Name:	UH ID:
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# AEROSPACE OPTION PROGRAM 2023-24 Graduation Checklist for Windward Community College ACADEMIC SUBJECT CERTIFICATE (ASC) – 13 credits

The Aerospace Option Program (AOP) is designed to assist undergraduate students interested in pursuing aerospace science and engineering careers – especially in the fields of astronomy, astronautics, aeronautics, and atmospherology. Through AOP, students may add an aerospace designation to their own major while earning an official University of Hawaii Certificate, which is recorded on their transcript. AOP emphasized experiential, hands-on learning by applying traditional STEM coursework to real-world, project-based research and internships. AOP is managed through WCC's Center for Aerospace Education in affiliation with the Hawaii Space Grant Consortium.

This is not an official document. Use it to keep track of your academic progress. You are responsible for meeting your program and graduation requirements. Check catalog for course descriptions and course prerequisites.

	COURSE	CREDIT	GRADE	TERM	
REQUIRED CAPSTONE PROJECT (1 credit)					
Student must complete one of the following capstone courses (SCI 295EN or SCI 295AS) during which the student is engaged in an					
aerospace research project conducted under the auspices of the Hawaii Space Grant Consortium or similar aerospace-related granting					
agency. The student is required to make a presentation of his / her project at a public venue such as the HSCG Fellowship Symposium.					
SCI 295AS Introduction to STEM Research in Aerospace Science OR	1	1			
SCI 295EN Introduction to STEM Research Engineering	=	1			
Core Electives – Minimum 12 credits					
Minimum 12-credit course work earned in the undergraduate courses listed in the electives below. See the restrictions noted on the table.					
Minimum Credits		13			

### **Graduation Requirements**

□ 2.0 cumulative grade point average.

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- Residency requirement: At least 20% of the required courses in the major area (the final credits) must be earned at the College. Under certain circumstances, this requirement may be waived upon request made to the Vice Chancellor of Academic Affairs.
- ☐ Any one course can fulfill only one area.
- □ Last day for graduation certification is the last day of instruction.

#### **RESTRICTIONS for Elective Courses:**

## ELECTIVE COURSES: Any number of Astronomy, Aeronautics, Engineering, and Physics courses may be applied to the 12-credit elective minimum with the specified restrictions:

ASTR 110 Survey of Astronomy (3)
ASTR 110L Survey of Astronomy Lab (1)
ASTR 170 Introduction to Rocketry (3)
ASTR 180 Planetary Astronomy (3)
ASTR 181 Stellar Astronomy (3)

ASTR 250 Observational Astronomy (3)
ASTR 250L Observational Astronomy Lab (1)

ASTR 281 Space Explorations (3)
CE 270 Applied Mechanics I (3)

EE 211

Basic Circuit Analysis I (4 lecture/lab)

PHYS 151 or PHYS 170

College Physics I (3) or General Physics I (4)

College Physics I Lab (1) or General Physics I Lab (1)

PHYS 152 or PHYS 272

College Physics II (3) or General Physics II (3)

PHYS 152L or PHYS 272L

College Physics II Lab (1) or General Physics II Lab (1)

PHYS 274 General Physics III (3)

#### ELECTIVE COURSES: No more than two of the ICS courses may be applied to the 12-credit elective minimum with the specified restrictions.

ICS 111 Introduction to Computer Science I (3) ICS 211 Introduction to Computer Science II (3)

ICS 212 or EE 160 Program Structure (3) or Programming for Engineers (4)

ICS 215 Introduction to Scripting (3)

## ELECTIVE COURSES: No more than three of the Chemistry and Geoscience courses may be applied to the 12-credit elective minimum with the specified restrictions.

ATMO 101 Introduction to Weather and Climate (3)

CHEM 151 or CHEM 161 Elementary Survey of Chemistry (3) or General Chemistry I (3)

CHEM 151L or CHEM 161L Elementary Survey of Chemistry Lab (1) or General Chemistry I Lab (1)

CHEM 162 General Chemistry II (3)
CHEM 162L General Chemistry II Lab (1)

ERTH 101 Dynamic Earth (3)

ERTH 101L Dynamic Earth Laboratory (1)

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UHManoa: ME 201 or EPET 201 is equivalent to WCC's ASTR 281 Space Explorations (3)

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