

**University of Hawaii Maui College**  
**Curriculum Action Request (CAR) Form**  
**Program/Degree/Certificate**

For Banner use:

Req:

Rcv:

\_\_\_ Alpha \_\_\_

\_\_\_ Program/name \_\_\_

\_\_\_ Program Code \_\_\_

\_\_\_ Concentration \_\_\_

\_\_\_ Major Code \_\_\_

1. Author(s): Ann Emmsley

2. Department: STEM

Program: Agriculture and Natural Resources

3. Date submitted to Curriculum Committee: 10/14/11

4. Program proposal

☐ New program (attach program proposal and program map)
 ☐ Change of name to existing program

Existing program Title: Sustainable Tropical Crop Production

Proposed program Title:

5. Credential (degree or certificate) proposal

☐ New credential added to existing program
 ☒ Modification to existing credential

Type of credential

Degree: ☐ AA ☐ AS ☒ AASCertificate: ☐ CA ☐ CC ☐ CO ☐ ACS☐ Other, specify:

Existing credential: Title: Sustainable Tropical Crop Management

Credits: 60

Proposed credential: Title: Sustainable Tropical Crop Management

Credits: 62

If modification, describe change:

☐ Change in credential name
☒ Change in course requirement(s); specify: Deleting AG 290 (1); replacing with AG 193V (1). Adding three new courses as requirements: AG 103(2), AG 104 (1); AG 252 (2) - this will replace AG 263 or AG 266(3) as a requirement; AG 200 (4) will fulfill the Natural Science General Elective Requirement; . The program electives move from 6 credits to 9 credits. The total number of credits for the AAS degree changes from 60 to 62 credits.

☐ Change in prerequisite(s) for credential; specify: Note: Ag 103 & AG 104 become prerequisites/corequisites for AG 251, AG 251 is a prerequisite for AG 252
☐ Other; specify:
☒ Program map must be attached. (For modifications, write changes on copy of current catalog map.)

6. Reason for this curriculum action:

Modification to create a curriculum that better supports agriculture entrepreneurship to support the development of new farmers.

7. Proposed term of first offering: Fall semester of 2012 year.

8. Special fees required:

☒ no ☐ yes, explain:

9. Special resources (personnel, supplies, etc.) required:

☒ no ☐ yes, explain:

10. Special scheduling considerations:

☒ no ☐ yes, explain:

11. Which program SLOs does this certificate support? (list all that apply and explain, if necessary.)

☒ Program SLO 1: Use basic business principles to manage projects or design a horticultural business enterprise.

Explain: Provides more business and production experiences.

☒ Program SLO 2: Recommend cultural practices, solve problems, plan projects, and cultivate horticultural crops in a sustainable manner based on sound biological and technological principles.

Explain: More opportunity to plan and grow crops using various cultural practices.

☒ Program SLO 3: Explain the relationships between agroecosystems, economics, human culture, and natural environments.

Explain: New courses allow for greater examination of sustainability and the impacts of farming methods.

12. Current UHMC Catalog needs revision on page(s): 31

13. Additional Information: See attached spreadsheet for clarification.

Agriculture & Natural Resources provides instruction for those wishing training, retraining, or skills upgrading in the field of agriculture and those wishing to transfer to a four-year college or university. Diverse learning activities are provided at facilities on Maui and Molokai. The Maui facility includes a 10,700 sq. ft. greenhouse; two acres of turfgrass including a golf green, fairway, and rough; and a 1.5 acre vegetable field. The Molokai Farm includes a 5,000 sq. ft. greenhouse, orchards, and vegetable fields on 28 acres of land. Projections point to a continued need for well-trained people in all aspects of the green industry. Hotels and condominiums face increasing demand for personnel to design and maintain aesthetically pleasing landscapes. Golf course and recreational facilities require knowledgeable people to establish and maintain healthy turfgrass in an environmentally sound manner. Farms and plantations need informed individuals to implement new technologies and sustainable agriculture techniques. Numerous opportunities exist for entrepreneurs in vegetable, flower, and nursery crop production as well as landscape maintenance.

Students may transfer to other institutions after beginning their academic and technical training on Maui or Molokai. Agriculture courses have been articulated with the University of Hawai'i at Hilo; some courses are equivalent to the ones offered there, while others transfer as agriculture or general electives. Students can also meet agriculture program requirements at the University of Hawai'i at Mānoa, as well as mainland institutions.

☞ Contact the program coordinator, Ann Emmsley, at 984-3243, or by email at [aemmsley@hawaii.edu](mailto:aemmsley@hawaii.edu) for latest program schedule cycle.

#### Requirements for Certificates of Competence (CO):

<b>Agricultural Science: 7 credits</b>	Agriculture 122(3), 200(4)
<b>GIS in Ecosystem Management: 8 credits</b>	Geographic Information Systems/Information and Computer Science 150(4) Geographic Information Systems 180(4)
<b>Nursery Production: 9 credits</b>	Agriculture 230(3), 266(3), 269(3)
<b>Pest Management: 9 credits</b>	Agriculture 174(3), 201(3), 281(3)

#### Requirements for Certificates of Completion (CC):

<b>Turfgrass Specialist: 23 credits</b>	<b>Sustainable Tropical Crop Production: 15 credits</b>
Agriculture 122(3), 174(3), 233(2), 235(3), 260(3), 194v(3)	Agriculture 122(3), 174(3), 232(1), 235(3), 251(4), 290(1)
English 22, 100, or 106(3)	
Mathematics 18 or higher(3)	
<i>Additional courses to improve employability, but not required:</i>	<b>Landscape Maintenance: 13 credits</b>
Agriculture 200(4), 201(3), 250(4), 269(3), 281(3)	Agriculture 235(3), 250(4), 260(3), 269(3)

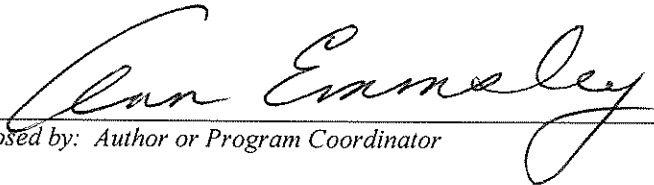
#### Requirements for Certificates of Achievement (CA):


<b>Courses required for all four CA programs: 27 credits</b>	
Agriculture 122(3), 174(3), 200(4), 201(3), 230(3), 235(3)	Automotive Technology 80(2)
BUSN 189, MATH 18 or higher(3)	English 22, 100, or 106(3)
<b>Floriculture Management: 34 credits</b>	<b>Nursery Management: 34 credits</b>
Agriculture 263(3), 269(3), 290(1)	Agriculture 266(3), 269(3), 290(1)
<b>Horticulture &amp; Landscape Maintenance: 40 credits</b>	<b>Sustainable Tropical Crop Management: 39 credits</b>
Agriculture 250(4), 260(3), 269(3), 281(3)	Agriculture 232(1), 251(4), 263 or 266(3), 281(3), 290(1)


#### Requirements for Associate in Applied Science (AAS) Degree: 60 credits

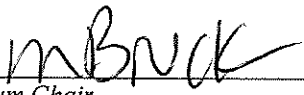
<b>Horticulture &amp; Landscape Maintenance: 60 credits</b>	<b>Sustainable Tropical Crop Management: 60 credits</b>
<i>All CA Horticulture &amp; Landscape courses(40) plus:</i>	<i>All CA Horticulture &amp; Landscape courses(39) plus:</i>
Electives(5) from AG Elective List below	Electives(6) from AG Elective List below
General Education(15) listed below	General Education(15) listed below
<b>General Education required for both AAS programs: 16 credits</b>	<b>AG Elective List:</b>
English 21, 22, 55, 100, 102, 104, 106, or COM 145(3)	Agriculture 92P(1), 92Q(1), 92R(1), 92S(1), 92T(1), 263(3), 264(3), 266(3), 290(1)
ICS 101 or BUSN 150(3)	<i>Tropical Crop options:</i> Agriculture 250(4), 260(3), 269(3)
Humanities elective(3)	<i>Horticulture options:</i> Agriculture 194v(1-3), 232(1), 233(2), 251(4)
Natural Science elective(3)	Trade/Natural Science appropriate to major, e.g., ACC 124
Social Science elective(3)	

University of Hawaii Maui College  
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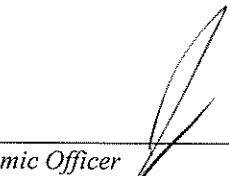
  
Proposed by: Author or Program Coordinator  
Date: 10/14/11


  
Checked by: Academic Subject Area Representative to Curriculum Committee  
Date: 10/14/11

  
Requested by Department: Department Chair  
Date: 10/14/11

  
Recommended by: Curriculum Chair  
Date: 12-9-11

  
Approved by Academic Senate: Academic Senate Chair  
Date: 2-1-12

  
Endorsed by: Chief Academic Officer  
Date: 2-4-12

  
Approved by: Chancellor  
Date: 2/8/12

# Sustainable Tropical Crop Management - New Farmer Curriculum redesign

	Course	credits	Name/Description
Core CA	ENG 22	3	Written Communication
	MATH 18	3	Math 18 or higher
		6	
Core AAS	ENG or COM	3	ENG or Oral Communications
	HUM	3	Humanities Elective
	NAT SCI	4	Natural Science - AG 200 Introduction to Horticulture
	SOC SCI	3	Social Science Elective
	ICS 101,	3	or BUSN 150
		16	
AG CORE	AG 122	3	Soils Technology
	AG 230	3	AG Business Management
	AG 174	3	Insects and Their Control
	AG 201	3	Plant Disease
	AG 281	3	Weed Science
	AG 235	3	Irrigation
	AMT 80	2	Small Engine Repair
		20	
AG CORE	AG 103	2	Sustainable Agriculture Systems - explore ag enterprises and marketing outlets - live & virtual field trips
Sus. Ag.	AG104	1	Food Safety Certification, Post Harvest Handling and Packaging, Worker Protection
	AG 232	1	Tractor Equipment operation
	AG 251	4	Sustainable Crop Production (veg)
	AG 252	2	student production of crops for culinary, CSA (replaces 290) (instructor guided, student led)
	AG 193V	1 to 3	Internship 1 minimum - 3 recommended?
		11+	
Electives	AG 113	1	new course - covers organic certification, conversion, recordkeeping, accepted practices and products,
9 credits	AG 162	2	formerly AG 190
	Aquap/Hydro	2	Aquaponics and Hydroponic production systems
	Sm animal	1	new course- small animal and poultry production - integration into systems
	Trop Fruit	1	new course -Tropical Fruit - survey of tropical fruits and production practices
	Flower & Fol	1	new course - replace 263? flower and foliage - survey of field grown flowers and foliage
	AG 253	4	Hawaiian Food Plants
	AG 265	4	Horticulture of Hawaiian Plants
	AG 266	3	Greenhouse
		AAS = 62-65	



CC in Sustainable Tropical Crop Production		CA in Sustainable Tropical Crop Management		AAS in Sustainable Tropical Crop Management	
11-12 catalog	Proposed	11-12 catalog	Proposed	11-12 catalog	Proposed
	AG 103(2) AG 104 (1)		AG 103(2) AG 104 (1)		AG 103(2) AG 104 (1)
AG 122 (3)	AG 122 (3)	AG 122 (3)	AG 122 (3)	AG 122 (3)	AG 122 (3)
AG 174 (3)	AG 174 (3)	AG 174 (3)	AG 174 (3)	AG 174 (3)	AG 174 (3)
AG 232 (1)	AG 235 (3)	AG 232 (1)	AG 232 (1)	AG 232 (1)	AG 232 (1)
AG 235 (3)	AG 232 (1)	AG 235 (3)	AG 235 (3)	AG 235 (3)	AG 235 (3)
AG 251 (4)	AG 251 (4)	AG 251 (4)	AG 251 (4)	AG 251 (4)	AG 251 (4)
AG 290 (1)		AG 290 (1)	AG 193V (1)	AG 290 (1)	AG 193V (1)
		AG 200 (4)	AG 200 (4)	AG 200 (4)	
<b>15 cr</b>	<b>17 cr</b>	AG 201(3)	AG 201(3)	AG 201(3)	AG 201(3)
		AG 230 (3)	AG 230 (3)	AG 230 (3)	AG 230 (3)
		AG 281 (3)	AG 281 (3)	AG 281 (3)	AG 281 (3)
		AG 263 or 266 (3)	AG 252 (2)	AG 263 or 266 (3)	AG 252 (2)
		AMT 80 (2)	AMT 80 (2)	AMT 80 (2)	AMT 80 (2)
		MATH 18 (3)	MATH 18 (3)	MATH 18 (3)	MATH 18 (3)
		ENG 22 (3)	ENG 22 (3)	ENG 22 (3)	ENG 22 (3)
				AG electives (6)	AG electives (9)
				ENG or COM (3)	ENG or COM (3)
		<b>39 credits</b>	<b>41 credits</b>	ICS 101 or BUSN 150(3)	ICS 101 or BUSN 150(3)
				Humanities (3)	Humanities (3)
				Social Science (3)	Social Science (3)
				Natural Science (3)	Natural Science - AG 200 (4)
				<b>60 credits</b>	<b>62 credits</b>