

**RECEIVED**

By Princess Soares at 8:42 am, Jun 23, 2016

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

**Reset Form**

# NEW OR MODIFY PROGRAM CODE

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

Date: 4/19/16

**REQUESTOR CONTACT INFORMATION**

Name Debie Amby Campus UH Maui College  
 Title Banner/Curriculum Specialist Email debie@hawaii.edu  
 Office/Dept Academic Affairs Phone 808-984-3378

**NEW PROGRAM CODE TO CREATE**

Institution MAU - UH Maui College Campus MAU - UH Maui College  
 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>LBRT</u>	<u>Liberal Arts</u>	<input type="checkbox"/> See Banner form STV_DEPT
Degree/Certificate	(6) <u>AS</u>	<u>Associates in Science</u>	<input type="checkbox"/> See Banner form STV_DEGC
Major	(4) <u>NSCI</u>	<u>Natural Science</u>	<input type="checkbox"/> See Banner form STV_MAJR
Concentration	(4) <u>ICT</u>	<u>Info &amp; Communications Tech</u>	<input checked="" 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:

**This new concentration will provide students with a computer science option that will allow them to transfer more easily within the UH system, and also be trackable.**

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.*

2.0

**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

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-NSCI  
91

VERIFICATIONS

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

**Registrar:**

Flora Mora



5/6/16

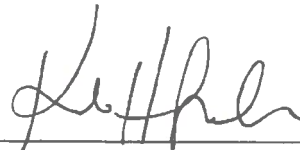
Print Name

Signature

Date

**Financial Aid Officer:**

Kilohana Miller



5-4-16

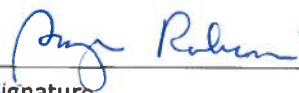
Print Name

Signature

Date

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

Suzette Robinson



6/22/16

Print Name

Signature

Date




UNIVERSITY of HAWAII\*  
**MAUI COLLEGE**

May 4, 2016

MEMORANDUM

TO: Risa E. Dickson  
Vice President for Academic Planning and Policy

FROM: Lui K. Hokoana   
Chancellor  
UH Maui College

SUBJECT: Program Action at UH Maui College

I have approved the following program actions so that the necessary program codes can be established in Banner.

If you have any questions or concerns, please let me know. Thank you for your assistance.

**NEW**

**AS-NSCI-ICT (Information & Communications Technology)**

**ASC- Music Studies**

**CA-ECET-ISSP (Information Security Specialist)**

**Effective Term: Fall 2016**

cc: Pearl Iboshi, Director of IRAO  
Suzette Robinson, UHCC Director of Academic Programs  
John McKee, Vice Chancellor  
Debra Nakama, Vice Chancellor  
David Grooms, Interim Assistant Dean of Instruction  
Kulamanu Ishihara, Assistant Professor, Counseling



2002-2003  
MetLife Foundation  
Best-Practice College  
Award Recipient



2008  
Bellwether  
Award Recipient



2009  
President's  
Higher  
Education  
Community  
Service  
Honor Roll

310 W. Ka'ahumanu Avenue  
Kahului, HI 96732-1617  
Telephone: 808 984-3655  
Fax: 808 984-3546  
Website: [www.mau.hawaii.edu](http://www.mau.hawaii.edu)

An Equal Opportunity/Affirmative  
Action Institution

University of Hawaii Maui College  
Curriculum Action Request (CAR) Form  
Program/Degree/Certificate

For Banner use:	
Req:	Rcv
___ Alpha	___
___ Program/name	___
___ Program Code	___
___ Concentration	___
___ Major Code	___

1. Author(s): Debasis Bhattacharya and Dan Kruse
2. Department: STEM Program: ASNS
3. Date submitted to Curriculum Committee:

4. Program proposal  
 New program (attach program proposal and program map)  Change of name to existing program

Existing program Title: Associate in Science in Natural Science  
Proposed program Title:

5. Credential (degree or certificate) proposal  
 New credential added to existing program  Modification to existing credential

Type of credential  
Degree:  AA  AS  AAS Certificate:  CA  CC  CO  ASC  
 Other, specify: New Concentration ICT in existing ASNS program

Existing credential: Title: Credits:  
Proposed credential: Title: Concentration in ICT or AS-NSCI-ICT Credits: 60-62

- If modification, describe change:
- Change in credential name
  - Change in course requirement(s); specify:
  - Change in prerequisite(s) for credential; specify:
  - Other; specify:

Program map must be attached. (For modifications, write changes on copy of current catalog map.)

6. Reason for this curriculum action:  
Creating a new concentration focused on Information and Communications Technology (ICT) that expands the scope of the ASNS degree providing a computer science option students. This track allows students to transfer to BS/CS in UHM. This concentration contains all the prerequisite ICS courses required in the lower division for a BS/CS degree at UHM.

7. Proposed term of first offering: Fall semester of 2016 year.

8. Special fees required:  no  yes, explain:

9. Special resources (personnel, supplies, etc.) required:  no  yes, explain:

10. Special scheduling considerations:  no  yes, explain:

11. Which program SLOs does this certificate support? (list all that apply and explain, if necessary.)

- Program SLO 1: unavailable Explain:
- Program SLO 2: Explain:
- Program SLO 3: Explain:

12. Current UHMC Catalog needs revision on page(s): UHMC General Catalog 2015-2016. Modifications needed for ASNS Program Page 22-23.

13. Additional Information: This new proposed concentration in ICT complements the existing two concentrations in Biological Science and Physical Science, as shown in page 22-23 of the UHMC 2015-16 catalog. All existing course requirements listed in page 22 will remain identical except for the bottom section on Additional ASNS Requirements. Propose we add one course - ICS 110 or Intro to Programming (3) to the list. On page 23, the ICT Concentration will include 5 core ICS courses (ICS 111, 141, 211, 212 and 241) for 17 credits. In addition there are ICT electives for students or a minimum of 13 credits.

**Natural Science**

The Associate in Science degree in Natural Science (ASNS) provides a comprehensive background in science and math courses and is designed specifically for students who are planning to transfer to baccalaureate degree programs in science, technology, engineering, or mathematics (STEM). Students may choose to concentrate in either the biological sciences or the physical sciences.

Associate in Science Degree in Natural Science						
(Name: Last, First, Middle Initial)			(UHID Number)			
Graduation Requirements						
CREDITS						
<input type="checkbox"/> Minimum Applicable: 60 credits, 100-level or higher						
GRADES						
<input type="checkbox"/> Minimum Cumulative GPA: 2.0						
RESIDENCY						
<input type="checkbox"/> Minimum UHMC: 12 credits						
WRITING INTENSIVE (WI): Two courses						
<input type="checkbox"/> 1 _____						
<input type="checkbox"/> 2 _____						
English: 6 credits		Course	Credits	Grade	Semester	Year
ENG 100(3)						
Choose at least one course from the following(3): ENG 106, ENG 209, ENG 210, ENG 225, SP 151, SP 251.						
Quantitative Reasoning: 4 credits		Course	Credits	Grade	Semester	Year
MATH 205(4)						
Humanities Elective: 8 credits		Course	Credits	Grade	Semester	Year
Choose at least one course from the following(3): ANTH 235, ART, BUS/COM 130, DNCE, DRAM, EALA, ENG 104, ENG 250-257, FIL, HAW, HWST(except 211), HIST, HUM, ILO, JPNS, LING, MUS; PHRM 203; PHIL, REL, SPAN, SP; SSM 101, 201, 202.						
Natural Science Electives: 8 credits		Course	Credits	Grade	Semester	Year
CHEM 161(3)						
CHEM 161L(1)						
Electives(4) selected from this list: AG 122, 174, 200, 265; ANTH 215; ASTR; BIOC; BIOL; BOT 101; F5HN; GEOG 101, 101L; GG; MICR; OCN 201, 201L; PHRM 203; PHYS; SCI; SSM 101, 201, 202; ZOOL.						
Social Science Electives: 8 credits		Course	Credits	Grade	Semester	Year
Choose at least one course from the following(3): ANTH (except 201L, 215 & 235); BOT 105, COM (except BUS/COM 130), ECON, FAMR 230; GEOG (except 101, 101L); HWST 211; PACS, POLS, PSY, SSCI, SOC.						
Additional ASNS Requirements: Biological 7 credits; Physical 7 credits		Course	Credits	Grade	Semester	Year
CHEM 162(3)						
CHEM 162L(1)						
ICS 101(3); GIS/ICS 150(4) 180(4); or other with approval						

Natural Science Concentration					
Concentration Requirements: 16-17 credits					
	Course	Credits	Grade	Semester	Year
	BIOL 171(3)				
	BIOL 171L(1)				
	BIOL 172(3)				
	BIOL 172L(1)				
	PHYS 151(4) or 170(5)				
	PHYS 152(4) or 272(4)				
Natural Science Concentration Electives: 13-14 credits					
	If not taken for Natural Science elective, choose from: AG 122(3), 174(3), 200(4), 265(4); ANTH 210(3), 210L(1), 215(3); AQUA 362, 466; ASTR 110(3), 110L(1); BIOC 241(3), 244(3); BIOL 100(3), 101(4), 102(4), 103(4), 105(4), 124(3), 124L(1), 151(3), 152(3), 200(4), 225(4), 226(5), 265(3), 282(3), 361(3), 424(3); BOT 101(4); FSHN 185(3), 285(3), 286(3); GEOG 101(3), 101L(1); GG 101(4), 103(3); GIS/ICS 150(4), 180(4); MATH 206(4), 231(3), 232(3); MICR 130(3), 140(2); OCN 201(3), 201L(1), 250(3), 351; PHRM 203(3); SCI 121(4), 122(3); SSM 101(3), 201(3), 202(3); ZOOL 101(4), 141(4), 142(4), 200(4).				
1.					
2.					
3.					
4.					
5.					
6.					
7.					
Science Concentration					
Concentration Requirements: 13 credits					
	Course	Credits	Grade	Semester	Year
	MATH 206(4)				
	PHYS 170(5)				
	PHYS 272(4)				
Science Concentration Electives: 17 credits					
	If not taken for Natural Science elective, choose from: AG 122(3), 174(3), 200(4), 265(4); ANTH 210(3), 210L(1), 215(3); AQUA 362, 466; ASTR 110(3), 110L(1); BIOC 241(3), 244(3); BIOL 100(3), 101(4), 102(4), 103(4), 105(4), 124(3), 124L(1), 151(3), 152(3), 171(3), 171L(1), 172(3), 172L(1), 200(4), 225(4), 226(5), 265(3), 282(3), 361(3), 424(3); BOT 101(4); FSHN 185(3), 285(3), 286(3); GEOG 101(3), 101L(1); GIS/ICS 150(4), 180(4); GG 101(4), 103(3); MATH 231(3)*, 232(3)*; MICR 130(3), 140(2); OCN 201(3), 201L(1), 250(3), 351; PHRM 203(3); SCI 121(4), 122(4); SSM 101(3), 201(3), 202(3); ZOOL 101(4), 141(4), 142(4), 200(4) *Recommended				
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					

# UHMC ASNS – ICT Concentration 2 Year Plan

This program map is based on the existing courses listed in page 22-23 of the UHMC 2015-16 Catalog.

1. Graduation Requirements – same as in page 22 of UHMC 2015-16 Catalog.
2. English Requirements (6) – same as in page 22 of UHMC 2015-16 Catalog.
3. Quantitative Reasoning (4) – same as in page 22 of UHMC 2015-16 Catalog.
4. Humanities Requirements (3) – same as in page 22 of UHMC 2015-16 Catalog.
5. Natural Science Electives (8) – same as in page 22 of UHMC 2015-16 Catalog.
6. Social Science Electives (3) - same as in page 22 of UHMC 2015-16 Catalog.
7. Additional ASNS Requirements – same as in page 22 of UHMC 2015-16 Catalog, need to take ICS 101. **Add ICT 7 Credits**
8. **Total Credits - 31**

In Page 23 add the following **ICT Concentration Requirements (17 credits)**

1. ICS 111 (4) - Intro to CS1
2. ICS 141 (3) - Discrete Math for CS1
3. ICS 211 (4) - Intro to CS2...prereq of 111
4. ICS 212 (3) - Program Structure...prereq of 211
5. ICS 241 (3) - Discrete Math for CS2...prereq of 141

In Page 23 add the following section **ICT Concentration Electives (12 credits)**

- ICS 110 (3) - Intro to Programming
- ICS 169 (3) - Intro to Info Sec
- ICS 184 (3) or ETRO 140 (4) - Intro to Networking
- ICS 171 (3) - Intro to Comp Sec
- ICS 281 (3) - Ethical Hacking
- ICS 282 (3) - Digital Forensics
- Plus the existing list of electives from Biological and Physical Science Electives in Page 23.
- Note the one Hawaiian, Asian, Pacific (HAP) course required

<b>Semester 1 (17)</b> English 100 (3) - FW MATH 205 (4) - FS CHEM 161/161L (4) - DP/DY ICS 110 (3) – ICT Elective ICS 101 (3) – Additional ASNS Requirement	<b>Semester 2 (17)</b> ENGLISH or SP Course (3) - FG1 - WI Humanities Elective (3) - DA, DH, DL ICS 111 (4) - ICT Concentration ICS 141 (3) - ICT Concentration CHEM 162/162L (4) - Additional ASNS Reqmnt
<b>Semester 3 (14)</b> ICS 211 (4) - ICT Concentration Natural Science Elective (4) - DB ICT Elective (3) ICT Elective (3)	<b>Semester 4 (12)</b> ICS 212 (3) - ICT Concentration ICS 241 (3) - ICT Concentration ICT Elective (3) Social Science Elective (3) - DS



ASNS  
ICT Concentration

**Natural Science**

The Associate in Science degree in Natural Science (ASNS) provides a comprehensive background in science and math courses and is designed specifically for students who are planning to transfer to baccalaureate degree programs in science, technology, engineering, or mathematics (STEM). Students may choose to concentrate in either the biological sciences or the physical sciences.

Associate in Science Degree in Natural Science					
(Name: Last, First, Middle Initial)			(UH ID Number)		
<b>Graduation Requirements</b>					
<b>CREDITS</b>					
<input type="checkbox"/>	Minimum Applicable: 60 credits, 100-level or higher				
<b>GRADES</b>					
<input type="checkbox"/>	Minimum Cumulative GPA: 2.0				
<b>RESIDENCY</b>					
<input type="checkbox"/>	Minimum UHMC: 12 credits				
<b>WRITING INTENSIVE (WI): Two courses</b>					
<input type="checkbox"/>	1 _____				
<input type="checkbox"/>	2 _____				
<b>English</b>					
	ENG 100(3)				
	Choose at least one course from the following(3): ENG 106, ENG 209, ENG 210, ENG 225, SP 151, SP 251.				
<b>Math</b>					
	MATH 205(4)				
<b>Humanities</b>					
	Choose at least one course from the following(3): ANTH 235, ART, BUS/COM 130, DNCE, DRAM, EALA, ENG 104, ENG 250-257, FIL, HAW, HWST(except 211), HIST, HUM, ILO, JPNS, LING, MUS; PHRM 203; PHIL, REL, SPAN, SP; SSM 101, 201, 202.				
<b>Natural Sciences &amp; Electives</b>					
	CHEM 161(3)				
	CHEM 161L(1)				
	Electives(4) selected from this list: AG 122, 174, 200, 265; ANTH 215; ASTR; BIOC; BIOL; BOT 101; FSHN; GEOG 101, 101L; GG; MICR; OCN 201, 201L; PHRM 203; PHYS; SCI; SSM 101, 201, 202; ZOOL.				
<b>Science</b>					
	ANTH (except 201L, 215 & 235); BOT 105, COM (except BUS/COM 130), ECON, FAMR 230; GEOG (except 101, 101L); HWST 211; PACS, POLS, PSY, SSCI, SOC.				
<b>Additional</b>					
	CHEM 162(3)				
	CHEM 162L(1)				
	ICS 101(3); GIS/ICS 150(4), 180(4); or other with approval				

\* Insert... ICT 7 credits

- BIOL 171(3)
- BIOL 171L(1)
- BIOL 172(3)
- BIOL 172L(1)
- PHYS 151(4) or 170(5)
- PHYS 152(4) or 272(4)

If not taken for Natural Science elective, choose from:

AG 122(3), 174(3), 200(4), 265(4); ANTH 210(3), 210L(1), 215(3); AQUA 362, 466; ASTR 110(3), 110L(1); BIOC 241(3), 244(3); BIOL 100(3), 101(4), 102(4), 103(4), 105(4), 124(3), 124L(1), 151(3), 152(3), 200(4), 225(4), 226(5), 265(3), 282(3), 361(3), 424(3); BOT 101(4); FSHN 185(3), 285(3), 286(3); GEOG 101(3), 101L(1); GG 101(4), 103(3); GIS/ICS 150(4), 180(4); MATH 206(4), 231(3), 232(3); MICR 130(3), 140(2); OCN 201(3), 201L(1), 250(3), 351; PHRM 203(3); SCI 121(4), 122(3); SSM 101(3), 201(3), 202(3); ZOOL 101(4), 141(4), 142(4), 200(4).

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

- MATH 206(4)
- PHYS 170(5)
- PHYS 272(4)

If not taken for Natural Science elective, choose from:

AG 122(3), 174(3), 200(4), 265(4); ANTH 210(3), 210L(1), 215(3); AQUA 362, 466; ASTR 110(3), 110L(1); BIOC 241(3), 244(3); BIOL 100(3), 101(4), 102(4), 103(4), 105(4), 124(3), 124L(1), 151(3), 152(3), 171(3), 171L(1), 172(3); 172L(1), 200(4), 225(4), 226(5), 265(3), 282(3), 361(3), 424(3); BOT 101(4); FSHN 185(3), 285(3), 286(3); GEOG 101(3), 101L(1); GIS/ICS 150(4), 180(4); GG 101(4), 103(3); MATH 231(3)\*, 232(3)\*, MICR 130(3), 140(2); OCN 201(3), 201L(1), 250(3), 351; PHRM 203(3); SCI 121(4), 122(4), SSM 101(3), 201(3), 202(3); ZOOL 101(4), 141(4), 142(4), 200(4).

\*Recommended

--- <sup>xxx</sup> For ICT electives use this list but add the following (all 3 cr)  
 ICS 110, ICS 169, ICS 184  
 ICS 171, ICS 281, ICS 282

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

\* Insert ...

Information and Communications Technology (ICT) Concentration

- ICT Requirements (17 credits)
- ICS 111 - Intro to Computer Science (4)
- ICS 141 - Discrete Math for Comp Sci (3)
- ICS 211 - Intro to Comp Sci 2 (4)
- ICS 212 - Program Structures (3)
- ICS 241 - Discrete Math for Comp Sci (3)
- \* Insert ICT Electives (12 credits) ... add to list above <sup>xxx</sup>

**Career & Technical Education**

Career and Technical Education (CTE) programs offer the Associate in Science (AS) degree or the Associate in Applied Science (AAS) degree. Additionally, there is a customized degree opportunity, the Associate in Technical Studies (ATS).

**Associate in Science**

The Associate in Science (AS), a two year degree consisting of at least 60 credits entirely at the college level (100-level or above), provides students with skills and competencies for gainful employment.

**At a Glance**

**Associate in Science (AS)**

- Dental Hygiene
- Early Childhood Education
- Electronic & Computer Engineering Technology
- Human Services
  - General Human Services
  - Substance Abuse Specialty
- Natural Science
  - Biological Science
  - Physical Science
  - Registered Nurse

*Insert... Information & Communication*

**Associate in Applied Science**

The Associate in Applied Science (AAS), a two-year degree consisting of at least 60 credits entirely at the college level (100-level or above), provides students with skills and competencies for gainful employment. While this degree is not designed for transfer directly into a baccalaureate program, some AAS programs have agreements with baccalaureate degree-granting institutions, and some AAS programs may include some baccalaureate-level course offerings.

**AS and AAS Requirements**

1. **Satisfactory Completion of a CTE Major:**  
Specific courses for each major are described later in this section.
2. **General Education:**
  - a. **Quantitative Reasoning:** 3 credits 3 credits minimum.  
*Refer to Program Maps for program mathematics requirements. Graduation Requirements: If students seek to apply Philosophy 110 to fulfill the AS or*

*AAS degree requirement in Quantitative Reasoning, students must place into Mathematics 100 or higher.*

- b. **English/Communication:** 6 credits 6 credits in English 100, 102, 104, 106, 209, 210; Learning Skills 110; Journalism 205; Speech 151, 251; Communication 145, 210; or Communication/Business 130. 3 credits of the 6 must be ENG 100 or ENG 106.

*Nursing AS degree requires only 3 credits in ENG 100.*

*Note: English courses that are numbered 250 or above can be counted only for Humanities requirements.*

- c. **Elective credits-AS:** 12 credits  
**Elective credits-AAS:** 9 credits  
At least one 100-level course each from Humanities, Natural Science, and Social Science listed below. *For the AS degree and the AAS degrees that have 12 General Education elective credits, the remaining 3 elective credits may be selected from any area with the exceptions that: CTE majors may not select electives from CTE courses, and Business majors may not select electives from Business courses.*

**Humanities:**

Anthropology 235, Art/ICS 161, 205, Art, Business/Communication 130, Dance, Drama, East Asian Languages, English 104, 106, 209, 210, 250-257, Hawaiian, Filipino, Hawaiian Studies (except 211), History, Humanities, ICS 161, 205, Ilokano, Japanese, Linguistics, Music, Philosophy, Religion, Spanish, Speech, Telecommunications 261.

**Natural Science:**

Agriculture 122, 174, 200, 253, 265; Anthropology 210L, 215; Aqua; Astronomy 110, 110L; Biochemistry; Biology; Botany 101, 105L; Chemistry; Food Science & Human Nutrition 185, 285; Geography 101 & 101L; Geology & Geophysics; Hawaiian Studies 211L; Microbiology; Oceanography 201, 201L; Pharmacology 203; Physics; Science; Zoology SSM 201,202.

**Social Science:**

Anthropology (except 201L, 215, & 235); Botany 105; Communications (except 130); Economics; Family Resources 230, 244; Geography (except 101, 101L); Hawaiian Studies 211; Pacific Island Studies 108, Political Science; Psychology; Social Science; Sociology.

3. **Minimum of 60 credits:**  
These maximums may be applied:
  - a. 9 credits Cooperative Education;
  - b. 30 credits with CR grade.*Interdisciplinary Studies courses may be applied. 60 credits for the AS degree must be at the 100-level or above.*
4. **Grade Point Average:**  
2.0 (C) or better.
5. **Residency Requirement:**  
12 credits toward a major must be earned at UH Maui College. The residency requirement may be waived for cause or credit-by-examination used with approval of the Vice Chancellor of Academic Affairs.
6. **Graduation Requirement:**  
To be awarded the AS or the AAS degree, students must complete an Application for Graduation form obtained from Student Services.  
*See Academic Calendar for deadline*

**At a Glance**

**Associate in Applied Science (AAS)**

- Accounting
- Administration of Justice
- Agriculture & Natural Resources
  - Horticulture & Landscape Maint
  - Sustainable Tropical Crop Mgr
- Auto Body Repair & Painting
- Automotive Technology
- Business Careers
- Business Technology
  - Information Processing
  - Medical Assistant II
- Culinary Arts
  - Baking
  - Culinary Arts
- Fashion Technology
- Hospitality & Tourism
- Sustainable Construction Technology

*Technology (ICT)*

solving. Covers the following applications: a micro-computer operating system, word processing, spreadsheets, graphics, and database management systems. 3cr., 3hr. lect./lab

### 116 Designing for Cross-Media: Publishing for Print & Web

*Prereq: ICS 101 or BUSN 150, or consent.* Focuses on design and layout for cross-media publishing. Examines the interface, functions, and integration of publishing software for graphic design and production. Explains how to prepare content for publication for print, Portable Document Format (PDF), and on the web. 3cr., 3hr. lect./lab

### 150 Introduction to GIS/GPS

*Prereq: ICS 101 or BUSN 150, either with grade C or better; or consent. Recommended: Familiarity with computer databases.* Introduces 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. Teaches use of global positioning system (GPS.) Explores cross-disciplinary applications in the natural and social sciences. (Crosslisted as GIS 150.) 4cr., 6hr. lect./lab

### 151C Introduction to C Programming

*Prereq: ICS 111 with grade C or better, or consent.* Introduces students to C Programming Language and an Integrated Development Environment (IDE). Develops structured programs using problem solving, algorithm development, and programming concepts using a procedural language. 3cr., 3hr. lect./lab

### 161 Introduction to Computer Graphics

*Prereq: ICS 101 (or concurrent) or BUSN 150, or consent.* Introduces computer graphics tools and concepts in digital image editing, illustration graphics, print and web design, and 2D and 3D animation. (Crosslisted as ART 161.) 3cr., 3hr. lect. (DA)

### 169 Introduction to Information Security

*Prereq: ICS 101 with grade C or better, or consent.* Provides the basic foundation to information security, including identifying threats, planning for business continuity,

and preparing for various security attacks. Focus will be given to threats to financial security such as attacks on banking and other related financial information. Special emphasis on ethics and legal issues that covers hacking and other cybersecurity techniques and tactics. 3cr., 3hr. lect.

### 171 Introduction to Computer Security

*Prereq: ICS 101 or BUSN 150, or consent.* Examines the essentials of computer security, including risk management, the use of encryption, activity monitoring, intrusion detection; and the creation and implementation of security policies and procedures to aid in security administration. 3cr., 3hr. lect.

### 184 Introduction to Networking

*Prereq: ICS 101 with grade C or better, or consent.* Provides the student with the knowledge and skills to manage, maintain, troubleshoot, install, operate and configure basic network infrastructure, as well as to describe networking technologies, basic design principles, and adhere to wiring standards and use testing tools. 3cr., 3hr. lect.

### 193v Computer Science Internship I

*Prereq: ICS 111, and consent of both instructor and Co-op coordinator. Coreq: Enrollment in ECET program and one or more ECET or ETRO courses. Recommended: ETRO 101 and 105, and ENG 100.* Reflects student interest area and availability of job stations. Offers opportunity to upgrade workplace employability. *Student, instructor, and employment supervisor jointly develop learning outcomes. Instructor and employment supervisor jointly evaluate student. (May be repeated for a maximum of 3 credits.)* 1-3cr., 75hrs. supervised work/ct.

### 200 Web Technology

*Prereq: ICS 110 with grade C or better, or consent.* Introduces web page authoring. Creates client-side web pages using web authoring language and style sheets. Uses graphical design elements, validation, browser capability, and accessibility. Uses scripting language to add dynamic elements to web pages., client-side scripting, regular expressions, event handling, input validation, selection, repetition, and parameter passing. 3cr., 3hr. lect.

### 205 Photoshop and Illustrator

*Prereq: ICS 101 or BUSN 150, or consent.* Introduces the basic tools and features of digital image editing, photo retouching, and color correction of images. Focuses on the fundamental drawing techniques of illustration graphics including pen tool paths, objects, and type. (Crosslisted as ART 205.) 3 cr., 3hr. lect./lab (DA)

### 211 Introduction to Computer Science II

*Prereq: ICS 111 with grade C or better, or consent. Recommended: MATH 135.* Reinforces and strengthens problem-solving skills using more advanced features of programming languages and algorithms, such as recursion, pointers, and memory management. Emphasizes use of data structures, such as arrays, lists, stacks, and queues. Meets ACM CS2 course standards. 3cr., 3hr. lect./lab

### 214 Fundamentals of Design for Print & Web

*Prereq: ICS 101 or BUSN 150, or consent.* 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. (Crosslisted as ART 221.) 3cr., 3hr. lect./lab (DA)

### 251 Introduction to Unix/Linux

*Prereq: ICS 101 with grade C or better, or consent.* Introduces the Unix/Linux operating system with emphasis on the Red Hat Linux release. Covers the history and structure of Unix/Linux, basic functions, and fundamental commands. Explores advanced topics unique to Unix/Linux system administration. Stresses the ethics and responsibilities incumbent with Super User privileges. 4cr., 4hr. lect./lab

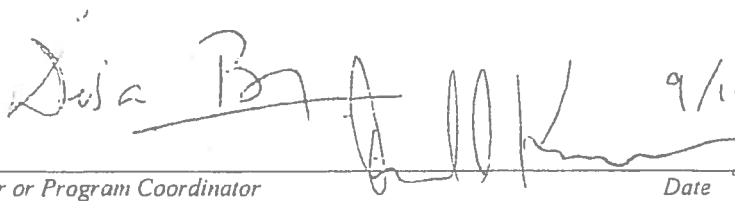
### 252 Unix/Linux System Administration

*Prereq: ICS 251 with grade C or better, or consent.* Continues exploration of the Unix/Linux operating system with an examination of

XX Insert course description for ICS141  
 XXX Insert course description for ICS 212

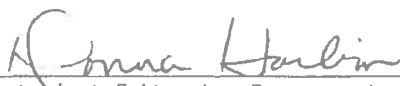
XXX - Insert course description for ICS 241

University of Hawaii Maui College  
Curriculum Action Request (CAR) Signature Page

 9/11/15

Proposed by: Author or Program Coordinator

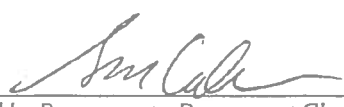
Date



9/11/15

Checked by: Academic Subject Area Representative to Curriculum Committee

Date



9/11/15

Requested by Department: Department Chair

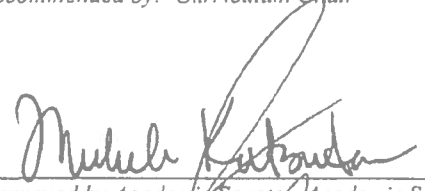
Date



12/10/15

Recommended by: Curriculum Chair

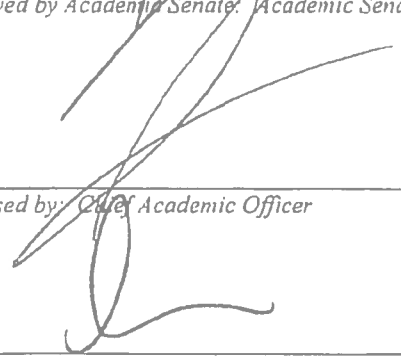
Date



2/26/16

Approved by Academic Senate: Academic Senate Chair

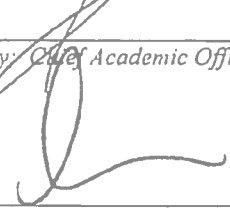
Date



2-29-16

Endorsed by: Chief Academic Officer

Date



3/8/16

Approved by: Chancellor

Date