☐ **New Program Code**   ■ **Replace Program Code**   Date: 5/26/23

REQUESTOR CONTACT INFORMATION

Name	Heather Takamatsu	Campus	Leeward CC
Title	STEM Counselor	Email	haihara@hawaii.edu
Office/Dept	Math and Science Division	Phone	808-455-0443

NEW PROGRAM CODE TO CREATE

Institution	LEE-Leeward Community College	Campus	LEE-Leeward Community College
Level	UG-Undergraduate	Effective Term	Fall 2023

	Code (Max. Characters)	Description	Check if requesting new code:
College	(2) IN	Instructional	☐ See Banner form STVCOLL
Department	(4) MS	Math & Science	☐ See Banner form STVDEPT
Degree/Certificate	(6) AS	Associate in Science	☐ See Banner form STVDEGC
Major	(4) NSCI	Natural Science	☐ See Banner form STVMAJR
Concentration	(4) ICS	Information& Computer Sciences	☐ See Banner form STVMAJR
Minor	(4)		☐ 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)? See http://www.ifap.ed.gov/GainfulEmploymentInfo/index.html	☐ Yes	☐ No

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 years

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

EXISTING PROGRAM CODE TO REPLACE, IF APPLICABLE

Program Code	AS-NSCI-ICT	Program Description	AS-NSCI-Info&CommunicationTech
Institution	Leeward Community College	Campus	Leeward CC
College	Instructional	Department	Math & Science
Level	Undergraduate		

Are current students "grandfathered" under the program code? ☐ Yes ■ No

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

Effective [Fall 2023] , old program code will no longer be available to admit or recruit students.
Term (ie. Fall 2020)

This will turn off the online application, recruitment (effects Banner forms SRASUMI and SRAQUIK) and admissions (effects Banner forms SAADCRV, SAAADMS, SAASUMI, SAAQUIK, and SAAQUAN) Banner modules.

Effective [Fall 2024] , old program code will no longer be available to award degree to students.
Term (ie. Fall 2020)

This will turn off the general student (effects Banner form SGASTDN) and academic history (effects Banner form SHADEGR) Banner modules.

ATTACHMENTS

BOR Approved: Sole-credential Certificate, Associate, 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	Tiana Loo
Grant Helgeson _Digitally signed by Grant Helgeson Date: 2023.06.09 12:34:37 -10'00'_	Gregg Yoshimura _Digitally signed by Gregg Yoshimura Date: 2023.06.09 14:20:52 -10'00'_	*(signature)* 6/26/23
Signature Date	Signature Date	Signature Date

ADDITIONAL COMMENTS

April 25, 2023

MEMORANDUM

TO: Misaki Takabayashi, Chancellor, Kapi'olani CC
                Carlos Peñaloza, Chancellor, Leeward CC
                Lui Hokoana, Chancellor, UH Maui College
                Ardis Eschenberg, Chancellor, Windward CC
                Della Teraoka, Interim Associate Vice President for Academic Affairs

FROM: Maria Bautista, Interim Vice Chancellor for Academic Affairs, Kapi'olani CC
                Keala Chock, Vice Chancellor for Academic Affairs, Leeward CC
                Kaheleonolani Dukelow, Dean – Arts & Sciences, UH Maui College
                Charles Sasaki, Vice Chancellor for Academic Affairs, Windward CC

SUBJECT: CHANGE OF NAME FOR THE ASSOCIATE IN SCIENCE IN NATURAL SCIENCE
                CONCENTRATION IN INFORMATION AND COMMUNICATIONS TECHNOLOGY DEGREE

SPECIFIC ACTION REQUESTED:

Four of the University of Hawai'i Community Colleges (UHCCs) using the Associate in Sciences in Natural Sciences (ASNS) in Information Communications Technology (ICT) request to change the program concentration names for the ASNS-ICT to Information & Computer Sciences (ICS). This request applies to all four-community college using the ASNS-ICT programs. New banner code forms will be submitted

RECOMMENDED EFFECTIVE DATE:

Immediately upon approval.

ADDITIONAL COST:

None

PURPOSE:

A change in the name of the Information and Communications Technology concentration of the Associate in Science in Natural Science (ASNS) is requested to more accurately reflect the focus of the degree program as the term "ICT" is not as widely recognized or understood as "Computer Science." The suggested name of the concentration is "Information & Computer Sciences".

ICT, while conceptually may make sense when referring to the collective group of programs such as Information Technology, Computer Science, Creative Media, etc., is confusing to students as the

concentration name for one program. Many students who are interested in pursuing careers in Computer Science may not be aware that this degree program is a pathway directly aligned with Bachelor of Science degree programs in Computer Science at the UH four-year campuses.

BACKGROUND:

By changing the name of the degree program to Associate in Science in Natural Science with a concentration in Information & Computer Sciences, the program's emphasis as a Computer Science transfer degree can be better communicated. This change will help to improve student recruitment and to clarify the degree's focus for prospective students, employers, and others in the community.

Hence, the four ASNS concentrations would be:
1. Biological Sciences - AS-NSCI-BSC
2. Engineering - AS-NSCI-ENGR
3. Information & Computer Sciences - AS-NSCI-ICS
4. Physical Sciences - AS-NSCI-PSC

ACTION RECOMMENDED:

It is recommended that the Chancellors of the respective campuses and the OVPCC AA approve the request to change the program concentration name from ASNS-Information and Communications Technology to ASNS-Information & Computer Sciences

APPROVE ☑   DISAPPROVE ☐

Misaki Takabayashi   05.05.23

_____
Misaki Takabayashi, Chancellor, Kapiʻolani, CC   Date

APPROVE ☑   DISAPPROVE ☐

Carlos G. Peñaloza   5/5/23

_____
Carlos Peñaloza, Chancellor, Leeward CC   Date

APPROVE ☑   DISAPPROVE ☐

_____   **5/6/23**
Lui Hokoana, Chancellor, UH Maui College   Date

APPROVE ☑   DISAPPROVE ☐

_____   **5/5/23**
Ardis Eschenberg, Chancellor, Windward CC   Date

APPROVE ☑   DISAPPROVE ☐

_____   **5/5/2023**
Della Teraoka,   Date
Interim Associate Vice President for Academic Affairs

c: Director of Institutional Research and Analysis Office
     UHCC Vice Chancellors of Student Affairs
     UHCC CTE Deans
     Banner Central

Modify ASNS Concentration Name ICT to ICS 2023.04.25

Final Audit Report   2023-05-06

Created:	2023-05-04
By:	Roxanne Yee (rsyee@hawaii.edu)
Status:	Signed
Transaction ID:	CBJCHBCAABAAXjTs1HX_2in0AlwvcbbRN9LJ6eTI5tIE

"Modify ASNS Concentration Name ICT to ICS 2023.04.25" History

📄 Document created by Roxanne Yee (rsyee@hawaii.edu)
2023-05-04 - 11:03:24 PM GMT- IP address: 128.171.39.165

📧 Document emailed to Misaki Takabayashi (misakita@hawaii.edu) for signature
2023-05-04 - 11:21:45 PM GMT

📄 Email viewed by Misaki Takabayashi (misakita@hawaii.edu)
2023-05-05 - 7:37:56 AM GMT- IP address: 104.28.72.32

✍️ Document e-signed by Misaki Takabayashi (misakita@hawaii.edu)
Signature Date: 2023-05-06 - 3:32:07 AM GMT - Time Source: server- IP address: 64.75.203.10

📧 Document emailed to carlospe@hawaii.edu for signature
2023-05-06 - 3:32:08 AM GMT

📄 Email viewed by carlospe@hawaii.edu
2023-05-06 - 4:05:40 AM GMT- IP address: 172.225.108.108

✍️ Signer carlospe@hawaii.edu entered name at signing as Carlos G. Peñaloza
2023-05-06 - 4:06:26 AM GMT- IP address: 172.56.44.24

✍️ Document e-signed by Carlos G. Peñaloza (carlospe@hawaii.edu)
Signature Date: 2023-05-06 - 4:06:28 AM GMT - Time Source: server- IP address: 172.56.44.24

📧 Document emailed to Lui Hokoana (lhokoana@hawaii.edu) for signature
2023-05-06 - 4:06:29 AM GMT

📄 Email viewed by Lui Hokoana (lhokoana@hawaii.edu)
2023-05-06 - 4:22:01 AM GMT- IP address: 104.28.132.144

ETS
STATE OF HAWAI'I

AS-NSCI
Natural Sciences

Current | Fall 2023 — Indefinite

1) GENERAL INFORMATION

1.1) Effective Term
Fall 2023

1.2) Program Title
Natural Sciences

1.3) Degree Type
Associate in Science (AS)

1.4) Description
The curriculum in this program will allow students to complete a two year degree while fulfilling the coursework for the first two years of study towards a baccalaureate degree in one of four STEM fields of study. Students will have the option of choosing from one of four concentrations – Biological Sciences, Engineering, Information and Communications Technology, and Physical Sciences.

1.5) Division
Math & Science

1.6) Review Date (Academic Year)
—

2) PROGRAM LEARNING OUTCOMES

2.1) Outcomes
Communicate STEM-field specific ideas and/or principles clearly, correctly, and effectively.
Apply quantitative reasoning in solving mathematical, programming, biological, physical, or chemical problems, with a special emphasis on Hawai'i, where appropriate.
Analyze and apply STEM concepts and/or techniques to one of the four concentrations (i.e. Biological Sciences, Engineering, Information and Communication Technology, and Physical Sciences).

3) BOR INFORMATION

3.1) Program Justification
Leeward CC currently prepares students for transfer to a four-year baccalaureate program in the sciences. This program provides pathways, support, and recognition for those students' efforts, and it ensures that students will enter a baccalaureate science program with the skills and knowledge required to promote success. This program addresses the Mission Statement of Leeward Community College by providing a pathway for science studies. This program helps the college to meet these principles from the 2019-2020 Leeward Mission Statement: 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. We foster students to become responsible global citizens locally, nationally, and internationally. We advance the educational goals of all students with a special commitment to Native Hawaiians.

3.2) Program Mission and Objectives

The overall objective of the AS Natural Sciences degree is to allow students to complete a degree while completing the first two years of study towards a baccalaureate degree in STEM fields of study.

3.3) Program Curriculum Plan

LEEWARD COMMUNITY COLLEGE ASSOCIATE IN SCIENCE IN NATURAL SCIENCE (ASNS) with CONCENTRATIONS in Biological Sciences, Physical Sciences, Engineering, and Information and Communications Technology Degree Requirements: The AS Natural Sciences degree is awarded to students who complete the following:

1. 60 credits, all in courses numbered 100 and above.
2. General education, concentration requirements and electives, as indicated below.
3. 12 credits of the requirements earned from the Math and Sciences Division at Leeward CC.
4. One Hawaiian, Asian, Pacific (HAP) course.
5. Cumulative grade point average (GPA) of 2.0 or higher for all courses used to meet the degree requirement.

Foundation and Diversification Requirements :

I. Foundation Written Communication (FW) (3 credits required) course.
Must complete: ENG 100 or ENG 100E

II. Foundation Quantitative Reasoning (FQ) (4 credits required) course.
Must complete: MATH 241

III. Foundation Global Multicultural Perspectives (FG)
6 credits required from 2 groups (FGA, FGB, FGC)

IV. Diversification Social Sciences (DS) (3 credits required)
ECON 120*, ECON 130*, ECON 131* (*recommended for Engineering)
Any DS

V. Diversification Arts, Humanities, and Literature (DA/DH/DL) (3 credits required)

Diversification Arts (DA)
SP 251* (*option for Engineering only)
Any DA

Diversification Humanities (DH)
Any DH

Diversification Literature (DL)
Any DL

VI. Diversification Physical and Biological Sciences (DB+DP+DY) (4-7 credits required)

Diversification Physical (DP) (3 credits required) course CHEM 161
Diversification Laboratory (DY) (1 credit required) course CHEM 161L

VII. Concentration Requirements Select one of the Natural Science Concentrations:

Biological Sciences
CHEM 162 3 credits
CHEM 162L 1 credit
BIOL 171 3 credits (DB)
BIOL 171L 1 credit
BIOL 172 3 credits
BIOL 172L 1 credit
CHEM 272 3 credits
CHEM 272L 2 credits
CHEM 273/273L 5 credits or BIOL 275/275L 5 credits

Physical Sciences
CHEM 162 3 credits
CHEM 162L 1 credit
MATH 242 4 credits
PHYS 170 4 credits
PHYS 170L 1 credit
PHYS 272 3 credits
PHYS 272L 1 credit
PHYS 274 3 credits or ERTH 101 and ERTH 101L 4 credits or CHEM 272 and CHEM 272L 5 credits
Any DB

Engineering
CHEM 162 3 credits
EE 160 4 credits or ICS 111 3 credits (ICS 111 for CE and ME only)
MATH 242 4 credits
PHYS 170 4 credits
PHYS 170L 1 credit
PHYS 272 3 credits
PHYS 272L 1 credit
MATH 243 3 credits
MATH 244 3 credits
EE 211 4 credits or CE 270 3 credits

Information and Communications Technology
CHEM 162 3 credits
CHEM 162L 1 credits
MATH 242 4 credits
ICS 111 3 credits
ICS 141 3 credits
ICS 211 3 credits
ICS 212 3 credits
ICS 241 3 credits
Any DB

VIII. Optional Electives

Biological Sciences, Physical Sciences, and Information and Communications Technology students may take up to four semesters of sequential Hawaiian or Second Language (HSL) courses.

IX. Natural Science Electives Select classes not chosen above and appropriate for your chosen baccalaureate degree.

AG 110, AG 110L, AG 112, AG 141, AG 170, AG 170L, AG 200, AG 200L, AG 264, AG 269

ANTH 215, ANTH 215L

ASTR 110

BIOC 141

BIOL 100, BIOL 101,BIOL 101L,BIOL 124, BIOL 124L, BIOL 130, BIOL 130L, BIOL 171, BIOL 171L, BIOL 172, BIOL 172L, BIOL 200, BIOL 200L, BIOL 265, BIOL 265L, BIOL 275, BIOL 275L

BOT 101, BOT 101L, BOT 130, BOT 130L

CE 270, CE 271

CHEM 162L, CHEM 272, CHEM 272L, CHEM 273, CHEM 273L

EE 160, EE 211, EE 213, EE 260, EE 296

ERTH 101, ERTH 101L, ERTH 103

FSHN 185

GEO 101, GEO 101L

HWST 281, HWST 281L

ICS 111, ICS 141, ICS 211, ICS 212, ICS 215, ICS 241

MATH 242, MATH 243, MATH 244

ME 213

MICR 130, MICR 140L

OCN 101, OCN 201, OCN 201L

OEST 101

PHRM 203

PHYS 151*, PHYS 151L*, PHYS 152*, PHYS 152L* (*Biological Sciences and ICT only) PHYS 170, PHYS 170L, PHYS 272, PHYS 272L, PHYS 274

PHYL 141, PHYL 141L, PHYL 142, PHYL 142L

ZOOL 101, ZOOL 101L, ZOOL 200, ZOOL 200L

Other STEM courses as appropriate with approval

X. Hawaiian Asian Pacific (HAP) 1 course required

Important note: Appropriate course substitutions may be made with the prior written approval of both the appropriate Division Chair and Dean.

3.4) Program Rules

Semester 1   0
                                            Total Credits

Fetching rules...

Semester 2

0
Total Credits

Fetching rules...

Semester 3

0
Total Credits

Fetching rules...

Semester 4

0
Total Credits

Fetching rules...

3.5) Program Target Group

The program will recruit students from two general sources - incoming freshmen seeking a science degree and students enrolled in science courses to fulfill diversification requirements.

1. Incoming freshmen seeking a science degree will be recruited via counseling and Leeward CC's catalog containing degree descriptions. Students seeking a science degree will have formal, well-structured pathways.

2. Students will be recruited from the college's introductory science courses that non-science majors take to fulfill Gen Ed diversification requirements. Non-science majors commonly are inspired by introductory science courses to major in a science. The college's introductory course instructors will be able to counsel students using the pathways that correspond with the students' specific interest and goals.

3.6) Program Resources

The ASNS Program Coordinator requires a small amount of release time each semester. There is no other additional cost. All the courses that fulfill degree requirements currently are offered by the college. The personnel, supplies, and equipment costs are part of the current college and Math and Natural Sciences Division budget.

3.7) Program Efficiency

The proposed program will utilize classes already taught at Leeward CC. The efficiency of offering those classes will be determined by the standard methods already in place. Efficiency should be high since most of the required classes currently are fully or over enrolled. Since no new faculty are appointed to help with the program and no monies are allocated for supporting the program, the anticipated cost, cost per SSH, and cost per degree should be zero.

Comparisons with the AS-NS program offered at Kapiolani CC are as follows: Kapiolani CC reports a budget of $741,973 per year after an initial $1.25 million Tribal Colleges and Universities Program (TCUP) grant to start the program, and they awarded 43 degrees the first year and 113 the second.

The Teacher training program (AST) at Leeward CC is a comparable program on this campus. They report a budget of about $235,000 per year with an additional $199,544 in General Funded Budget Allocation and $38,642 in Special/Federal Budget Allocation, and they awarded 246 degrees the first year and 358 the second.

At Leeward CC 3 credits of release time was allocated by the college and 3 credits of release time was also provided by the Halau to generate the program.

After the program is approved it is expected that the information concerning cost per SSH, SSH/faculty, average class size and other quantitative measures will be available.

3.8) Program Effectiveness

Effectiveness will be evaluated by the number of graduates as well as the number of students following the pathways without obtaining a degree. The initial expectation was that 25 students would obtain degrees each year with a 10% increase during each of the first 5 years. In the 2012-2013 academic year, the first for the ASNS, there were 8 graduates. The program has grown to graduate 68 students in 2015-2016 and 40 students in 2016-2017. The program started in spring 2012 and by fall 2012, there were 104 students enrolled as ASNS students. As of Spring 2018, the enrollment is at 401. We have seen exponential growth of the program. Graduates should continue their studies and obtain a four-year baccalaureate degree in STEM fields.

4) ATTACHMENTS

- KSCM ASNS Sequence.xlsx