

- Discuss the theatre's influence and importance in human culture.
- Compare and contrast plays and theatre practices from different time periods and cultures.
- Analyze the artistic choices and techniques used to transform a written dramatic script into a performed work presented to an audience.

THEA 211 Mask Making and Performance (3)

A hands-on course exploring several mask-making techniques, and the fundamentals of bringing a mask to life. The history and cultural significance of the mask will be surveyed. Students will make several masks and will perform for each other. (3 hours lecture)

DA

The student learning outcomes are:

- Discuss the importance of the mask in human culture.
- Demonstrate two or more mask-making techniques.
- Apply the basic process of bringing a mask to life to improvisations or rehearsed performances.
- Identify, analyze, and critically evaluate the technique in mask-making and mask performances.

THEA 221 Acting I (3)

Performance course concentrating on voice, relaxation, body awareness, and freedom from self-consciousness through theatre games, improvisation, and exercises. Emphasis on ensemble work. Students must see two plays and write about them or use the Service-Learning option. (3 hours lecture)

DA

The student learning outcomes are:

- Articulate and project the voice well.
- Devise and execute pantomimes and improvisations.
- Explore dramatic one- and two-person scenes.
- Identify, analyze and critically evaluate the technique and believability of dramatic performances.

THEA 222 Acting II (3)

Performance course concentrating on exploration of character creation; continued work on voice, relaxation, and self-realization. Students must see two plays and write about them or use the Service-Learning option. (3 hours lecture)

Prerequisite: Credit for THEA 221.

DA

The student learning outcomes are:

- Articulate and project the voice well.
- Devise and execute pantomimes and improvisations unselfconsciously.
- Explore dramatic one- and two-person scenes.
- Identify, analyze and critically evaluate the technique and believability of dramatic performances.

THEA 240 Introduction to Stagecraft (3)

Introduction to the technical process of theatre including scenery, lighting, sound and stage management. Students will focus on the range of skills needed to work in theatrical space. Six credits may be applied to the AA degree. (3 hours lecture)

DA

The student learning outcomes are:

- Demonstrate competence with the use of theatrical equipment.
- Identify key theatrical terms and concepts.
- Critically evaluate a theatrical event.
- Work effectively in a theatrical environment.

THEA 241 Advanced Stagecraft (3)

Advanced techniques of the technical process of theatre including lighting, sound, and rigging. Students will focus on the range of skills needed to work in convention, theatrical, concert, and dance applications. Six credits may be applied to the AA degree. (3 hours lecture)

Prerequisite: Credit for THEA 240 or consent of instructor.

DA

The student learning outcomes are:

- Demonstrate competence with the use of theatrical equipment to the instructor.
- Identify key theatrical terms and concepts.
- Critically evaluate a theatrical event.
- Work effectively in a theatrical environment.
- Demonstrate knowledge of one particular area of stagecraft through a presentation to the class and/or the instructor.

THEA 260 Dramatic Production (3)

Introduction to the process of converting a play into a performance. Students are required to participate in at least two aspects of an actual production. Six credits may be applied to the AA degree. (3 hours lecture)

DA

The student learning outcomes are:

- Identify key theatrical terms and concepts.
- Critically evaluate a theatrical event.
- Work effectively in a theatrical environment.
- Demonstrate knowledge of one particular area of focus through a presentation to the class and/or the instructor.
- Participate effectively in one aspect of a theatrical event.

Women's Studies

WS 151 Introduction to Women's Studies (3)

This interdisciplinary introductory course looks at gender roles and relationships, historically and in contemporary societies. The course examines the social, cultural, historical, and political influences on the status of women. It presents women's experiences from diverse backgrounds, social structures, and cultures. (3 hours lecture)

DS

The student learning outcomes are:

- Show an understanding of the difference between sex as a biological category and gender as a social category.
- Analyze the ways in which gender is taught, how gender is reflected in written and visual images, and how gender influences the operation of major social institutions and human relationships.
- Describe the historical changes in both gender roles and the status of women in the United States.
- Explain the similarities and differences of women's roles across cultural, racial, social, and economic lines.

Course Descriptions

WS 200 Culture, Gender and Appearance (3)

This course explores the social construction of gender within culture and its visual expression through appearance. An analysis of role, identity, conformity, and deviance in human appearance is emphasized. (3 hours lecture)

DS

The student learning outcomes are:

- Identify and describe relationships between the social body and physical bodies.
- Describe the links between clothing and culture.
- Describe the role appearance plays in gender development.
- Interpret the communicative nature of appearance and expressions of identity.
- Synthesize concepts and theories to describe the role of individual choice in appearance.

WS 202 Psychology of Women (3)

Cross-listed as PSY 202 (3 hours lecture)

DS

Zoology

ZOOL 101 Principles of Zoology (4)

Introduction to zoology. Topics include living animals, physiology, anatomy, development, reproduction, ecology, and evolutionary relationships. Lecture/laboratory course. (3 hours lecture, 3 hours laboratory)

Recommended Preparation: High school biology.

DB DY

The student learning outcomes are:

- Describe the atomic and molecular bases of tissues.
- Draw an animal cell, label its parts and list their functions.
- Solve monohybrid and multihybrid genetics problems involving complete dominance, codominance, multiple alleles, and sex-linked traits.
- Explain the basic principles of evolution, and the different forms that it takes.
- Connect the unique anatomical features of animals with their respective phyla and class, and list the functions of those anatomical features.
- Explain the principles of ecology, with a focus on consumers.
- Describe the animal organ systems, list their respective parts and their functions.
- Explain the principles of animal behavior.

ZOOL 105 Hawaiian Use of Fish and Aquatic Invertebrates (3)

A study of fish and aquatic invertebrates used traditionally by Native Hawaiians. This class will examine the role of fish and aquatic invertebrates in Hawaiian culture and resource utilization and management. (3 hours lecture)

Recommended Preparation: High school biology.

ZOOL 141 Human Anatomy and Physiology I (3)

The first semester of a two-semester course in human anatomy and physiology which includes a study of human embryology, gross

anatomy, microanatomy, physiology, pathology, and homeostatic relationships. This course is intended for students entering health care or medically related fields such as nursing, physical therapy and medical technology. (3 hours lecture)

Prerequisite: High school chemistry or equivalent preparation or consent of instructor.

Recommended Preparation: High school biology, BIOL 100, BIOL 101 or ZOOL 101; registration in ZOOL 141L.

DB

The student learning outcomes are:

- Discuss the major chemical elements found in the human body and describe the different ways in which these elements combine to form molecules and compounds.
- Understand the functions of cellular organelles, and be able to trace the path of protein manufacture in the cell.
- Compare and contrast the physical, chemical, and biological factors governing the transport of materials across the cell membrane.
- Discuss the link between cells and tissues and describe how tissue structure determines its suitability for secretion, absorption, support, or protection.
- Use standard medical terminology to describe body positions and the orientations.
- Describe the anatomy and function of the integumentary, skeletal, muscular, and nervous systems, and discuss how these systems maintain homeostasis in the human body.
- Discuss how negative feedback maintains homeostasis in each of the above body systems. Also, be able to explain how disease and disorders disrupt the homeostasis of each of the above body systems and discuss how common medical treatments and drugs are used to restore homeostasis.
- Write a research paper on a disease affecting one of the body systems using primary and secondary scientific literature.

ZOOL 141L Human Anatomy and Physiology Lab I (1)

Laboratory to accompany ZOOL 141. Reinforces the facts and concepts of human anatomy and physiology discussed in ZOOL 141 through dissections, examination of models, laboratory activities, and other hands-on experiences. This course is intended for students entering health care or medically related fields such as nursing, physical therapy and medical technology. (3 hours laboratory)

Prerequisite: Credit for or registration in ZOOL 141 or equivalent preparation or consent of instructor.

DY

The student learning outcomes are:

- Use the scientific method to design and conduct a clinical research study.
- Describe the anatomy of the integumentary, skeletal, muscular, and nervous systems from prepared slides, skeleton models, and real and virtual animal dissections.
- Use basic laboratory equipment (microscopes, slides, and dissecting tools) to observe and characterize human tissues.
- Use critical thinking to analyze and interpret clinical data.
- Prepare an oral presentation and written summary of lab activities using the scientific method.

Course Descriptions

ZOOL 142 Human Anatomy and Physiology II (3)

The second semester of a two-semester course in human anatomy and physiology which includes a study of human embryology, gross anatomy, microanatomy, physiology, pathology, and homeostatic relationships. This course is intended for students entering health care or medically related fields such as nursing, physical therapy and medical technology. (3 hours lecture)

Prerequisite: Credit for ZOOL 141 or equivalent preparation or instructor's consent.

Recommended Preparation: Registration in ZOOL 142L.

DB

The student learning outcomes are:

- Describe how lipids, carbohydrates, proteins and nucleic acids are digested, assimilated, and catabolized to obtain energy and raw materials.
- Describe the anatomy and function of the circulatory, lymphatic, endocrine, digestive, urinary, and reproductive systems and discuss how these systems maintain homeostasis in the human body.
- Describe the link between the anatomy of human tissues and organs and their functions within the human body.
- Discuss how negative feedback maintains homeostasis in the human body.
- Explain how disease and disorders disrupt the homeostasis of each of the above body systems and discuss how common medical treatments and drugs are used to restore homeostasis.
- Write a research paper on a disease affecting one of the body systems using primary and secondary scientific literature.

ZOOL 142L Human Anatomy and Physiology Lab II (1)

Laboratory to accompany ZOOL 142. Reinforces the facts and concepts of human anatomy and physiology discussed in ZOOL 142 through dissections, examination of models, laboratory activities, and other hands-on experiences. This course is intended for students entering health care or medically related fields such as nursing, physical therapy and medical technology. (3 hours laboratory)

Prerequisite: Credit for or registration in ZOOL 142 or equivalent preparation or consent of instructor.

DY

The student learning outcomes are:

- Use the scientific method to design and conduct a clinical research study.
- Describe the anatomy of the endocrine, circulatory, lymphatic, respiratory, digestive, urinary, and reproductive systems from prepared slides, models, and real and virtual animal dissections.
- Use basic laboratory and medical equipment (microscopes, sphygmomanometers, stethoscopes, ECG apparatus, & respiratory spirometers) to evaluate functions of the above body systems.
- Use critical thinking to analyze and interpret clinical data.
- Prepare an oral presentation and written summary of lab activities using the scientific method.

ZOOL 154 Exercise for Wellness (3)

The course will introduce students to the field of exercise, including a discussion of the underlying physiology, clinical responses, and the recommended medically related remediation. Exercise will be analyzed as an open energy system, supported by the major body systems, including cardiovascular, pulmonary, skeletal and neuromuscular systems. Important factors that will be considered include the frequency, intensity, type, and duration/time of exercise as well as the impact of gender, age, purpose, lifestyle and your body composition and metabolic status. (3 hours lecture)

Recommended Preparation: BIOL 100 or ZOOL 101 or ZOOL 141 and ZOOL 142.

DB

The student learning outcomes are:

- Define basic terms, concepts and principles of exercise, fitness, and wellness.
- Describe the fundamental classification of exercise biology and its underlying processes.
- Discuss the relationships between exercise and health.
- Explain the specificity of exercise and its multiple modes of application and related responses.
- Describe guidelines for assessing and planning a fitness-wellness program.
- Contrast Western and Eastern approaches to wellness.

ZOOL 200 Marine Biology (3)

Biological, physical, and chemical characteristics, flora and fauna, and interactions of components of marine ecosystems; survey of marine environments; utilization, exploitation, pollution, and conservation of marine resources; with special emphasis on the Hawaiian marine environment. (3 hours lecture)

Recommended Preparation: Registration in ZOOL 200L.

DB

The student learning outcomes are:

- Explain the process and philosophical basis of scientific inquiry.
- Distinguish between living things and inanimate objects.
- Demonstrate an understanding of the physical and chemical characteristics of the marine environment, especially those of the Hawaiian marine environment, and how they impact marine life.
- Communicate knowledge of the diversity of marine organisms, especially Hawaiian species.
- Exhibit an appreciation of the interaction between structure and function of marine life and how marine organisms are taxonomically related.
- Illustrate and provide examples of the ecological role of and relationships between marine organisms.
- Describe the major life zones of the ocean and the adaptations of living things relevant to being a successful species in these zones.
- Recognize and suggest solutions to the negative impacts of human activities on the marine environment.
- Research and write, using the language of the field, about a marine biology topic.

ZOOL 200L Marine Biology Laboratory (1)

Companion laboratory to ZOOL 200, Marine Biology. Practical, hands-on experiences in marine biology. Laboratory/field trip class. (3 hours laboratory)

Prerequisite: Credit for or registration in ZOOL 200 or consent of instructor.

DY

The student learning outcomes are:

- Use the scientific method of inquiry to investigate biological phenomena.
- Apply the concepts learned in ZOOL 200 to an experimental and hands-on observational setting.
- Collect, reduce, and interpret biological data.
- Prepare written objective reports describing and interpreting experimental and observational results.
- Demonstrate the use of some of the standard tools of the biological scientist, such as microscopes, scales, spectrophotometers, computers, and other analytical tools.
- Demonstrate the use of specialized tools and methods frequently used in the study of the marine environments and the organisms that live in these environments.

ZOOL 254 Exercise Therapy (3)

This course introduces selected concepts, principles and practices of physical activity that affect human wellness and fitness throughout all stages of life. In particular, the concepts of exercise specificity, adaptation, and remediation are presented as they affect human growth and development, and the aging process. The clinical concept of hypokinetic disease (under activity) is presented and its counterpart, clinical exercise therapy (Rx dosage) for purposes of preventative health application and remediation. Comparative study of both Western and Eastern exercise regimens are included in the context of their clinical contribution to wellness. (3 hours lecture)

Recommended Preparation: BIOL 100 or ZOOL 101 or ZOOL 141 and ZOOL 142.

DB

The student learning outcomes are:

- Define basic terms, concepts and principles of exercise, fitness, and wellness.
- Describe the fundamental classification of exercise biology and its underlying processes.
- Discuss the relationships between exercise and health.
- Explain the specificity of exercise and its multiple modes of application and related responses.
- Describe guidelines for assessing and planning a fitness-wellness program.
- Comprehend the professional literature and correctly interpret and categorize new developments/approaches in the field.
- Apply scientific logic to the selection and application of the many commercial products and procedures inundating the field.
- Contrast Western and Eastern approaches to wellness.

Additional College Information

Faculty and Staff

For a current listing of Faculty and Staff go to the WCC website at <http://windward.hawaii.edu/Directory/>

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Cresencia Antonio

Janitor

Derwin Baquiring

Building Maintenance Worker

Edwin Bruno

Janitor

Sandie Carmichael

Office Assistant, Media Production Center

Avelina Corpuz

Janitor, Supervisor

Magie Delmendo

Janitor

Freddie Gamayo

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Derrick Teruya

Janitor

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Clerk-Steno, Office of Academic Affairs

Faye Watanabe

Account Clerk, Business Office

Wendy Yamamoto

Office Assistant, Career & Community
Education

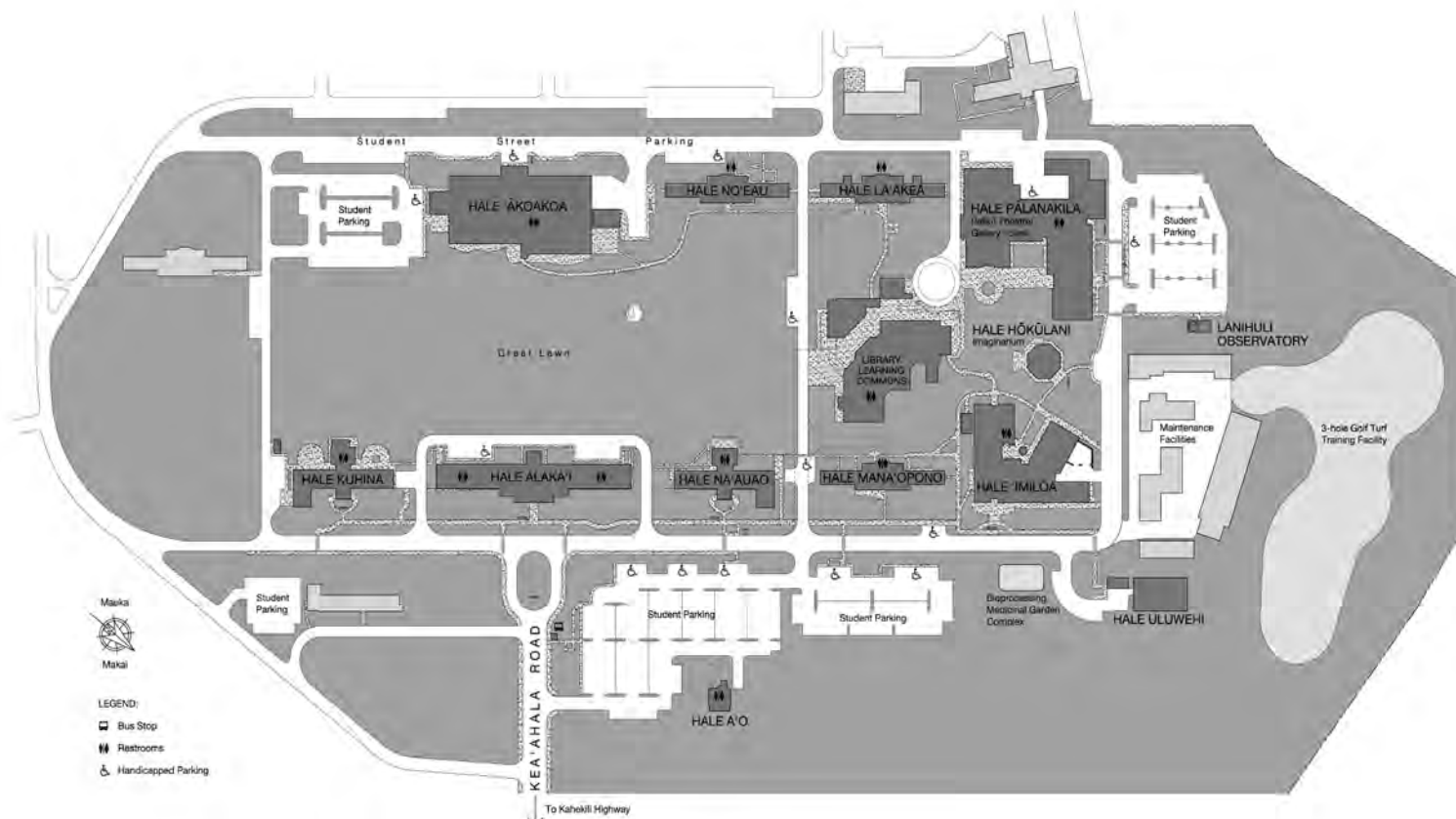
Carl Yokogawa

Groundskeeper

Dhalia Young

Cashier Clerk, VCE, OCCE

WCC Campus Map & Statistics



Hale Kūhina

(Career & Community Education)
Administrative Offices
Health Career Programs

Hale Alaka'i

(Administration)
Chancellor
Vice Chancellor of Academic Affairs
Vice Chancellor of Administrative Services
Admissions & Records
Business Office/Cashier
Financial Aid
Human Resources
Security
Institutional Research
Classrooms
Information & Computer Science (future)

Hale Ākoakoa

(Campus Center)
Vice Chancellor of Student Affairs
Academic Advising and Counseling
Student Publications
Student Government

Career and Transfer Center

Student Activity Center
Outreach & Recruitment
Clubs and Organizations
Bookstore
Cafeteria

Hale Na'auao

(Social Sciences)
Classrooms
Faculty offices
Service-Learning
New Name T/C
Faculty offices
TRiO

Hale A'o

(Hawaiian Studies)
Faculty offices
Hawaiian Studies classrooms

Hale Manaleo

(Language Arts)
Classrooms
Computer classrooms
Faculty offices

Hale La'akea

(Library Learning Commons)
Library
The Hub Coffee Shop
The Testing Center (TTC)
Computing Services
Ka Piko College Success Zone
Media Center (duplicating and media production)
Marketing & Communications

Hale Mana'opono

(Math)
Faculty offices
Math Classrooms and Lab

Hale Pālanakila

(Humanities)
Faculty offices
Classrooms
Music classrooms
Art classrooms
Ceramics Studio
Gallery 'Iolani
Palikū Theatre
Photography Lab
Computer Labs

Hale Hōkūlani

(Imaginarium)
Center for Multi-Media Education
Hale Lanihuli Observatory

Hale 'Imiloa

(Natural Sciences)
Science Classrooms and Labs
Veterinary Technology facilities
Aerospace Exploration Lab
Hawai'i Space Grant Consortium – Windward
Ho'a'aina RS/GIS Center
Kuhi La'au Plant Identification Center
Marine Option Program (MOP) Office
Water Quality Lab

Hale Uluwehi

Agriculture Technology facilities
Shade House

**GRADUATION AND PERSISTENCE RATES
FIRST-TIME, FULL-TIME, DEGREE OR CERTIFICATE-SEEKING UNDERGRADUATES**

	Fall 2008 Cohort
GRADUATION RATE - 150% of normal time to completion	10%
Gender	
Men	8%
Women	11%
IPEDS Race/Ethnicity	
Nonresident Alien	#
Hispanic/Latino	#
American Indian or Alaska Native	#
Asian	12%
Black or African American	#
Native Hawaiian or Other Pacific Islander	7%
White	6%
Two or more races	19%
Race and ethnicity unknown	#
Federal Grant/Loan Recipient	
Recipient of a Federal Pell Grant	14%
Recipient of a subsidized Stafford Loan who did not receive a Pell Grant	#
Student who did not receive either a Pell Grant or a subsidized Stafford Loan	9%
PERSISTENCE RATE - Still enrolled after 150% of normal time to completion	23%
TRANSFER OUT RATE	25%

A pound sign (#) denotes any cohort/subcohort with fewer than ten students.

This information is provided for the Student Right-to-Know Act, Public Law 101-542. It provides a partial description of the graduation and enrollment patterns of students. It should not be used to infer or predict individual behavior.

Institutional Research and Analysis Office, University of Hawai'i, February 2012

WCC Crime Statistics

Cases reported (per calendar year)	Murder	Rape	Sex Assault Forcible/Non-forcible		Robbery	Assault	Burglary	Auto Theft	Liquor Law*	Drug*	Weapons*
2010	0	0	0	0	0	0	0	1	0	0	0
2009	0	0	0	0	1	0	0	1		0	0
2008	0	0	0	0	0	1	0	0	0	0	0

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Quick Telephone Reference

Absences

Contact Instructor or Vice Chancellor
of Academic Affairs 235-7422

Admissions & Records 235-7432

Aerospace Exploration Lab 235-7321

Art Gallery

Gallery 'Iolani 236-9155

Audio/Visual Services

Media Production Center 235-7301

Bookstore 235-7418

Career Information

Career Center 235-7413

Cashier 235-7411

Ceramics Lab 235-7323

Continuing & Community Education 235-7362

Counseling Services

Counseling/Academic Advising 235-7413

Director of Development

KC Collins, CFRE, UH Foundation..... 235-7413
WCC Ambassadors

Disability Services 235-7448

Emergency 911

Equal Opportunities Officer 235-7404

FAX..... 247-5362

Financial Aid 235-7449

International Students Information

Admissions & Records 235-7432

Fujio Matsuda Technology Training and

Education Center 235-7433

Hawai'i Backyard Aquaculture Program .. 236-9121

Hawai'i Space Grant Consortium—

Windward 236-9111

Health Service/Medical Insurance Inquiries

Student Affairs 235-7466

Hökūlani Imaginarium 236-9350

Human Resources 235-7409

Library Services 235-7436

Literary Magazine (Student)

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Marketing and Public Relations..... 235-7374

NASA Flight Training Aerospace Education

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Pacific Center for Environmental Studies (PaCES)

Dave Krupp 236-9121

Floyd McCoy 236-9115

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Study Skills for Students

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WINDWARD
COMMUNITY COLLEGE

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