

**New Program Code**       **Modify Program Code**

Date: 1/27/2021

**REQUESTOR CONTACT INFORMATION**

Name Michael Bauer Campus Leeward CC  
 Title Professor Email mbauer@hawaii.edu  
 Office/Dept Math & Science Division Phone 455-0310

**NEW PROGRAM CODE TO CREATE**

Institution LEE - Leeward Community College Campus LEE - Leeward Community College  
 Level UG - Undergraduate Effective Term Fall 2021

	Code (Max. Characters)	Description	Check if requesting new code:
College	(2) <u>IN</u>	<u>Instructional</u>	<input type="checkbox"/> See Banner form STVCOLL
Department	(4) <u>ICS</u>	<u>Information &amp; Computer Sciences</u>	<input type="checkbox"/> See Banner form STVDEPT
Degree/Certificate	(6) <u>CO</u>	<u>Certificate of Competence</u>	<input type="checkbox"/> See Banner form STVDEGC
Major	(4) <u>ICS</u>	<u>Information &amp; Computer Sciences</u>	<input type="checkbox"/> See Banner form STVMAJR
Concentration	(4) <u>CSP</u>	<u>Cloud Security Specialist</u>	<input checked="" type="checkbox"/> See Banner form STVMAJR
Minor	(4) _____	_____	<input type="checkbox"/> See Banner form STVMAJR

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.* 2

Special Program Designations  A  B  N  P  T  U  
 See *Special Program Designations Code Definitions on IRAO Program Code Request webpage*

Required Terms of Enrollment:  Fall  Spring  Summer  Extended

**IRAO USE ONLY: DATE RECEIVED**

**ADDITIONAL COMMENTS**

This new program is being created to respond to the industry trend toward use of cloud computing to secure resources being stored and used in the cloud.

**ATTACHMENTS**

**BOR Approved:** Sole-credential Certificates, Associate (excluding ATS), Bachelor and Graduate Degrees, and sole credential certificates

- BOR Meeting Minutes & Supporting Documents  Curriculum

**Chancellor Approved:** Concentrations, Certificates and Associate in Technical Studies (ATS) Degree

- Memo from Chancellor to notify Vice President for Academic Planning and Policy regarding program action.  
 Curriculum

**CERTIFICATES ONLY: Please check one (1) statement.** This certificate is a...

- BOR approved certificate. BOR Meeting/Approval Date: \_\_\_\_\_  
 Chancellor approved within an authorized BOR program. BOR Program: \_\_\_\_\_  
 Chancellor approved CO in accordance with UHCCP 5.203, Section IV.B.10.

**VERIFICATIONS**

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

Registrar  
(Print Name)

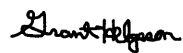
Financial Aid Officer  
(Print Name)

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

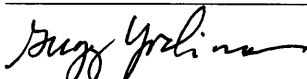
Grant Helgeson

Gregg Yoshimura

Della Teraoka



2/4/21



2/5/21



2/26/2021

Signature

Date

Signature

Date

Signature


Date




January 27, 2021

**MEMORANDUM**

TO: Debora J. Halbert  
Associate Vice President for Academic Programs and Policy

VIA: Kay Ono   
Interim Vice Chancellor for Academic Affairs

FROM: Carlos Peñaloza   
Chancellor

SUBJECT: Program Approval

I have approved the following effective Fall 2021. The approval can be found at:  
<https://leeward.kuali.co/cm>

**New**

Certificate of Competence (CO) – Cloud Security Specialist

c: James Goodman  
Ron Umehira  
Division Chairs  
Lexer Chou  
Jiajia Garcia  
Pete Gross  
Adam Halemano  
Candy Hochstein  
Pearl Imada-Oboshi  
Janel Oshiro

# Program Code

## CO-Cloud Security Specialist

Future | Fall 2021 – Indefinite

### 1) GENERAL INFORMATION

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#### 1.1) Effective Term

Fall 2021

#### 1.2) Program Title

CO-Cloud Security Specialist

#### 1.3) Degree Type

Certificate of Competence (CO)

#### 1.4) Description

Students will be introduced to the essentials of computer security in the cloud. They will perform basic ethical (white hat) hacking, and learn about the moral and legal issues that are involved while performing the learned techniques. Students will use tools to validate user's identity and prevent data from leaving an organization's perimeter. Students will learn tools to deploy a zero trust network.

#### 1.5) Division

Math & Science

### 2) PROGRAM LEARNING OUTCOMES

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#### 2.1) Outcomes

Utilize methodologies and tools that assist with discovering and securing data in the cloud.

Apply techniques involved with Ethical Hacking.

Utilize methodologies and tools that will assist in deploying a zero trust network.

### 3) BOR INFORMATION

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#### 3.1) Program Justification

Relationship to University and campus mission and development plans: The program objectives are in line with the Leeward Community College mission. At Leeward Community College, we work together to nurture and inspire all students. We help them attain their goals through high-quality liberal arts and career and technical education. Evidence of continuing need for the program: This is a new certificate within an existing program. Projections of career opportunities for graduates: According to employment projections for 2006-2016 by the United States Department of Labor Bureau of Labor Statistics ([http://www.bls.gov/emp/ep\\_table\\_102.htm](http://www.bls.gov/emp/ep_table_102.htm)), jobs demand for computer specialists will continue to increase for the immediate future. 2008 National Employment Matrix title Employment Number (x1000) Percent change Total job openings (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

### 3.2) Program Mission and Objectives

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. Meeting community needs: This certificate provides an opportunity for workforce retraining. Meeting State needs: This certificate provides an entry point to a career in the computer industry in the State of Hawaii. 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

### 3.3) Program Curriculum Plan

This certificate contains these three ICS courses: ICS 215 Introduction to Scripting (3), ICS 281 Ethical Hacking (3), and ICS 284 Cloud Security (3). Two of these courses are taught at Leeward CC as part of the AS in ICS. The third is proposed to be part of the AS in ICS. This certificate will use the same admission, advising, and counseling resources as the ICS program. To earn the certificate, a minimum of a C grade in each of the courses is required.

### 3.4) Program Rules

#### Semester 1

3

Total Credits

- Completed the following:
  - ICS281 - Ethical Hacking (3)

#### Semester 2

6

Total Credits

- Completed the following:
  - ICS215 - Introduction to Scripting (3)
  - ICS284 - Cloud Security (3)

### Grand Total Credits: 9

### 3.5) Program Target Group

This is a previously approved program. It is in the catalog as well as the Banner system.

### 3.6) Program Resources

The program will use existing resources. One new course needs to be offered. An existing section of ICS 101 will be reallocated to offer one section of ICS 284 each semester. The other two courses are already being offered.

**3.7) Program Efficiency**

The availability of this certificate will provide an additional incentive for ICS students to take these courses and complete their degree. The high level of student interest in the certificate is likely to increase enrollment in many of the courses included in other certificates. Thus, this certificate should improve the fill rate and the efficiency of these courses.

**3.8) Program Effectiveness**

Effectiveness will be demonstrated through the number of students who complete the certificate, improved student retention rates, improved class enrollment for ICS 215, ICS 281, and ICS 284, student feedback, and employer feedback.

## **4) ATTACHMENTS**

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