



UNIVERSITY
of HAWAI'I®
WEST O'AHU



UNIVERSITY of HAWAI'I®
WINDWARD
COMMUNITY COLLEGE

UNIVERSITY OF HAWAI'I ARTICULATION AGREEMENT
Windward Community College Associate in Science degree in Natural
Science with a concentration in Information and Communication Technology to the
University of Hawai'i-West O'ahu Bachelor of Applied Science degree in
Information Security and Assurance

The purpose of this Agreement is to facilitate a smooth transition for students from the Windward Community College (WCC) Associate in Science (AS) in Natural Science with a concentration in Information and Communication Technology program to the University of Hawai'i-West O'ahu (UHWO) Bachelor of Applied Science (BAS) in Information Security and Assurance program.

The agreement establishes a pathway to serve student career and educational objectives. Students may use dual enrollment as a method of completing the required coursework outlined.

Students who do not complete the AS in Natural Science, Information and Communication Technology degree at Windward Community College will be required to meet admissions and UH West O'ahu catalog requirements for the current academic year. While this academic pathway represents the most efficient coursework progression from the AS program at Windward Community College through the BAS program at the University of Hawai'i-West O'ahu, 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.

Requirements of the articulated Associate in Science in Natural Science, Information and Communication Technology (AS) degree and the Bachelor of Applied Science (BAS) in Information Security and Assurance degree are provided as attachments and form the basis of this Agreement. Subsequent changes to the curricular requirements of these programs may require revisions to this Agreement.

Under the terms of this Agreement, the University of Hawai'i-West O'ahu agrees to:

1. Identify Success Advisors at the University of Hawai'i-West O'ahu who will partner with Windward Community College advisors to ensure timely and accurate advising

information on pre-admission, admission, degree requirements, and other related advising information.

2. Identify a University of Hawai'i-West O'ahu faculty member who will serve as the faculty advisor to students who are part of this articulation in the selected concentration.
3. Meet with Windward Community College faculty and/or administration minimally every two years, or on an as-needed basis, to discuss potential and planned curricular changes.

Under the terms of this Agreement, Windward Community College agrees to:

1. Place a notation in the advisor notes in STAR which identifies AS in Natural Science, Information and Communication Technology students intending to transfer to the University of Hawai'i-West O'ahu who are in the process of completing the AS degree and are a part of this articulation.
2. Identify a Counselor at Windward Community College who will partner with the University of Hawai'i-West O'ahu Success Advisor to ensure timely and accurate advising information on pre-admission, admission, degree requirements, and other relevant advising information.
3. Identify a Windward Community College faculty member who will serve as the faculty advisor to students who are part of the articulation.
4. Meet with the University of Hawai'i-West O'ahu faculty and/or administration minimally every two years, or on an as needed basis, to discuss potential and planned curricular changes.

This Articulation Agreement is effective beginning Spring 2020 and is based on the General Education and Focus requirements in effect at the University of Hawai'i-West O'ahu for 2019-2020.

This Agreement will remain in effect through academic year 2025 and should be reviewed for renewal and/or modification by both parties in order to maintain this Windward Community College to University of Hawai'i-West O'ahu pathway.

Attachment I

WINDWARD COMMUNITY COLLEGE

Associate in Science in Natural Science, Information and Communication Technology
 University of Hawai'i-West O'ahu Articulation Option Requirements
 Based on Catalog Year: 2019-2020

Required Program Courses

Credits	WIN CC Course	Course Title/Requirement	UH West O'ahu Requirement
3	ENG 100	Composition I	FW
6	Choose Two:	Choose 6 credits from 2 different groups: <ul style="list-style-type: none"> • Group A- ANTH 151, ART 175, HIST 151 • Group B- ANTH 152, ART 176, GEOG 102, HIST 152 • Group C- REL 150 	FGA, FGB, FGC
3	Choose One:	Choose 3 credits: Arts (DA), Humanities (DH) or Literature (DL) <i>Highly recommend completion of SP 151 or SP 251, DA and OC focus</i>	DA, OC
3	Choose One:	Social Science course (DS) <i>Highly recommend completion of PACS 108 or BOT 105, DS and HAP Focus)</i>	DS, HAP
3	Choose One:	Biological Science (DB)	DB
8-9	Choose One Sequence:	Complete of one of the following 3 sequences: <ul style="list-style-type: none"> • CHEM 161/L and CHEM 162/L • PHYS 151/L and PHYS 152/L • PHYS 170/L and PHYS 272/L 	DP, DY and Elective
4	MATH 241	Calculus I	FQ, MATH 241
4	MATH 242	Calculus II	MATH 242
3	ICS 111	Introduction to Computer Science I	ICS 111
3	ICS 141	Discrete Mathematics for Computer Science I	Elective
3	ICS 211	Introduction to Computer Science II	ICS 211
3	Choose One:	<ul style="list-style-type: none"> • ICS 212 Program Structure • ICS 215 Introduction to Scripting 	Elective
3	ICS 241	Discrete Mathematics for Computer Science II	Elective

Credits	WIN CC Course	Course Title/Requirement	UH West O'ahu Requirement
10-11	Electives	Highly Recommend choosing electives from the following: <ul style="list-style-type: none"> • Diversification of Literature or Humanities (DH or DL) • Social Science (DS): Select a DS from a different area than above • MATH 115 Introduction to Statistics and Probability • ICS 101 Digital Tools for the Info World • ICS 184 Introduction to Networking • ICS 129 Introduction to Databases (formerly ICS 113) • ENG 200 Composition II or ENG 209 Business Writing 	General Education or Program Requirement

Note: To receive General Education or Focus requirements at the University of Hawai'i-West O'ahu, the course needs to be designated at the time of completion from Windward Community College.

60 Total Credits

Attachment II

UNIVERSITY OF HAWAI'I-WEST O'AHU

Bachelor of Applied Science in Information and Security Assurance
University of Hawai'i-West O'ahu Articulation Option Requirements
Based on Catalog Year: 2019-2020

General Education Requirements (31 credits)

Gen Ed / Credits Requirement/Course Title

Focus

FW	3	Written Communication: ENG 100 Composition I
FS/FQ	3	Symbolic Reasoning: MATH 241 Calculus I
FG	6	Global & Multi-cultural Perspectives: Complete 6 credits from two different groups (FGA, FGB or FGC)
DA, DH, DL	6	Diversification Arts, Humanities or Literature: Complete 6 credits from two different areas *HWST 107 Hawai'i: Center of the Pacific (DH, HAP) and SP 151 Personal and Public Speaking (DA, OC) is strongly recommended.
DS	6	Diversification Social Sciences: Complete 6 credits from two different subject areas
DB, DP, DY	7	Diversification Natural Sciences: Complete 3 credits of Biological Science (DB), 3 credits of Physical Science (DP) and 1 credit of Lab (DY)

Writing Skills Requirement

ENG 200 Composition II or ENG 209 Business Writing

ISA Lower Division Math Requirement (8-11credits)

Credits	Course	Course Title
3	MATH 115	Statistics
4	MATH 241	Calculus I
4	MATH 242	Calculus II

ISA Lower Division Concentration Requirements (18 credits)

Credits	Course	Course Title
3	ICS 111	Introduction to Computer Science I
3	ICS 129	Introduction to Databases
3	ICS 184	Introduction to Networking
3	ICS 211	Introduction to Computer Science II
3	ICS 240	Operating Systems
3	ISA 275 or CSNT 275	Security Essentials

BAS Core Program Requirements (9-12 credits)

Credits	Course	Course Title
3	ICS 101	Digital Tools for Info World
3	SSCI 210	Statistical Analysis I
3	SSCI 301	Methods & Techniques in Social Science Research
0-3	ETH	Completion of 300-400 level ETH course *May be combined with other requirements

ISA Concentration Requirements (18 credits)

Credits	Course	Course Title
3	ISA 320	Fundamentals of Secure Software Programming
3	ISA 330	Introduction to Proactive System Security
3	ISA 340	Introduction to Digital Forensics
3	ISA 400	Management of Information Security
3	ISA 450	Modern Cyber Conflicts
3	ITS 410	IT Project Management

ISA Upper Division Electives (18 credits)

Complete 18 credits of 300 or higher-level ISA, CSNT, IT, MATH, PUBA or Business Area* electives

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

Capstone Requirement (3 credits)

APSC 486S (WI) Senior Project or APSC 490S (WI) Senior Practicum

Elective Requirement

May need additional 300-400 level coursework to meet the University of Hawai'i-West O'ahu upper division credit minimum of 45 credits. Please check with your College Success Advisor to determine if elective credits are needed.

Focus Requirements

Requirement

Oral Communication (OC)

Contemporary Ethical Issues (ETH)

Hawaiian, Asian and Pacific Issues (HAP)

*May be met in combination with other requirements

Writing Intensive Requirement

Complete 3 upper division (300 or higher) level Writing Intensive (WI) courses. A minimum of two classes must come from coursework outside of the Capstone Course (APSC 486S or APSC 490S) *Whenever possible, WI sections of required core or concentration courses are highly recommended.*

Note: A minimum of 120 total credits must be earned which includes a minimum of 45 credits of upper division credits. A minimum of 30 credits must be earned “in residence” through courses taken at the University of Hawai‘i-West O‘ahu

Bachelor of Applied Science, Information Security and Assurance (Windward Community College ASNS, Information and Communication Technology)

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 and is subject to change. Students also may track their academic progress via STAR Degree Check at star.hawaii.edu. Academic Advising appointments may be scheduled by calling [808-689-2689](tel:808-689-2689) or toll-free from neighbor islands at [866-299-8656](tel:866-299-8656).

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

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

General Education Requirements: 31 credits

Credits	Course Alpha / Number / Title
3	Foundations Written Communications (FW) /Windward CC ENG 100 Composition I
3	Foundations Symbolic Reasoning (FS) OR Foundations of Quantitative Reasoning (FQ) /Windward CC MATH 241 MATH 115 or MATH 241
6	Foundations Global and Multicultural Perspectives (FG): /Windward CC 6 credits from two different 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	Diversification Arts, Humanities & Literature (DA, DH, DL): /Windward CC -Recommend SP 151/251 (DA, OC) 6 credits from two different areas
3	Diversification Arts, Humanities & Literature (DA, DH, DL): Different area than above /Windward CC or UHWO
3	Diversification Social Sciences (DS): 6 credits from two different areas /Windward CC-Recommend PACS 108 or BOT 105 (DS, HAP)
3	Diversification Social Sciences (DS): Different area from above. /Windward CC or UHWO
3	Diversification Natural Sciences (DB, DP, DY): /Windward CC 3 credits from the biological sciences (DB):
3	3 credits from the physical sciences (DP): /Windward CC
1	1 credit of laboratory (DY): /Windward CC

ISA Lower Division Concentration Requirements: 18 credits

Credits	Course Alpha / Number / Title
3	ICS 111 Introduction to Computer Science I /Windward CC ICS 111
3	ICS 129 Introduction to Databases /Windward CC ICS 129 (formerly ICS 113) or UHWO
3	ICS 184 Introduction to Networking /Windward CC ICS 184 or UHWO
3	ICS 211 Introduction to Computer Science II /Windward CC ICS 211
3	ICS 240 Operating Systems
3	ISA 275 Security Essentials OR CSNT 275 Security Essentials

ISA Lower Division Math Requirement: 8-11 credits

Credits	Course Alpha / Number / Title
3	MATH 115 Statistics /Windward CC or UHWO
1-4	MATH 241 Calculus I (<i>Can also satisfy FS/FQ General Ed Requirement</i>) /Windward CC MATH 241
4	MATH 242 Calculus II /Windward CC MATH 242

Applied Science Core Requirements: 12-15 credits

Credits	Course Alpha / Number / Title
3	ICS 101 Digital Tools for Info World /Windward CC or UHWO
3	ENG 200 Composition II, ENG 209, ENG 210, ENG 215 (or equivalent) /Windward CC or UHWO
3	SSCI 210 Statistical Analysis I (Pre: Math 115 with a C- or higher)
3	SSCI 301 Methods & Techniques in Social Science Research
0 or 3	300-400 level course with an ETH designation (*may be combined with other requirements)

ISA Upper Division Concentration Requirements: 18 credits

Credits	Course Alpha / Number / Title
3	ISA 320 Fundamentals of Secure Software Programming
3	ISA 330 Introduction to Proactive System Security
3	ISA 340 Introduction to Digital Forensics
3	ISA 400 Management of Information Security
3	ISA 450 Modern Cyber Conflicts
3	ITS 410 IT Project Management

ISA Upper Division Concentration Requirements: 18 credits

Complete 18 credits of 300 or higher-level ISA, CSNT, ITS, MATH, PUBA, or Business Area* electives

**Business Area is meant to reflect any course in core or concentration areas within the BA in Business Administration Programs including ACC, BUSA, ECON, FIN, FMGT, MGT, or MKT*

•ISA students may choose an optional CSNT focus area by completing five 300-level CSNT electives (15 credits) at Honolulu Community College as part of the National Center of Academic Excellence in Cyber Defense Education (CAE-CD) designation and partnership.

Credits	Course Alpha / Number / Title
3	<i>Recommended: ISA 360 Cyber Competitions (Fall)</i>
3	<i>Recommended: ISA 430 Cybersecurity of SCADA (Spring)</i>
3	<i>Recommended: ISA 480I Cyber Investigations (Spring)</i>
3	<i>Recommended: ISA 480R Cyber Detection and Response (Fall)</i>
3	<i>Recommended: BUSA 342 Practical Programming: Python</i>
3	<i>Recommended: BUSA 386 (WI)</i>

Capstone Requirement: 3 (UD) credits

Credits	Course Alpha / Number / Title
3	WI APSC 486S Senior Project or WI APSC 490S Senior Practicum

Elective Requirements: 6-12 credits

See College Success Advisor to determine if elective credits are needed

Credits	Course Alpha / Number / Title
3	<i>Possible Upper Division Elective</i>
3	ICS 141 /Windward CC
3	ICS 212 or 215 /Windward CC
3	ICS 241 /Windward CC

NOTES: Dr. Matthew Chapman is the faculty contact for this program. For additional information, Dr. Chapman may be contacted at mchapman@hawaii.edu or at (808) 689-2333.