



**UNIVERSITY OF HAWAI'I  
MEMORANDUM OF AGREEMENT**

**HONOLULU COMMUNITY COLLEGE  
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)**

The purpose of this degree pathway is to facilitate a smooth transition for students entering Honolulu Community College or the University of Hawai'i – West O'ahu as they work toward obtaining the Bachelor of Applied Science (BAS) degree with a concentration in Computing, Electronics, and Networking Technology (CENT) or focus in Information Security Assurance (ISA). This recommended pathway is designed to produce multiple entry and exit points to flexibly serve student career and educational objectives. In particular, this Agreement will facilitate the transfer of students in the Associate in Science (AS) in the Computing, Electronics, and Networking Technology (CENT) Program at Honolulu Community College (HON) to the Bachelor of Applied Science with a concentration in CENT or ISA at the University of Hawai'i – West O'ahu (UHWO). While this academic pathway represents the most efficient coursework progression from the AS program at HON through the BAS program at UHWO, individual course substitutions may be made on a case-by-case basis when recommended courses are not available; however, all core, concentration, general education, focus, and graduation requirements must still be met in those individual cases.

As part of the Dual Enrollment agreement between HON and UHWO, and under the terms of this Agreement, the University of Hawai'i-West O'ahu agrees to:

1. Identify academic advisors at UHWO who will partner with HON's advisors to ensure timely and accurate advising information on pre-admission, admission, degree requirements, and other related advising information.
2. Identify a UHWO faculty member who will serve as the faculty advisor to students who are part of this articulation in the CENT concentration or ISA focus.
3. Inform students that financial aid may be available through whichever institution the student identifies as his/her home campus each semester, and that students must follow the financial aid policies and procedures at that home school in order to be eligible for financial aid.
4. Meet with HON faculty and/or administration minimally every two years, or on an as-needed basis, to discuss potential and planned curricular changes.
5. Continue discussions with HON on dual enrollment processes to benefit the matriculation and transfer processes for CENT and ISA students.

As part of the Dual Enrollment agreement between HON and UHWO, and under the terms of this Agreement, Honolulu Community College agrees to:

1. Identify a program counselor at HON who will partner with UHWO's advisors to ensure timely and accurate advising information on pre-admission, admission, degree requirements, and other related advising information.
2. Identify a HON faculty member who will serve as the faculty advisor to students who are part of this articulation in the CENT concentration or ISA focus and consult with UHWO's admissions personnel regarding students on an as-needed basis.
3. Inform students that financial aid may be available through whichever institution the student identifies as his/her home campus each semester, and that students must follow the financial aid policies and procedures at that home school in order to be eligible for financial aid.
4. Meet with UHWO faculty and/or administration minimally every two years, or on an as-needed basis, to discuss potential and planned curricular changes.
5. Continue discussions with UHWO on dual enrollment processes to benefit the matriculation and transfer processes for CENT and ISA students.

This Agreement will be reviewed as necessary in order to support the transfer, matriculation and graduation of CENT and IA students from both Honolulu Community College and the University of Hawai'i – West O'ahu.

**University of Hawai'i – West O'ahu**



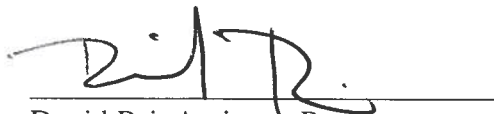
Rockne C. Freitas, Chancellor



Linda Randall  
Vice Chancellor for Academic Affairs



Derrek Choy, Chair of Business Administration

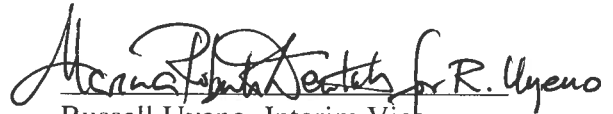


David Pai, Assistant Professor,  
Business Administration

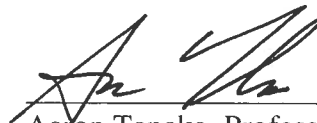
**Honolulu Community College**



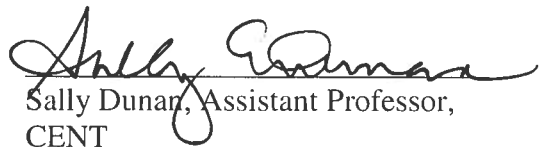
Erika Lacro, Chancellor



Russell Uyeno, Interim Vice  
Chancellor for Academic Affairs



Aaron Tanaka, Professor, CENT



Sally Dunar, Assistant Professor,  
CENT

Date of Agreement: 7/2/13


Effective Date: 7/2/13



UNIVERSITY of HAWAII\*  
**HONOLULU**  
COMMUNITY COLLEGE

May 15, 2013

TO: Erika Lacro  
Chancellor

FROM: Russell Uyeno   
Interim Vice Chancellor of Academic Affairs

SUBJECT: Coverage

I will be on vacation from June 24, 2013 to July 5, 2013. In my absence Marcia Roberts-Deutsch, Dean University College will be acting on my behalf and will have signing authority on all matters.

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 or Information Security and Assurance (ISA)

Attachment I

General Education Requirements

General Education Requirements for BAS CENT or ISA Concentrations – 31-32 credits (note some courses also meet other requirements in the CENT or ISA programs):

FW	3	<b>Foundations Written Communication</b> - ENG 100 Composition I, or ESL 100 (also satisfies AS CENT gen ed requirement)
FS	3-4	<b>Foundations Symbolic Reasoning</b> – MATH from the following list: 103 College Algebra; 135 Pre-calculus: Elementary Functions; 140 Pre-calculus: Trigonometry and Analytic Geometry: or higher level math (also satisfies AS CENT gen ed requirement)
FG	3	<b>Foundations Multicultural Perspectives</b> - Need 6 credits from two different groups (A,B,C): Group A: (e.g. HIST 151 or ANTH 151) Group B: (e.g. HIST 152 or ANTH 152) Group C: GEOG 151, MUS 107, GEOG 102, REL 150 (3 credits also satisfies AS CENT Humanities requirement)
DH, DA, DL	3	<b>Foundations Multicultural Perspectives</b> - Group different from above
	3	<b>Diversification Arts, Humanities, Literature</b> - Need 6 credits from two different areas. Recommended: HWST or DL107, or other DH or DL course with HAP focus. Upper-division 3XX or 4XX courses are recommended whenever possible to count toward the required 45 credits of upper-division coursework.
	3	<b>Diversification Arts, Humanities, Literature</b> – Group different from above Recommended: SP 151 Personal and Public Speech, or SP 251 Principles of Effective Speaking (or PUBA 313 or other DA to meet O-focus requirement)
DS	3	<b>Diversification Social Sciences</b> – Need 6 credits from two different areas. Recommended: SSCI 301(also counts toward BAS core requirement) (3 credits also satisfy AS CENT gen ed requirement)
DS	3	<b>Diversification Social Sciences</b> – Group different from above Recommended: Econ 130 or 131 (also counts toward IA lower division requirement)
DB	3	<b>Diversification Natural Science</b> – 3 credits from the Biological Sciences (DB)
DP	3	<b>Diversification Natural Science</b> – 3 credits from the Physical Sciences (DP) Recommended: PHYS 105 Principles of Technology (4 credits, satisfies AS CENT gen ed requirement and DP + DY BAS gen ed requirement)
DY	1	<b>Diversification Natural Sciences</b> – Lab for either DB or DP above Recommended: PHYS 105 Principles of Technology (4 credits, satisfies AS CENT gen ed requirement and DP + DY BAS gen ed requirement)

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Attachment II

**Lower Division Requirements**

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

(Honolulu Community College's AS degree CENT, with selected electives indicated below, is one degree pathway; however, completion of the AS degree is not a requirement of the BAS program at UHWO)

3	CENT/ICS 110	Introduction to Information Systems
4	CENT 132	ICT Support
3-4	ICS 111	Introduction to Computer Science I
4	CENT 140	Computer Networking I
4	CENT 228	System Administration & TCP/IP Networking with Unix/Linux
4	CENT 231	Telecommunications
4	CENT 240	Computer Networking II
4	CENT 270	Network Operating Systems I
3	CENT 275	Security Essentials
3	CENT 280	Database Systems I
2	CENT 290v or CENT 293v	Internship for CENT Cooperative Education
1	FAMR100a	Personal and Professional Development

Program Electives (select two courses from below):

4	CENT 232	PC Desktop and Printer Support
3	CENT 285	Introduction to Internet Applications/Web Applications
3	ICS 211	Introduction to Computer Science II (using Java)
3	ACCT 201	Introduction to Financial Accounting
3	Any CENT course numbered 300 or above that is not otherwise used to meet a program requirement	

**OR**

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

3	CENT/ICS 110	Introduction to Information Systems
4	CENT 132	ICT Support
3-4	ICS 111	Introduction to Computer Science I (using Java)
4	CENT 140	Computer Networking I
4	CENT 228	System Administration & TCP/IP Networking with Unix/Linux
4	CENT 231	Telecommunications
4	CENT 240	Computer Networking II
4	CENT 270	Network Operating Systems I
3	CENT 275	Security Essentials
3	CENT 280	Database Systems I
2	CENT 290v or CENT 293v	Internship for CENT Cooperative Education
1	FAMR100a	Personal and Professional Development
3	ACCT 201	Introduction to Financial Accounting
3*	ECON 130 or ECON 131	Principles of Microeconomics, Principles of Macroeconomics

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Program Electives (select one course from below):

- 4    CENT 232                PC Desktop and Printer Support
- 3    CENT 285                Introduction to Internet Applications/Web Applications
- 3    ICS 211                  Introduction to Computer Science II (using Java)
- 3    Any CENT 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)<sup>1</sup>:**

3	ENG 200 or ENG 209 or ENG 210 or ENG 215	Composition II <sup>2</sup> Business Writing Writing Term Papers Research/Argumentative Writing
3	PUBA/BUSA 481 or PUBA 477 or MGT 301	Ethics and Administration (ETH focus) Ethics in Healthcare Administration (ETH focus) Business Ethics (ETH focus)
3*	SSCI 301 (DS)	Methods and Techniques in Social Science Research
3	PUBA 341 or BUSA 320	Statistics for Decision-Making in Public Administration; Statistics for Decision-Making (Math 103 is pre-requisite for BUSA 320)
3	APSC 486/490	Senior Project/Administrative Practicum

\* Counted in DS under General Education

**AND**

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

3	CENT 310	Network Security
3	CENT 315	Network Management
3	CENT 410 (WI)	IT Project Management
3	ISA 400	Management of Information Security
9	CENT electives	300 or higher level CENT 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, 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.

**OR**

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

3	ISA 400	Management of Information Security
3	CENT 310	Network Security
3	ITS/CENT/BUSA 410	IT Project Management
9	ISA electives	300 or higher level ISA courses not used to meet any other requirement

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- |   |                      |   |
|---|----------------------|---|
| 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, 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.

**Graduation Requirement – 45 credits of upper division course work met for CENT:**

- |   |  |  |
|---|--|--|
| 3 | SSCI 301                                   | Methods and Techniques in Social Science Research (satisfies a core requirement)   |
| 3 | PUBA 341<br>or BUSA 320                    | Statistics for Decision-Making in Public Administration;<br>Statistics for Decision-Making [Math 103 is pre-requisite for BUSA 320 (satisfies a core requirement)<br>[Note: SSCI 210 Applied Statistics I is a statistics option for BAS students, but students choosing that option will need an additional 3 credits of upper division work] |
| 3 | PUBA/BUSA 481<br>or PUBA 477<br>or MGT 301 | Ethics and Administration (ETH focus) (satisfies a core requirement)<br>Ethics in Healthcare Administration (ETH focus) (satisfies a core requirement)<br>Business Ethics (ETH focus) (satisfies a core requirement)   |
| 3 | APSC 486/490                               | Senior Project/Administrative Practicum (satisfies a core requirement)   |
| 3 | CENT 310                                   | Network Security   |
| 3 | CENT 315                                   | Network Management   |
| 3 | CENT 410                                   | Project Management   |
| 3 | ISA 400                                    | Management of Information Security   |
| 9 | CENT electives                             | 300 or higher level CENT 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 [Note: HAP, WI, DA, DL, or DH designated courses recommended to minimize number of overall credits needed to meet all requirements]  |
| 3 | Restricted Electives                       | 300 or higher level Business Area*, CENT, ISA, or PUBA courses not used to meet any other requirement  |

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**Graduation Requirement – 45 credits of upper division course work met for ISA:**

3	SSCI 301	Methods and Techniques in Social Science Research (satisfies a core requirement)
3	PUBA 341 or BUSA 320	Statistics for Decision-Making in Public Administration; Statistics for Decision-Making [Math 103 is pre-requisite for BUSA 320 (satisfies a core requirement) [Note: SSCI 210 Applied Statistics I is a statistics option for BAS students, but students choosing that option will need an additional 3 credits of upper division work]
3	PUBA/BUSA 481 or PUBA 477 or MGT 301	Ethics and Administration (satisfies a core requirement) Ethics in Healthcare Administration (satisfies a core requirement) Business Ethics (satisfies a core requirement)
3	APSC 486/490	Senior Project/Administrative Practicum (satisfies a core requirement)
3	ISA 400	Management of Information Security
3	CENT 310	Network Security
3	ITS/CENT/BUSA 410	IT Project Management
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 [Note: HAP, WI, DA, DL, or DH designated courses recommended to minimize number of overall credits needed to meet all requirements]
6	Restricted Electives	300 or higher level Business Area*, CENT, 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.

**MINIMUM TOTAL CREDITS for BAS in CENT: 121 credits**

**MINIMUM TOTAL CREDITS for BAS in ISA: 121credits**

<sup>1</sup> BAS Computer Literacy requirement is waived based on overall computer competencies with the CENT or IA concentration

<sup>2</sup> ENG 200 must be taken at UHWO in order to meet UHWO minimum 30 credit requirement for graduation. If ENG 200 or equivalent is taken at HON, an alternate course must be taken at UHWO.