



UNIVERSITY  
of HAWAII  
WEST O'AHU



UNIVERSITY of HAWAII  
HONOLULU  
COMMUNITY COLLEGE

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UNIVERSITY OF HAWAII - WEST O'AHU

ADDENDUM TO THE  
UNIVERSITY OF HAWAII ARTICULATION AGREEMENT  
Honolulu Community College Associate in Science (AS) in CENT to the  
University of Hawai'i-West O'ahu Bachelor of Applied Science, Concentration options in  
Computing, Electronics, and Networking Technology (CENT) OR Information Security and  
Assurance (ISA) signed  
July 2, 2013.

Purpose of Addendum

The purpose of this addendum is to address the discontinuation of the BAS CENT degree, effective Fall 2019, and the name modification for Honolulu Community College's Computing, Electronics and Networking Technology (CENT) program to Computing, Security and Networking Technology (CSNT).

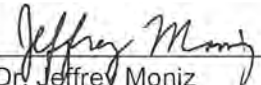
Curricular Modification

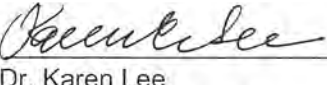
Per this addendum, the program name modification to CSNT requires updating the program requirements and providing substitutions to courses no longer offered with the discontinuation of CENT. Modified Attachments II and III contain additional course options to guide continuing University of Hawai'i West O'ahu students pursuing the Bachelor of Applied Science, Concentration in Computing, Electronics, and Networking Technology (CENT) OR Information Security and Assurance (ISA).

Approvals

University of Hawai'i-West O'ahu

Honolulu Community College

 4/11/19  
Dr. Jeffrey Moniz Date  
Vice Chancellor for Academic Affairs

 4/22/19  
Dr. Karen Lee Date  
Vice Chancellor for Academic Affairs

**University of Hawai'i - West O'ahu**  
**Bachelor of Applied Science with a Concentration in Computing, Electronics, and**  
**Networking Technology (CENT)**  
**or Information Security and Assurance (ISA)**

Attachment II

**Lower Division Requirements**

**Lower Division Requirements for CENT Concentration (45-47 credits):**

Students under the HonCC and UHWO MOA can obtain their BAS–CENT without attainment of the AS-CENT, although it is highly recommended.

3	CENT/CSNT/ICS 110	Introduction to Information Systems
	<b>or</b> ICS 110P	Introduction to Information Systems
4	CENT/CSNT 132	ICT Support
3-4	ICS 111	Introduction to Computer Science I
4	CENT/CSNT 140	Computer Networking I
4	CENT/CSNT 228	System Administration & TCP/IP Networking with Unix/Linux
4	CENT/CSNT 231	Telecommunications
4	CENT/CSNT 240	Computer Networking II
4	CENT/CSNT 270	Network Operating Systems I
3	CENT/CSNT 275	Security Essentials
3	CENT/CSNT 280	Database Systems I

Program Electives (select three courses from below):

4	CENT/CSNT 232	PC Desktop and Printer Support
3	CENT/CSNT 285	Introduction to Internet Applications/Web Applications
3	CENT/CSNT 290V	Internship for CENT
	<b>or</b> CENT/CSNT 293V	Cooperative Education
3	ICS 211	Introduction to Computer Science II (using Java)
3	ACCT 201	Introduction to Financial Accounting
4	MATH 241	Calculus I
4	MATH 242	Calculus II
3-4	EE 150, EE 160	A course in C programming
	<b>or</b> ICS 212	
3	Any CENT/CSNT course numbered 300 or above that is not otherwise used to meet a program requirement	

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**Lower Division Requirements for ISA Concentration (45-47 credits):**

Students under the HonCC and UHWO MOA can obtain their BAS–ISA without attainment of the AS–CENT, although it is highly recommended.

3	CENT/CSNT/ICS 110	Introduction to Information Systems <u>or</u> ICS 110P Introduction to Information Systems
4	CENT/CSNT 132	ICT Support
3-4	ICS 111	Introduction to Computer Science I (using Java)
4	CENT/CSNT 140	Computer Networking I
4	CENT/CSNT 228	System Administration & TCP/IP Networking with Unix/Linux
4	CENT/CSNT 231	Telecommunications
4	CENT/CSNT 240	Computer Networking II
4	CENT/CSNT 270	Network Operating Systems I
3	CENT/CSNT 275	Security Essentials
3	CENT/CSNT 280	Database Systems I
3	ACCT 201	Introduction to Financial Accounting
3*	ECON 130	Principles of Microeconomics,
	<u>or</u> ECON 131	Principles of Macroeconomics

**Program Electives (select one course from below):**

4	CENT/CSNT 232	PC Desktop and Printer Support
3	CENT/CSNT 285	Introduction to Internet Applications/Web Applications
3	CENT/CSNT 290V	Internship for CENT
3	CENT/CSNT 293V	Cooperative Education
3	ICS 211	Introduction to Computer Science II
4	MATH 241	Calculus I
4	MATH 242	Calculus II
3	EE 150	Intro to Computer Programming
4	EE 160	Programming for Engineers
3	ICS 212	Programming Structure
3	Any CENT/CSNT course numbered 300 or above that is not otherwise used to meet a program requirement	

\* Counted in DS under General Education

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Attachment III

**BAS Core & Upper Division Requirements**

**Bachelor of Applied Science Core Requirements for both CENT and ISA Concentrations**  
**(15 credits):**

- 3     ENG200 Composition II or ENG 209 Business Writing  
      or ENG 210 Writing Term Papers or ENG 215 Research/Argumentative Writing
- 3     PUBA/BUSA 481 Ethics and Administration (ETH focus)  
      or PUBA477 Ethics in Healthcare Administration (ETH focus)  
      or MGT 301 Business Ethics (ETH focus) or Any 300 or higher ETH Focus Course
- 3\*    SSCI 301 Methods and Techniques in Social Science Research (DS)
- 3     PUBA 341 Statistics for Decision-Making in Public Administration  
      or BUSA 320 Statistics for Decision-Making (Math 103 is pre-requisite for BUSA 320)
- 3     APSC 486I/490I Senior Project/Administrative Practicum

\*Counted in DS under General Education

**Upper Division Course Requirements for CENT Concentration (33 credits):**

- 3     CENT/CSNT 310 Network Security (HCC)
- 3     CENT/CSNT 315 Network Management (HCC)
- 3     CENT 410 IT Project Management or BUSA/ITS 410 IT Project  
      Management (WI) (UHWO)
- 3     ISA 400 Management of Information Security (UHWO)
- 9     CENT/CSNT electives: 300 or higher level CENT/CSNT courses not used to meet any  
      other requirement
- 9     UHWO electives: 300 or higher level Business Area\* or PUBA courses not used to meet  
      any other requirement
- 3     Restricted Electives: 300 or higher level Business Area\*, CENT/CSNT, ISA, or PUBA  
      courses not used to meet any other requirement

\*Business Area is meant to reflect any course in core or concentration areas within the BA in Business Administration Programs like ACC, BUSA, FIN, or MGT.

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**Upper-Division Course Requirements for ISA Concentration (33 credits):**

- 3 ISA 400 Management of Information Security (UHWO)
- 3 CENT/CSNT 310 Network Security (HCC)
- 3 ITS/CENT/BUSA 410 IT Project Management (UHWO)
- 9 ISA electives: 300 or higher level ISA courses not used to meet any other requirement
- 9 UHWO electives: 300 or higher level Business Area\* or PUBA courses not used to meet any other requirement
- 6 Restricted Electives: 300 or higher level Business Area\*, CENT/CSNT, ISA or PUBA courses not used to meet any other requirement

\*Business Area is meant to reflect any course in core or concentration areas within the BA in Business Administration Programs like ACC, BUSA, FIN, or MGT.

# Bachelor of Applied Science, Computing, Electronics and Networking Technology (CENT - HonCC/UHWO Articulation Agreement)

The goal of academic advising is to further enhance the educational mission of the university, and create quality, accessible advising partnerships with all students in a positive environment that supports student success. This advising sheet is for tracking purposes toward degree completion. Students also may track their academic progress via STAR Degree Check through MyUH at [myuh.hawaii.edu](http://myuh.hawaii.edu). Academic Advising appointments may be scheduled by calling 808-689-2689 or toll-free from neighbor islands at 1-866-299-8656.

**Graduation Requirements (see the current catalog for any additional graduation requirements):**

- 45 Upper Division Credits Minimum
- 120 Total Credits Minimum
- 30 UHWO Credits
- 3 Upper Division Writing Intensive Courses
- Focus Requirements (OC, HAP, ETH)
- 2.0 OVERALL GPA
- 2.0 UHWO GPA
- 2.0 CONCENTRATION GPA

**GENERAL EDUCATION REQUIREMENTS: 31-28 credits**

Credits	Course Alpha/Number/Title	WI or Focus	Semester Completed	Grade
3	Foundations Written Communication (FW) ENG 100 Composition			
3	Foundations Symbolic Reasoning (FS) MATH 103, MATH 135, MATH 140 or higher			
3	Foundations Multicultural Perspectives (FG): 6 credits from two <u>different</u> groups (A, B, C): *Group A: Primarily before 1500 CE (e.g.; HIST 151 or ANTH 151) *Group B: Primarily after 1500 CE (e.g.; HIST 152 or ANTH 152) *Group C: Pre-history to present			
3	Foundations Multicultural Perspectives (FG): Group different from above			
3	Diversification Arts, Humanities & Literature (DA, DH, DL): 6 credits from two different areas (Recommended HWST107, or other DH or DL course with HAP focus)			
3	Diversification Arts, Humanities & Literature (DA, DH, DL): Different from area above (Recommended SP 151 or SP 251, or other DA course with OC focus)			
3	Diversification Social Sciences (DS): 6 credits from two different areas (SSCI 301 credits counted in core below)			
3	Diversification Social Sciences (DS): Different area from above. (Recommend ECON130 or 131)			
3	Diversification Natural Sciences (DB, DP, DY) 3 credits from the biological sciences (DB)			
3	3 credits from the physical sciences (DP) (Recommend PHYS 105 which is DP + DY=4 credits)			
1	1 credit from a laboratory (DY) (not required if PHYS 105 was taken)			

**CORE REQUIREMENT: 15 credits (12 UD)**

Credits	Course Alpha/Number/Title	WI or Focus	Semester Completed	Grade
3	<b>Select one course from the following:</b> ENG 200 Composition II ENG 209 Business Writing ENG 210 Writing Term Papers ENG 215 Research/Argumentative Writing <b>**UHWO WRITING SKILLS REQUIREMENT**</b>			
3	<b>Select one course from the following:</b> PUBA 481/BUSA/PHIL 481 Ethics and Administration PUBA 477 Ethics and Health Care Administration MGT 301 Business Ethics	ETH		
(3)	SSCI 301 Methods & Techniques in Social Science Research *Counted in DS under Gen Eds			
3	<b>Select one course from the following: (Check Prerequisites)</b> PUBA 341 Statistics for Decision-Making in Public Administration BUSA 320 Statistics for Decision-Making			
3	WI APSC 486C or S Senior Project or WI APSC 490C or S Senior Practicum <b>**CAPSTONE REQUIREMENT**</b>	WI		

**CENT LOWER-DIVISION REQUIREMENTS: 45 - 47 credits** (waived if earned AS CENT from HonCC)

Credits	Course Alpha/Number/Title	WI or Focus	Semester Completed	Grade
3	CENT/CSNT 110 or ICS 110 or ICS 110P Introduction to Information Systems			
4	CENT/CSNT 132 ICT Support [CENT 130 + 131 allowable substitution]			
3-4	ICS 111 Introduction to Computer Science I			
4	CENT/CSNT 140 Computer Networking I			
4	CENT/CSNT 228 System Administration & TCP/IP Networking with Unix/Linux <b>OR</b> CENT/CSNT 253 System Admin. w/ Unix/Linux I			
4	CENT/CSNT 231 Telecommunications			
4	CENT/CSNT 240 Computer Networking II			
4	CENT/CSNT 270 Networking Operating Systems I			
3	CENT/CSNT 275 Security Essentials			
3	CENT/CSNT 280 Database Systems I			

**CENT PROGRAM ELECTIVES**

9-10	<b>Select three courses from below:</b>			
	4 CENT 232 PC Desktop and Printer Support			
	3 CENT/CSNT 285 Introduction to Internet Applications/Web Applications			
	3 CENT/CSNT 290V CENT Internship <b>OR</b> CENT/CSNT 293V Cooperative Education			
	3 ICS 211 Introduction to Computer Science II			
	3 ACCT 201 Introduction to Financial Accounting			
	4 MATH 241 Calculus I			
	4 MATH 242 Calculus II			
	3-4 EE 150 Intro to Computer Programming Methods, EE 160 Programming for Engineers <b>OR</b> ICS 212 Programming Structure			
	3 Any CENT/CSNT course numbered 300 or above that is not otherwise used to meet a program requirement.			

**CENT CONCENTRATION UPPER DIVISION REQUIREMENTS: 21 credits**

(NOTE: If lower-division CENT and/or ICS coursework is taken in this category, student must still meet UHWO upper-division credit graduation requirement of 45 credits)

Credits	Course Alpha/Number/Title	WI or Focus	Semester Completed	Grade
3	ISA 400 Management of Information Security (UHWO)			
3	CENT/CSNT 310 Network Security (HCC)			
3	CENT/CSNT 315 Network Management (HCC)			
3	CENT 410 IT Project Management <b>or</b> ITS 410 IT Project Management	WI		
3	<b>CENT/ CSNT Electives (9 Credits Total):</b> 300 or higher level CENT/CSNT courses not used to meet any other requirement			
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3	CENT/CSNT Elective: 300 or higher level CENT/CSNT courses not used to meet any other requirement			

**UPPER DIVISION UHWO ELECTIVES : 9 credits (9 UD)**

Credits	Course Alpha/Number/Title	WI or Focus	Semester Completed	Grade
3	300 or higher level Business Area* or PUBA courses not used to meet any other requirement			
3	300 or higher level Business Area* or PUBA courses not used to meet any other requirement			
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**UPPER DIVISION RESTRICTED ELECTIVES: 3 credits (3 UD)**

Credits	Course Alpha/Number/Title	WI or Focus	Semester Completed	Grade
3	300 or higher level Business Area*, CENT/CSNT, ISA or PUBA courses not used to meet any other requirement			

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\*Students under the HonCC and UHWO MOA can obtain their BAS–CENT without attainment of the AS-CENT, although it is highly recommended.

Faculty contact: Dr. Matthew Chapman, [mchapman@hawaii.edu](mailto:mchapman@hawaii.edu) or 689-2333

**+NOTE: UHWO requires 3 courses of upper-division Writing Intensive for graduation, with no more than three credits from the capstone course (APSC 486/490)**

**Possible CSNT elective course offered by Honolulu Community College:** *Please refer to Honolulu Community College's Catalog for comprehensive list of CSNT courses*

CSNT 320 Internet of Things  
CSNT 330 Ethical Hacking  
CSNT 340 Advanced Routing  
CSNT 370 Integrated Network Applications (Advanced Linux)  
CSNT 375 Virtualization (vSphere)  
CSNT 377 Cloud Infrastructure & Services  
CSNT 380 Malware Analysis  
CSNT 385 Scripting for Cybersecurity



# Bachelor of Applied Science, Information Security and Assurance (ISA - HonCC/UHWO Articulation Agreement)

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- 3 Upper Division Writing Intensive Courses
- Focus Requirements (OC, HAP, ETH)
- 2.0 OVERALL GPA
- 2.0 UHWO GPA
- 2.0 CONCENTRATION GPA

**GENERAL EDUCATION REQUIREMENTS: 31-28 credits**

Credits	Course Alpha/Number/Title	WI or Focus	Semester Completed	Grade
3	Foundations Written Communication (FW) ENG 100 Composition			
3	Foundations Symbolic Reasoning (FS) MATH 103, MATH 135, MATH 140 or higher			
3	Foundations Multicultural Perspectives (FG): 6 credits from two <b>different</b> groups (A, B, C): *Group A: Primarily before 1500 CE (e.g.; HIST 151 or ANTH 151) *Group B: Primarily after 1500 CE (e.g.; HIST 152 or ANTH 152) *Group C: Pre-history to present			
3	Foundations Multicultural Perspectives (FG): Group different from above			
3	Diversification Arts, Humanities & Literature (DA, DH, DL): 6 credits from two different areas (Recommended HWST107 or other DH or DL course with HAP focus)			
3	Diversification Arts, Humanities & Literature (DA, DH, DL): Different from area above (Recommended SP 151 or SP 251 or other DA course with OC focus)			
3	Diversification Social Sciences (DS): 6 credits from two different areas (SSCI 301 credits counted in core below)			
3	Diversification Social Sciences (DS): Different area from above. (Recommend ECON130 or 131, <i>counted in required lower division coursework below</i> )			
3	Diversification Natural Sciences (DB, DP, DY) 3 credits from the biological sciences (DB)			
3	3 credits from the physical sciences (DP) and 1 credit from Lab (DY) (Recommend PHYS 105, will count as DP+DY=4 credits)			
1	1 credit from a laboratory (DY) ( <i>not required if PHYS 105 was taken</i> )			

**CORE REQUIREMENT: 15 credits (12 UD)**

Credits	Course Alpha/Number/Title	WI or Focus	Semester Completed	Grade
3	<b>Select one course from the following:</b> ENG 200 Composition II or ENG 209 Business Writing or ENG 210 Writing Term Papers or ENG 215 Research/Argumentative Writing or <b>**Meets UHWO WRITING SKILLS REQUIREMENT**</b>			
3	<b>Select one course from the following:</b> PUBA/BUSA/PHIL 481 Ethics and Administration OR PUBA 477 Ethics and Health Care Administration OR MGT 301 Business Ethics	ETH		
(3)	SSCI 301 Methods & Techniques in Social Science Research			
3	<b>Select one course from the following: (Check Prerequisites)</b> PUBA 341 Statistics for Decision-Making in Public Administration BUSA 320 Statistics for Decision-Making			
3	WI APSC 486S Senior Project or WI APSC 490S Senior Practicum <b>**CAPSTONE REQUIREMENT**</b>	WI		

**ISA LOWER-DIVISION COURSEWORK: 45 - 47 credits WAIVED IF HOLD AS CENT FROM HONCC**

Credits	Course Alpha/Number/Title	WI or Focus	Semester Completed	Grade
3	CENT/CSNT or ICS 110 or ICS 110P Introduction to Information Systems			
4	CENT/CSNT 132 ICT Support [can sub CENT 130 and CENT 131]			

3-4	ICS 111 Introduction to Computer Science I			
4	CENT/CSNT 140 Computer Networking I			
4	CENT/CSNT 228 System Administration & TCP/IP Networking with Unix/Linux OR CENT/CSNT 253 System Admin. w/Unix/Linux I			
4	CENT/CSNT 231 Telecommunications			
4	CENT/CSNT 240 Computer Networking II			
4	CENT/CSNT 270 Networking Operating Systems I			
3	CENT/CSNT 275 Security Essentials			
3	CENT/CSNT 280 Database Systems I			

**PROGRAM ELECTIVES**

3	ACCT 201 Introduction to Financial Accounting			
3	ECON 130* Principles of Microeconomics OR ECON 131* Principles of Macroeconomics *Credits counted in DS above			
3-4	<b>Program elective: Select one course from below:</b> 4 CENT 232 PC Desktop and Printer Support 3 CENT/CSNT 285 Introduction to Internet Applications/Web Applications 3 CENT/CSNT 290V Internship for CENT 3 CENT/CSNT 293V Cooperative Education 3 ICS 211 Introduction to Computer Science II (using Java) 4 MATH 241 Calculus I 4 MATH 242 Calculus II 3 EE 150 Intro to Computer Programming Methods 4 EE 160 Programming for Engineers 3 ICS 212 Programming Structure 3 Any CENT/CSNT course numbered 300 or above that is not otherwise used to meet a program requirement.			

**ISA CONCENTRATION COURSEWORK: 18 credits**

Credits	Course Alpha/Number/Title	WI or Focus	Semester Completed	Grade
3	ISA 400 Management of Information Security (UHWO)			
3	CENT/CSNT 310 Network Security (HCC)			
3	ITS/CENT/BUSA 410 IT Project Management (UHWO)	WI		
3	<b>ISA Electives: 9 Credits Total:</b> 300 or higher level ISA courses not used to meet any other requirement			
3	ISA Electives: 300 or higher level ISA courses not used to meet any other requirement			
3	ISA Electives: 300 or higher level ISA courses not used to meet any other requirement			

**UPPER DIVISION UHWO ELECTIVES: 9 credits**

Credits	Course Alpha/Number/Title	WI or Focus	Semester Completed	Grade
3	300 or higher level Business Area* or PUBA courses not used to meet any other requirement			
3	300 or higher level Business Area* or PUBA courses not used to meet any other requirement			
3	300 or higher level Business Area* or PUBA courses not used to meet any other requirement			

**UPPER DIVISION RESTRICTED ELECTIVES: 6 credits**

Credits	Course Alpha/Number/Title	WI or Focus	Semester Completed	Grade
3	300 or higher level Business Area*, CENT/CSNT, ISA or PUBA courses not used to meet any other requirement			
3	300 or higher level Business Area*, CENT/CSNT, ISA or PUBA courses not used to meet any other requirement			

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**+NOTE: UHWO requires 3 courses of upper-division Writing Intensive for graduation, with no more than three credits from the capstone course (APSC 486/490)**