

IRAO OFFICE USE ONLY	
Received	
In Banner	
MTVCOMP/Codeset	
Master Curriculum	
CIP Code	
Program Code	
Program Description	

University of Hawai'i
Code Request Form for Academic Programs for
**NEW OR MODIFY
PROGRAM CODE**

[Reset Form](#)

New Program Code **Modify Program Code**

Date: 4/17/2016

REQUESTOR CONTACT INFORMATION

Name Blanca Polo Campus Leeward CC
 Title Associate Professor Email blanca@hawaii.edu
 Office/Dept DA 210 / Math and Sciences Division Phone (808) 455-0506

NEW PROGRAM CODE TO CREATE

Institution LEE - Leeward CC Campus LEE - Leeward CC
 Level UG - Undergraduate Effective Term Fall 2016

	Code (Max. Characters)	Description	Check if requesting new code:
College	(2) <u>IN</u>	<u>Instructional</u>	<input type="checkbox"/> See Banner form STV_COLL
Department	(4) <u>ICS</u>	<u>Information & Computer Sciences</u>	<input type="checkbox"/> See Banner form STV_DEPT
Degree/Certificate	(6) <u>CA</u>	<u>Certificate of Achievement</u>	<input type="checkbox"/> See Banner form STV_DEGC
Major	(4) <u>ICS</u>	<u>Information</u>	<input type="checkbox"/> See Banner form STV_MAJR
Concentration	(4) <u>ISSP</u>	<u>Information Security Specialist</u>	<input type="checkbox"/> See Banner form STV_MAJR
Minor	(4) _____	_____	<input type="checkbox"/> See Banner form STV_MAJR

If a similar major/concentration code exists in Banner, please list the code: _____

Justification to warrant a new major/concentration code similar to an existing major/concentration code: _____

Is this major/concentration code being used the same way at the other UH campuses? Yes No

Should this program be available for applicants to select as their planned course of study on the online application? *If yes, student may select the code as their only program of study.* Yes No

RULES PERTAINING TO FINANCIAL AID AND 150% DIRECT SUBSIDIZED LOAN LIMIT LEGISLATION

Is 50% or greater of the classes in this program offered at a location other than the Home Campus? Yes No

Is this program/major/certificate financial aid eligible? Yes No

Does this certificate qualify as a Gainful Employment Program (Title IV-eligible certificate program)? Yes No

See <http://www.ifap.ed.gov/GainfulEmploymentInfo/index.html>

Program Length

In academic years; decimals are acceptable. The length of the program should match what is published by the campus in any online and/or written publication.

1.0 academic year

Special Program Designations

See *Special Program Designations Code Definitions on IRAO Program Code Request webpage*

A B N P T U

Required Terms of Enrollment: Fall Spring Summer Extended

ADDITIONAL COMMENTS

[Empty box for additional comments]

ATTACHMENTS

BOR Approved: Associate, Bachelor and Graduate Degrees, and sole credential certificates

BOR Meeting Minutes & Supporting Documents

Curriculum

Chancellor Approved: Certificates related to authorized BOR program & Associate in Technical Studies (ATS) Degree

Memo from Chancellor to notify VPAA about new program

Curriculum

For new certificates approved by the Chancellor, the related BOR authorized academic program is:
AS in Information and Computer Science

VERIFICATIONS

By signing below, I verify that I have reviewed and confirm the above information that is pertinent to my position.

Registrar:

Grant Helgeson
Print Name

[Signature]
Signature

4/28/16
Date

Financial Aid Officer:

Gregg Yoshimura
Print Name

[Signature]
Signature

4/29/2016
Date

For Community Colleges, verification of consultation with OVPCC Academic Affairs:

Suzette Robinson
Print Name

[Signature]
Signature

6/22/16
Date





UNIVERSITY of HAWAII
LEEWARD
COMMUNITY COLLEGE

March 17, 2016

MEMORANDUM

TO: Risa Dickson
Vice President for Academic Affairs

VIA: Michael Pecsok 
Vice Chancellor for Academic Affairs

FROM: Manuel J. Cabral 
Chancellor

SUBJECT: Curriculum Approval

I have approved the following on 3/16/16 effective Fall 2016. These approvals can be found at:
<http://curriculumcentral.its.hawaii.edu:8080/central/core.cas.jsp>

New

Academic Subject Certificate (ASC) – Hawaiian Language
Certificate of Achievement (CA) – Information Security

c Division Chairs
James Goodman
Ron Umehira
Alicia Brown
Janel Oshiro
Candy Hochstein
Blake Hunrick
William Albritton
Pearl Imada-Iboshi

Leeward Community College

Degree:	Certificate of Achievement
Division:	Mathematics and Natural Sciences
Title:	Information Security
Description:	Provides students with entry-level skills or job upgrading for positions under direct supervision in information security.
Effective Date:	Fall 2016

- 1. Are the program outcomes appropriate functions of the college and University? (Relationship to University and campus mission and development plans, evidence of continuing need for the program, projections of career opportunities for graduates, etc.)**

Relationship to University of Hawai'i Mission:

The program "serves the public by creating, preserving, and transmitting knowledge in a multicultural environment," which is part of the University of Hawai'i Mission as stated on the University of Hawai'i Community Colleges Mission Statements webpage (http://uhcc.hawaii.edu/OVPCC/strategic_planning/mission.php).

Relationship to University of Hawai'i Community Colleges Mission:

The program supports "workforce development: to provide the trained workforce needed in the State, the region, and internationally by offering occupational, technical, and professional courses and programs, which prepare students for immediate employment and career advancement," which is part of the University of Hawai'i Community Colleges Mission as stated on the University of Hawai'i Community Colleges Mission Statements webpage (http://uhcc.hawaii.edu/OVPCC/strategic_planning/mission.php).

Relationship to Leeward Community College Mission:

The program supports "career and technical education" which is part of Leeward Community College Mission as stated in the 2015-2016 Leeward Community College Catalog.

Relationship to development plans:

The CA in Information Security is a one of the deliverables in the TAACCT (Trade Adjustment Assistance Community College and Career Training) Grant Program, Round 4 (also called "C3T4 Grant") for several of the UH Community Colleges, including Leeward CC. (See the TAACCT Grant Program webpage at:

<http://www.doleta.gov/taaccct/grantawards.cfm>.) Honolulu CC already has a CA in Information Assurance

(<http://www.honolulu.hawaii.edu/sites/www2.honolulu.hawaii.edu/files/catalog-cent.pdf>).

Kapi'olani CC has proposed a CA in Information Technology Cyber Security to be effective fall 2016.

This program provides our students entry into the well-paying, in demand career path of information security. After completing this CA, students can continue with 2-year degree in an AS in ICS with a Specialization in Information Security Specialist, and then continue with a 4-year degree with UHWO's BAS in Information Technology and BAS in IA (Information

Assurance). All three degrees are articulated with one another, so all courses count towards and/or transfer to the next degree.

The program aligns with H.B. NO. 979, which states: "The purpose of this Act is to increase the numbers of qualified employees for cybersecurity positions by building upon existing cybersecurity degree pathways and related training programs within the University of Hawaii community college system."

For details, see: HOUSE OF REPRESENTATIVES H.B. NO. 979 of the TWENTY-EIGHTH LEGISLATURE, 2015 STATE OF HAWAII.

Report Title: Cybersecurity Employment Training; Appropriation.

Description: Establishes a Cybersecurity Employment Training Initiative within the University of Hawaii Community College System; appropriates funds for the operation of the Initiative.

Webpage: http://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=HB&billnumber=979&year=2015

Evidence of continuing need for the program:

This is a new program.

Projections of career opportunities for graduates:

According to H.B. NO. 979: "The legislature finds that there is a growing demand for employees qualified to support federal and private sector requirements in cybersecurity and related disciplines. The U.S. Pacific Command has expressed their expectation of hiring over two thousand employees to support cybersecurity in their area of responsibility, and the National Security Administration expects to hire seven hundred employees in Hawaii alone."

According to the State of Hawaii Employment Projections for Industries & Occupations 2012 - 2022: "From 2012 to 2022, computer and mathematical occupations will rise to 11,480, up by 1,270 jobs or 12.4 percent. Over 90 percent of the jobs added will originate from the computer occupations subsector. Demand will stem from the increasing need for cybersecurity, the conversion to electronic medical records, and the constant advances in mobile technology. All of the occupations within this group will require some postsecondary education. ... Seven of the ten occupations advancing the fastest are classified in two occupational groups - computer and mathematical occupations, or in business and financial operations occupations. (See PDF at:

<https://www.hiwi.org/admin/gsipub/htmlarea/uploads/Long-TermProjections-2012-2022-State.pdf>.)

According to The Best 100 Jobs by U.S. News and World Report, Information Security Analyst is ranked number eight. "This profession is growing – at a rate of 36.5 percent through 2022." (See <http://money.usnews.com/careers/best-jobs/rankings/the-100-best-jobs>.)

- 2. What are the outcomes of the program? (outcomes should be stated in terms of meeting student, community or State needs. Also includes Program Learning Outcomes.)**

Student needs:

The program will provide students with entry-level skills or job upgrading as technical assistants to professional and administrative personnel in information security.

State needs:

The program aligns with H.B. NO. 979, which states: "The purpose of this Act is to increase the numbers of qualified employees for cybersecurity positions by building upon existing cybersecurity degree pathways and related training programs within the University of Hawaii community college system."

Program Learning Outcomes:

Upon completion of the certificate, the student will be able to:

1. Solve problems, develop algorithms and write object-oriented computer programs in a programming language.
 2. Design a relational database with proper documentation.
 3. Demonstrate proficiency in computer maintenance and networking.
 4. Demonstrate an understanding of the functioning of a computer's operating system.
 5. Apply the tools and techniques of information security to secure physical and digital information.
3. **How is the program organized to meet its outcomes? (Description of curriculum organization, requirements, admission policies, advising and counseling, and other aspects of the program, with reference to its outcomes.)**

Curriculum organization:**First Semester Requirements**

Courses	Credits	Certification
ICS 111 Introduction to Computer Science I	3	
ICS 170 Ethics for the Digital World	3	
ICS 171 Introduction to Computer Security	3	Security+
ICS 184 Introduction to Networking	3	Networks+
ICS 240 Operating Systems	3	Linux+

Second Semester Requirements

Courses	Credits	Certification
ICS 113 Database Fundamentals	3	
ICS 125 Personal Computer Maintenance and Repair	3	A+
ICS 215 Introduction to Scripting	3	
ICS 281 Ethical Hacking	3	CEH
ICS 282 Computer Forensics	3	EnCE

Requirements:

There are no special requirements.

Admission policies:

There are no special admission policies.

Advising and counseling:

Advising and counseling is consistent with other programs at the college.

4. **Who will enroll in the program? (Special target groups, if any; number of majors expected by year for first five years; expected service to non-majors; evidence of student interest.)**

Special target groups:

The target group is students who are interested in entry-level computer skills or job upgrading in information security.

Number of majors expected by year for first five years:

According to data in the University of Hawaii Community Colleges Annual Report of Instructional Program Data, the Associate in Science in ICS had 156 majors in academic year 2012-2013, 160 majors in academic year 2013-2014, and 169 majors in academic year 2014-2015. Assuming 20% of the students are interested in Information Security, we should have around 30 majors per year for the CA in Information Security.

Expected service to non-majors:

This program is useful to non-majors who would like to supplement their major with entry-level information security skills.

Evidence of student interest:

According to the Second Decade Project, which examined the higher education needs of the state for the next decade, the highest need in the state for post-secondary education is on the Leeward Coast. This area of Oahu contains 30% of the island's population and is expected to have a high population growth rate. This degree will serve the needs of Leeward Coast students interested in entry-level information security job skills.

We already have students taking the ICS classes listed in the CA in Information Security every semester. For the three Information Security specific courses for the fall 2015 semester, we have 12 students in ICS 171, 15 students in ICS 281, and 10 students in ICS 282. For the other courses, we have multiple sections with 20 students per class. ICS 215 is a new class, which will be offered in spring 2015.

5. **What resources are required for program implementation and first five-year cycle operation? (Number, source, and cost of faculty; library requirements; support personnel; estimated cost of supplies, equipment and CIP; facilities to be utilized; total funds required for program implementation and operation; expected source of funds, including sources of reallocated funds.)**

The program can be done with the use of existing resources. No new classes need to be offered. All courses within the program are presently offered by the ICS discipline.

6. **How efficient will the program be? (Compare anticipated cost per SSH, cost per major, SSH/faculty, average class size or other quantitative measures with other programs in the college and similar programs on other UH campuses.)**

The availability of this certificate will provide an additional incentive for ICS students who want to eventually earn an AS degree in ICS. The high level of student interest in the certificate is likely to increase enrollment in the courses included in the certificate. Thus, this program should improve the fill rate and the efficiency of these courses.

7. **How will effectiveness of the program be demonstrated? (Projected number of graduates yearly; placement of graduates; special accreditation; student satisfaction; career and employer satisfaction, etc.)**

Effectiveness will be demonstrated through the number of students who complete the certificate, improved student retention rates, improved class enrollment for ICS classes, student feedback, and employer feedback.

Campus: LEE
Updated By: WALBRITT
Updated Date: 09/23/2015 9:52 PM