

UNIVERSITY OF HAWAI'I
CODE REQUEST FORM FOR ACADEMIC PROGRAM CODES

REQUESTOR CONTACT INFORMATION	
Date: March 11th 2012	Effective term of request (Semester-Year): Fall 2011
Name: Blanca Polo	Title: Assistant Professor
Campus: Leeward CC	Office/Department: Math and Sciences
Phone: 455-0506	Email: blanca@hawaii.edu

1. PROGRAM CODE, MAJOR CODE, CONCENTRATION CODE		Banner forms: SMAPRLE, SOACURR, STVMAJR
Institution: Leeward CC (LEE)	College: IN Instructional	Department: Information and Computer Science
<input checked="" type="checkbox"/> New program code <input type="checkbox"/> Change/replace existing program code:		
Level: <input checked="" type="checkbox"/> Undergraduate <input type="checkbox"/> Graduate <input type="checkbox"/> First-Professional <input type="checkbox"/> Post-Baccalaureate <input type="checkbox"/> Other:		
Degree:	Certificate: CO Certificate of Competence	
If requesting an existing Major code and/or Concentration code in Banner:		
Existing Major: ICS Information and Computer Science	Existing Concentration:	
<small>Code</small>	<small>Description</small>	<small>Code</small> <small>Description</small>
If requesting a new <input type="checkbox"/> Major code or <input checked="" type="checkbox"/> Concentration code that does not exist in Banner:		
New Code [4 char/space limit]: APNT Description [30 char/space limit]: Adv. Prog. & Net. Troubleshoot		
If a similar major/concentration code exists in Banner, please list the code:		
Is this major/concentration code being used the same way at other UH campuses?		
Is 50% or greater of the classes in this program offered at a location other than the Home Campus? <input type="checkbox"/> Yes <input type="checkbox"/> No <small>(Please consult your Financial Aid Officer on Program Participation Agreement impact)</small>		
Is this program/major/certificate financial aid eligible? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Financial Aid Officer consultation required for all new program codes)		
Should this program be available for applicants to select as their planned course of study on the online application? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>(If yes, students may select the code as their <u>only</u> program of study.)</small>		

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Replacing or eliminating an existing program code:

If replacing an existing program code, are current students “grandfathered” under the old code? Yes No

Should the old program code be available for use in Banner? Yes No

Will the old program code be available for:	Banner Module	Yes	No	Ending Term (Semester-Year)
	Online Application	<input type="checkbox"/>	<input type="checkbox"/>	_____
	Recruitment	<input type="checkbox"/>	<input type="checkbox"/>	_____
	Admissions	<input type="checkbox"/>	<input type="checkbox"/>	_____
	General Student	<input type="checkbox"/>	<input type="checkbox"/>	_____
	Academic History	<input type="checkbox"/>	<input type="checkbox"/>	_____

2. CERTIFICATES ONLY:

Does this certificate qualify as a Gainful Employment Program (Title IV-eligible certificate program)? Yes No
(Please consult your Financial Aid Officer or see: <http://www.ifap.ed.gov/GainfulEmploymentInfo/index.html>)

For new certificates approved by the Chancellor, the related BOR authorized academic program is:

3. NEW CAMPUS, COLLEGE, DIVISION, OR DEPARTMENT CODE		Banner forms: STVCAMP, STV_COLL, STVDIVS, STVDEPT
Campus code [3 char]:	Campus description [30 char/space limit]:	
College code [2 char]:	College description [30 char/space limit]:	
Division code [4 char/space limit]:	Division description [30 char/space limit]:	
Department code [4 char/space limit]:	Department description [30 char/space limit]:	

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4. NEW COURSE SUBJECT CODE (Subject Alpha)		Banner form: STVSUBJ
College:	Department:	
Subject code [4 char/space limit]:	Subject description [30 char/space limit]:	

5. NEW MINOR (Minor codes are listed on the Major code table)		Banner form: STVMAJR
Minor Code [4 char/space limit]:	Minor Description [30 char/space limit]:	

Please briefly describe your request and explain why you are requesting the code(s):

SUPPORTING DOCUMENTATION
<p>Please see the Code Request Guide for the required supporting documents to be submitted. Documents submitted with this form:</p> <ul style="list-style-type: none"><input type="checkbox"/> Board of Regents meeting minutes and supporting documents provided to the BOR<input type="checkbox"/> Memo from UH President<input checked="" type="checkbox"/> Memo from Chancellor<input type="checkbox"/> Curriculum (required for requests for new programs/majors/minors/certificates)<input type="checkbox"/> Gainful Employment Program notification to the US Department of Education<input type="checkbox"/> Other: _____

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CAMPUS VERIFICATION		
Requestor Signature	<u>Blanca J. Polo</u>	Date <u>March 11th, 2012</u>
Registrar (If different from Requestor)	<u>Warren Man</u>	<u>3/13/12</u>
Print name	Signature	Date
Email/memo in lieu of Registrar's signature may be attached		
Financial Aid Officer (Financial Aid Officer consultation required for all new program codes)	<u>Aileen Lum-Akana</u>	<u>03-13-2012</u>
Print name	Signature	Date
Email/memo in lieu of Financial Aid Officer's signature may be attached		
For Community Colleges, verification of consultation with OVPCC Academic Affairs:		
<u>Peter O'Leary</u>	<u>[Signature]</u>	<u>3-22-12</u>
Print name	Signature	Date
Email/memo in lieu of signature may be attached		

Send completed form and supporting documentation to:

Institutional Research and Analysis Office (IRAO)
 1633 Bachman Place
 Sinclair Annex 2, Room 4
 Honolulu, HI 96822

Email: iro-mail@lists.hawaii.edu
 Fax: 808-956-9870
 Phone: 808-956-7532

After all required forms and supporting documents have been submitted, please allow at least two weeks for processing by IRAO and Banner Central.

FOR INTERNAL USE ONLY	
Date form/docs received:	
Program code [12]:	Program Description [30]:
CIP code [6]:	CIP description [30]:



UNIVERSITY of HAWAII*
LEEWARD
COMMUNITY COLLEGE

March 8, 2012

MEMORANDUM

TO: Linda Johnsrud
Office of the Executive Vice President for Academic Affairs/Provost

VIA: Michael Pecsok *[Signature]*
Vice Chancellor for Academic Affairs

FROM: *for* Manuel J. Cabral *[Signature]*
Chancellor

SUBJECT: Curriculum Approval

I have approved the new Certificate of Competence in Advanced Programming and Network Troubleshooting on 3/8/12 effective Fall 2011. The approval can be found at:
<http://curriculumcentral.its.hawaii.edu:8080/central/core.cas.jsp>

- c Division Chairs
- James Goodman
- Ron Umehira
- Nancy Buchanan
- Della Anderson
- Alicia Brown
- Candy Hochstein
- Michael Lane
- Pearl Imada-Iboshi

Leeward Community College

Degree: Certificate of Competence
Division: Mathematics and Natural Sciences
Title: Advanced Programming and Network Troubleshooting
Description: This certificate provides students with advanced computer programming and network troubleshooting. Students will learn program organization paradigms, programming environments, implementation of a module from specifications, and the C and C++ programming languages. Students will also learn full network life cycle development including analysis, design and maintenance of Local Area Network (LAN) and Wide Area Network (WAN) technologies
Effective Date: Fall 2011

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 and campus mission and development plans: The program objectives are in line with the following principles, which are part of the overall mission of Leeward Community College as stated in the 2011-2012 Leeward Community College Catalog.

- Access: To broaden access to postsecondary education in Hawai'i, regionally, and internationally by providing open-door opportunities for students to enter quality educational programs within their own communities.
- Work Force Development: To provide the trained workforce needed in the State, the Asia-Pacific region, and internationally by offering occupational, technical, and professional courses and programs which prepare students for immediate and future employment and career advancement.
- Personal Development: To provide opportunities for personal enrichment, occupational upgrading, and career mobility through credit and non-credit courses and activities.

Evidence of continuing need for the program: This is a new program.

Projections of career opportunities for graduates: According to employment projections for 2008–2018 by the United States Department of Labor Bureau of Labor Statistics (http://www.bls.gov/emp/ep_table_102.htm), jobs demand for computer specialists will continue to increase for the immediate future. This certificate is also designed to upgrade the computer skills of employees in the

Department of the Navy.

Employment Projections for 2008-2018 by the US Department of Labor Bureau of Labor Statistics				
2008 National Employment Matrix title	Employment		Percent change	Total job openings (x1000)
	Number (x1000)			
	2008	2018		
Computer specialists	3,424.30	4,187.00	22.27	1,383.60
Computer and information scientists, research	28.9	35.9	24.18	13.2
Computer programmers	426.7	414.4	-2.87	80.3
Computer software engineers	909.6	1,204.80	32.46	371.7
Computer software engineers, applications	514.8	689.9	34.01	218.4
Computer software engineers, systems software	394.8	515	30.44	153.4
Computer support specialists	565.7	643.7	13.8	234.6
Computer systems analysts	532.2	640.3	20.31	222.8
Database administrators	120.4	144.7	20.26	44.4
Network and computer systems administrators	339.5	418.4	23.23	135.5
Network systems & data communications analysts	292	447.8	53.36	208.3
All other computer specialists	209.3	236.8	13.14	72.6
Total, all occupations	150,931.70	166,205.60	10.12	50,928.50

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.)

As for meeting student needs, this certificate will provide students with opportunities to make effective decisions with intellectual integrity to solve problems and/or achieve goals utilizing the skills of critical thinking, creative thinking, information literacy, and quantitative/symbolic reasoning, which are fundamental skills in the computer industry.

As for meeting community needs, this certificate provides an opportunity for workforce retraining. With the recent recession, many people in the community are upgrading their skills by taking classes at Leeward Community College, so that they can attain a better-paying position in their current job, change careers to a computer-related job, or begin their education for a four-year degree.

As for meeting State needs, this certificate provides an entry point to a career in the computer industry in the State of Hawai'i. According to the HAWAII Workforce Infonet (<https://www.hiwi.org/>) of the Hawaii Department of Labor, job demand for computer specialists will continue to increase for the immediate future. Most of these jobs are increasing

at a rate greater than the average for all occupations.

Hawaii Employment Projections for 2008-2018 by HAWAII Workforce Infonet				
Occupation Title	Employment		Percent change	Estimated Annual Openings
	Number			
	2008	2018		
Computer and information scientists, research	70	70	0.00%	0
Computer programmers	920	780	-1.50%	20
Computer software engineers, applications	880	1,060	2.00%	30
Computer software engineers, systems software	510	600	1.80%	10
Computer support specialists	1,360	1,400	0.30%	40
Computer systems analysts	1,040	1,110	0.70%	30
Database administrators	250	280	1.20%	10
Network and computer systems administrators	960	1,080	1.30%	30
Network systems & data communications analysts	1,540	2,120	3.80%	90
Computer specialists, All Other	1,330	1,340	0.10%	30
Total, all occupations	685,950	734,790	0.70%	21,400

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

- Solve problems, develop algorithms and write structured computer programs using the C and C++ programming languages.
- Write object-oriented computer programs at an advanced level.
- Evaluate the principles and terminology of computer networking.
- Apply the mathematics used in computing science.
- Create and evaluate computer networking and Internet applications.

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.)

This certificate contains these two courses:

- ICS 212 – Program Structure
- ICS 294 – Network Analysis and Design

ICS 212 is taught at Leeward CC as one of the ICS courses required to transfer to UH Manoa. ICS 294 is one of the ICS courses required for the Certificate of Completion in Advanced Networking. This certificate will use the same admission, advising, and counseling resources as the ICS program. ICS 212 is a programming class. ICS 294 is a networks class. The two skills have been identified by the Department of the Navy as meeting a critical need. Furthermore, ICS 212 is articulated with the ICS BA and BS degrees at UH Manoa. Earning this certificate will facilitate the transfer of students to UH Manoa who wish to attain these degrees.

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: One special target group is students from the US Navy. In Fall 2011, we have 20 students from the U.S. Navy signed up for both courses. In addition, we also want to target students who are taking classes at Leeward CC, who want to transfer to the ICS program at UH Manoa.

Number of majors expected by year for first five years: As for number of majors, we currently have a MOA (Memorandum of Agreement) with the U.S. Navy for 20 students in Fall 2011. Potentially, if the U.S. Navy has a continuing need for this certificate each academic year, we can expect 100 students over five years from the U.S. Navy. In addition, we expect 20 of our regular students per year to complete this certificate, for a total of 100 over five years. This adds up to 200 total students in the first five years.

Expected service to non-majors: The ICS department has around ten students per year who transfer to UH Manoa and/or are UH Manoa students.

Evidence of student interest: Due to changes in the ICS Associate in Science Degree for Fall 2012, we expect student enrollment to increase for ICS 212 and ICS 294.

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.)

This program will be offered with a memorandum of agreement between Leeward Community College and the Department of the Navy. The cost will be based on 20 students with overhead calculated as part of the agreement.

As for our regular students, there will be no extra cost, except the cost of tuition.

The availability of this certificate will provide an additional incentive for ICS students transferring to the UH Manoa ICS program to take these courses. 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.

Because these courses are presently being offered by the ICS discipline, no new resources would be needed. With the increase in enrollment generated by this program, program efficiency will increase.

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 this certificate, improved student retention rates, improved class enrollment for ICS 212 and ICS 294, student feedback, and employer feedback.

For the Department of the Navy, a pre-test and a post-test will be administered to all students to measure their level of comprehension.

Campus:	LEE
Updated By:	WALBRITT
Updated Date:	10/27/2011