UNIVERSITY OF HAWAI'I ARTICULATION AGREEMENT
Leeward Community College Associate in Science degree
in Information and Computer Science 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 Leeward Community College Associate in Science (AS) in Information and Computer Science program to the University of Hawai'i-West O'ahu Bachelor of Applied Science (BAS) in Information Security 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 here.

Students who do not complete the AS in Information and Computer Science degree at Leeward 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 Leeward 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 (AS) in Information and Computer Science and the Bachelor of Applied Science (BAS) in Information Security and Assurance 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 Hawaiʻi-West Oʻahu agrees to:

1. Identify Success Advisors at the University of Hawaiʻi-West Oʻahu who will partner with Leeward Community College Counselors to ensure timely and accurate advising information on pre-admission, admission, degree requirements, and other related advising information.
2. Identify a Success Advisor at the University of Hawaiʻi-West Oʻahu who will work with their campus STAR personnel to develop an accurate STAR pathway for students pursuing this articulation agreement.
3. Identify a University of Hawaiʻi-West Oʻahu faculty member who will serve as the faculty advisor to students who are part of this articulation in the selected concentration.
4. Inform students that financial aid may be available through either institution as the student identifies 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.
5. Meet with Leeward Community College faculty and/or administration minimally every two years, or on an as-needed basis, to discuss potential and planned curricular changes.
6. Continue discussions with Leeward Community College on dual enrollment processes to benefit the matriculation and transfer processes for ISA students.

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

1. Place a notation in the advisor notes in STAR which identifies AS in Information and Computer Science students intending to transfer to the University of Hawaiʻi-West Oʻahu who are in the process of completing the AS degree and are a part of this articulation.
2. Identify a Counselor at Leeward Community College who will partner with the University of Hawaiʻi-West Oʻahu advisors to ensure timely and accurate advising information on pre-admission, admission, degree requirements, and other relevant advising information.
3. Identify a Leeward Community College faculty member who will serve as the faculty advisor to students who are part of the articulation.
4. Inform students that financial aid may be available through either institution as the student identifies 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.
5. Meet with the University of Hawaiʻi-West Oʻahu faculty and/or administration minimally every two years, or on an as needed basis, to discuss potential and planned curricular changes.
6. Continue discussions with Leeward Community College on dual enrollment processes to benefit the matriculation and transfer processes for ISA students.

This Articulation Agreement is effective beginning Fall 2021 and is based on the General Education and Focus requirements in effect at the University of Hawaiʻi-West Oʻahu for 2021-2022.

This Agreement will remain in effect through academic year 2026 and must be reviewed for renewal and/or modification by both parties in order to maintain this Leeward Community College to University of Hawaiʻi West Oʻahu pathway.

Attachment I

LEEWARD COMMUNITY COLLEGE
Associate in Science in Information and Computer Science
University of Hawai'i-West O'ahu Articulation Option Requirements
Based on Catalog Year: 2021-2022

AS Program Requirements

Credits	LEE CC Course	Course Title	UH West O'ahu Requirement
3	ENG 100	Composition I	FW, ENG 100
3	ENG 209	Business Writing	ENG 209
3	Select One:	MATH 103 College Algebra, MATH 135 Pre-Calculus or higher-level MATH	FQ
3	Select One:	• SP 151 Personal & Public Speech • SP 251 Principles of Effective Public Speaking	OC
3	Select One:	Diversification of Social Science (Recommend PACS 108, DS/HAP)	DS, HAP
3	Select One:	Foundations Global Multicultural Perspectives (FGA, FGB or FGC)	FGA, FGB or FGC
3	ICS 101	Digital Tools for the Information World	ICS 101
3	Select One:	• ICS 110M Introduction to Programming: Mobile • ICS 110P Introduction to Programming: Python	Elective
3	ICS 111	Introduction to Computer Science I	ICS 111
3	ICS 125	Personal Computer Maintenance and Repair	Elective
3	ICS 129	Introduction to Databases	ICS 129
3	ICS 170	Ethics for the Digital World	DH, ETH
3	ICS 171	Introduction to Computer Security	Elective
3	ICS 184	Introduction to Networking	ICS 184
3	ICS 231	Introduction to Linux	ICS 240
3	ICS 270	Systems Analysis	Elective
3	ICS Elective	Recommend ICS 211 Introduction to Computer Science II	ICS 211
9	Select One Specialty:	Information Security Specialty • ICS 215 Introduction to Scripting • ICS 281 Ethical Hacking • ICS 282 Computer Forensics	Elective

Credits	LEE CC Course	Course Title	UH West Oʻahu Requirement

Network Support Specialty
- ICS 215 Introduction to Scripting
- ICS 273 Network Design and Administration
- ICS 274 Advanced Network Routing and Optimization

Software Developer Specialty
- ICS 211 Introduction to Computer Science II
- ICS 212 Program Structure
- ICS 241 Discrete Mathematics for Computer Science II

Note: To receive General Education or Focus requirements at the University of Hawaiʻi-West Oʻahu, the course needs to be designated at the time of completion from Leeward Community College.

60-61 Credits

Attachment II

UNIVERSITY OF HAWAI'I-WEST O'AHU
Bachelor of Applied Science in Information Technology
University of Hawai'i-West O'ahu Articulation Option Requirements
Based on Catalog Year: 2021-2022

General Education Requirements (31 credits)

Gen Ed / Focus	Credits	Requirement/Course Title
FW	3	Written Communication: ENG 100 Composition I
FS/FQ	3	Symbolic Reasoning: MATH 115 Statistics or higher-level Mathematics
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
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 (3 credits)

ENG 200 Composition II or ENG 209 Business Writing

Lower Division Math Requirements (0-3credits)

MATH 115 Statistics

All ISA students are encouraged to complete 15 credit hours of mathematics that include math statistics (MATH 115) and both differential and integral calculus (MATH 241 and 242) in order to promote eligibility for specialized professional employment opportunities in cybersecurity and scientific career fields.

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/CSNT 275	Security Essentials

Applied Science Core Requirements (9-12 credits)

Gen Ed / Focus	Credits	Course	Course Title
	3	ICS 101	Digital Tools for the Information World
	3	SSCI 210	Statistics
	3	SSCI 301	Methods and Techniques in Social Science Research
ETH	3	Choose One:	Any 300-400 level course with ETH Designation (*may be combined with other requirements, but 45 credits of upper division 300-400 level coursework must still be completed)

ISA Upper Division 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	Project Management

ISA Upper Division Elective 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, HOST, MGT, or MKT

Capstone Requirement (3 credits)

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

Electives

May need additional 300-400 level coursework to meet the University of Hawai'i-West O'ahu upper division 45 credit minimum. Students are encouraged to select upper division coursework that fulfill any outstanding General Education requirements upon transfer to the University of Hawai'i-West O'ahu.

Focus Requirements

Oral Communication (OC)
Contemporary Ethical Issues (ETH)
Hawaiian, Asian and Pacific Issues (HAP)
*Can 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 of which 45 credits must be upper division. A minimum of 30 credits must be earned "in residence" through courses taken at the University of Hawaiʻi-West Oʻahu.

Bachelor of Applied Science, Information Security and Assurance (Leeward Community College AS in Information and Computer Science)

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 through www.STAR.hawaii.edu. Academic Advising appointments may be scheduled by calling 808-689-2689 or toll-free from neighbor islands at 866-299-8656.

Graduation Requirements (see the current 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) /**Leeward CC** ENG 100 Composition I
3	Foundations Symbolic Reasoning (FS) **OR** Foundations of Quantitative Reasoning (FQ) /**Leeward CC**
3	Foundations Global and Multicultural Perspectives (FG): /**Leeward 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	Foundations Global and Multicultural Perspectives (FG): Different Group from above: FGA, FGB or FGC
3	Diversification Arts, Humanities & Literature (DA, DH, DL): 6 credits from two different areas /**Leeward CC ICS 170 DH, ETH**
3	Diversification Arts, Humanities & Literature (DA, DH, DL): Different area from above
3	Diversification Social Sciences (DS): 6 credits from two different areas /**Leeward CC Recommend PACS 108 DS, HAP**
3	Diversification Social Sciences (DS): Different area from above.
3	Diversification Natural Sciences (DB, DP, DY): 3 credits from the biological sciences (DB):
3	3 credits from the physical sciences (DP):
1	1 credit of laboratory (DY):

Writing Skills Requirement: 3 credits

Select one course from the following:
ENG 200 Composition II
ENG 209 Business Writing
ENG 210 Writing Term Papers
ENG 215 Research/Argumentative Writing

Credits	Course Alpha / Number / Title
3	**Leeward CC**

ISA Lower Division Math Requirement:3 credits

•All ISA students are encouraged to complete 15 credit hours of mathematics that include math statistics (MATH 115) and both differential and integral calculus (MATH 241 and 242) in order to promote eligibility for specialized professional employment opportunities in cybersecurity and scientific career fields.

Credits	Course Alpha / Number / Title
3	MATH 115 Statistics *(Can also satisfy FS/FQ General Ed Requirement)*

ISA Lower Division Concentration Requirements: 18 credits

Credits	Course Alpha / Number / Title
3	ICS 111 Introduction to Computer Science I /**Leeward CC ICS 111**
3	ICS 129 Introduction to Databases /**Leeward CC ICS 129**
3	ICS 184 Introduction to Networking /**Leeward CC ICS 184**
3	ICS 211 Introduction to Computer Science II /**Leeward CC ICS 211**
3	ICS 240 Operating Systems /**Leeward CC ICS 231**
3	ISA 275 Security Essentials **OR** CSNT 275 Security Essentials

Applied Science Core Requirements: 9-12 credits

Credits	Course Alpha / Number / Title
3	ICS 101 Digital Tools for Info World /**Leeward CC ICS 101**
3	SSCI 210 Statistical Analysis I (Pre: Math 103, Math 115 or higher 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 Elective 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, HOST, 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	*Recommended: ISA 360 Cyber Competitions (Fall)*
3	*Recommended: ISA 430 Cybersecurity of SCADA (Spring)*
3	*Recommended: ISA 480I Cyber Investigations (Spring)*
3	*Recommended: ISA 480R Cyber Detection and Response (Fall)*
3	*Recommended: ISA 480C Cyber Communications (Spring)*
3	*Recommended: BUSA 342 Practical Programming: Python*

Capstone Requirement: 3 (UD) credits

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

Elective Requirements: 17-20 credits

Credits	Course Alpha / Number / Title
3	*Possible Upper Division (300-400 level) if you combine ETH requirement with another requirement*
3	**Leeward CC AS Elective**
3	**Leeward CC AS Elective**
3	**Leeward CC AS Elective**
3	**Leeward CC AS Elective**
3	**Leeward CC AS Elective**
2	**Leeward CC AS Elective**

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.