Cover Sheet: Request 9724

AOM Curriculum Changes Fall 2014

Info

Process	Major Curriculum|Modify|Ugrad/Pro
Status	Pending
Submitter	Porter,Wendell A waporter@ufl.edu
Created	11/4/2014 10:07:00 AM
Updated	2/6/2015 1:25:48 PM
Description	Update Tracking/Transfer requirements and provide more detailed elective paths

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CALS - Agricultural and Biological Engineering 514907000	Haman, Dorota Zofia		11/4/2014
College	Approved	CALS - College of Agricultural and Life Sciences	Brendemuhl, Joel H	Approved at the CALS CC on 11/14/14.	11/30/2014
University Curriculum Committee	Recycled	PV - University Curriculum Committee (UCC)	Morrison, Lee Shaw	Add a generic path to degree that enables students to still get a degree if they fail to get a concentration. Suggestion to use generic introductory courses for chemistry and physics instead of offering the first course of a two course sequence in these disciplines. Use catalog copy with tracked changes for document resubmission. Suggestion to use "departmentally approved elective" in the semester plan instead of listing all of the electives for all of the concentrations.	1/21/2015
College	Approved	CALS - College of Agricultural and Life Sciences	Brendemuhl, Joel H	Suggested changes by the UCC and a follow-up consult with Toby Shorey have resulted in the current version which was uploaded on 1/29/15. I believe all considerations have been addressed.	2/6/2015
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			2/6/2015

Step	Status	Group	User	Comment	Updated
Office of the Registrar					
Student Academic Support System					
Catalog					
Academic Assessment Committee Notified					
College Notified					

Modify the Curriculum of a Major

This process should be used to change the required or elective coursework in a graduate or professional major, or the eight-semester plan or critical tracking in an undergraduate major. To change the total credits, limited access status, major name, delivery platform or funding model, follow the procedures at http://approval.ufl.edu. Instructions for completing this form are on the last page.

Major to be Modified

1. Major Name Agricultural Operations Management
2. Major Code AOM
3. Degree Program Name Agricultural Operations management
4. Effective Term Fall Effective Year 2015

5. **Proposed Changes**

See attached
Transfer/tracking course changes and new elective course details

6. **Pedagogical Rationale/Justification**

See attached

7. **Projected Impact on Initial Enrollment, Retention, Graduation**

None

- Prepare a document showing the catalog copy with the current and proposed curricula either in a side-by-side comparison or edited using the "track changes" feature in Word.
- Prepare supporting documentation from other colleges indicating availability of seats in courses that are affected by the change in credits and support for the proposed application, if overlap is a concern.

Instructions
Please note: this form should be used to request a change in the required or elective coursework in an undergraduate or professional major, or the eight-semester plan or critical tracking in an undergraduate major. To change the total credits, limited access status, major name, delivery platform or funding model, follow the procedures at http://approval.ufl.edu..

Major to Be Modified
1. Enter the name of the major. Example: "Mathematical Modeling"
2. Enter the two-letter or three-letter major code.
3. Enter the name of the degree program in which the major is offered.
4. Enter the term (semester and year) that the curriculum change would be effective.

Proposed Changes
5. Describe the proposed changes to the curriculum.

Pedagogical Rationale/Justification
6. Describe the rationale for the proposed changes to the curriculum.

Projected Impact on Initial Enrollment, Retention, Graduation
7. Describe any potential impact of the curriculum changes on students who are currently in the major.

UF UNIVERSITY of FLORIDA

Institute of Food and Agricultural Sciences
Agricultural and Biological Engineering Department

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To: CALS Curriculum Committee November 4, 2014

From: Wendell A. Porter, Undergraduate Coordinator AOM

Subject: AOM Curriculum Changes

There are several changes occurring at the state and University that have required all majors on campus to produce updated eight semester plans. There are state generated general education changes and University generated general education changes. All majors on campus have been directed to incorporate these changes.

The overall effect of these changes is to reduce the flexibility our students have to fulfill their gen-ed requirements. This will make it even more difficult for our transfer students to finish their degree plans within limits before the tuition penalty kicks in. With this in mind, we have developed the following changes:

- Defined tracking/transfer courses along the same path as ABE does: Take 6 of 8 before you apply and certain courses must be included. This action will direct the students to take more of their required courses before they transfer in to our AOM program. It should be noted that our students still will need CHM2045, PHY2004 and MAC1147. The BSC requirements have been clarified due to Biology dept changes.
- We have also worked at developing a better path for our student's elective requirements. We have reached out over the last several months to other programs in CALS that offer courses that are of significant interest to our students. With advice from advisers in these departments we have developed particular elective paths for the majority of our students. These elective courses are defined in the attached document

These courses have been reviewed and approved by our departmental curriculum committee, the department chair and associated AOM faculty. Please feel free to contact me with any questions or comments.

AGRICULTURAL OPERATIONS MANAGEMENT – TRANSFER REQUIREMENTS

Agricultural Operations Management (AOM) combines emerging technologies with business principles to allow students to apply cutting edge techniques to a wide variety of career paths. Students gain technical expertise in systems management, environmental quality, energy efficiency, agricultural construction management, machinery, GIS/GPS remote sensing, safety, irrigation, power systems, water control and food processing. Students select a concentration based on their interest area.

The curriculum supports students who plan to seek career opportunities in commercial business operations and management. In addition to hands-on applied skills, students will take courses in economics, accounting, business, finance and management. Graduates become an integral part of the profitable operations of many types of businesses, such as agricultural production facilities, grove management, commercial nurseries, construction management and materials, regulatory agencies and citrus processing.

Students must complete an Associate of Arts degree, meet the required grade point average (G.P.A.), complete the required prerequisite courses, and meet the foreign language and immunization policies of the University of Florida before transferring.

Agricultural Operations Management

Required G.P.A. = 2.0 overall and 2.0 in the following courses.

Students MUST complete 6 of 8 of the following courses before transferring and the MAC, CHM and PHY courses:

	MAC 1147	Precalculus	4
or	MAC 1140 & MAC 1114	Precalculus Algebra and Trig	6
or	MAC 1105 & MAC 1114	College Algebra and Trigonometry	6
or	MAC 2233	Survey of Calculus 1	3
	CHM 2045 & 2045L	General Chemistry 1and Lab	4
	PHY 2004	Applied Physics 1	3
or	PHY 2020	Introduction to Principles of Physics	3
	BSC 2010/2010L	General Biology 1and Lab	4
	PSY 2012	General Psychology	3
	ACG 2021	Intro to Financial Accounting	4
	SPC 2608	Introduction to Public Speaking	3
	ENC 2210	Technical Writing	3

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

ECO 2013	Macroeconomics	3
ECO 2023	Microeconomics	3
STA 2023	Introduction to Statistics 1	3

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Web site: http://abe.ufl.edu/

PLEASE NOTE: G.P.A. is calculated using UF's grade point system. Refer to http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html for more information.

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or	MAC 1105 & MAC 1114	College Algebra and Trigonometry	6
or	MAC 2233	Survey of Calculus 1	3
	CHM 2045 & 2045L	General Chemistry 1and Lab	4
	PHY2004	Applied Physics 1	3
or	PHY2020	Introduction to Principles of Physics	3
	PHY2005	Applied Physics 2	3
or	Approved Physical Science Course		3
	BSC 2010/2010L	General Biology 1and Lab	4
	BSC 2011	General Biology 2	4

The following courses may be completed at the community/state college, but are not required for admission to the College of Agricultural and Life Sciences:

SPC 2608	Introduction to Public Speaking	3
ENC 2210	Technical Writing	3
ECO 2013	Macroeconomics	3
ECO 2023	Microeconomics	3
ACG 2021	Introduction to Financial Accounting	4
STA 2023	Introduction to Statistics 1	3
PSY 2012	General Psychology	3

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Bachelor of Science
Agricultural Operations Management
2015

Students in AOM will explore sustainable solutions for the 21st Century and can choose from multiple of areas of concentration.

Agribusiness Management	(AG-AOMBM)
Fishery & Aquatic Production	(AG-AOMFSH)
Animal Production Management	(AG-AOMAML)
Forest Resources & Conservation	(AG-AOMFOR)
Horticulture and Crop Management	(AG-AOMNUR)
Agricultural Leadership	(AG-AOMLDR)
Agricultural Extension	(AG-AOMEXT)
Soil and Water Science	(AG-AOMSWS)

Bachelor of Science in Agricultural Operations Management 2015

SUBJECT		CREDIT
Composition (State Core)	(GE-C – N or D)	3
Humanities – (State Core)	(GE-H – N or D)	3
Physical Science-(GE-B/P)		3
IUF 1000	What is the Good Life? (GE-H)	3
***PSY 2012 (State Core)**	**General Psychology (GE-S)**	**3**
****BSC 2010, 2010L (St Core)**	**Biological Science (GE-B/P) or Botany 2010c**	**4 (or 3)**
****CHM 2045, 2045L**	**General Chemistry (GE-B/P)**	**4**
****PHY2004 or PHY2020 & Lab**	**Applied Physics (GE-B/P) and Physics Lab**	**4**
****MAC 1147 or MAC2233 (SC)**	**Precal Alg & Trig (4) or *Survey of Calculus (3) (GE-M)**	**4 (or 3)**
***ENC 2210**	**Tech Writing (GE-C)**	**3**
***SPC 2608**	**Public Speaking**	
or AEC 3030C	**Effective Oral Communication**	**3**
***ACG 2021C**	**Intro Financial Acct**	**4**
or AEB 3122	**Financial Planning for Agribusiness (3)**	
ECO 2013 and ECO 2023	Macroeconomics and Microeconomics (GE-S)	8
or AEB 2014	Economic Issues Food & You (3) (GE-S)	
STA 2023	Statistics (GE-M)	3
Business Law or Business Ethics or Human Resources course		3
AEB 4126	Ag & Natural Resources Ethics	
AEB 4085	Agricultural Risk Management and the Law	
AEB 4123	Agricultural Law	
BUL 4443	Ethics in Global Business	
FOS 4731	Government Regulation & Food Industry	
SWS 3022	Intro to Soils in the Environment	3
AEB 3133	Principles of Agribusiness Management	3
or MAN 3025	Principles of Management (4)	
AEB 3300	Agricultural & Food Marketing	3
or MAR 3023	Principles of Marketing (4)	
ALS 3133	Agriculture & Environmental Quality	3
or AOM4521	Intro to Biofuels	
AOM 2520	Global Sustainable Energy	3
AOM 3220	Agricultural Construction & Maintenance	3
AOM 3333	Pesticide Application	3
AOM 3734	Irrigation Principles & Practices in Florida	3
AOM 4314C	Power & Machinery Management	3
AOM 4434	Precision Agriculture	3
AOM 4444C	Electrical Power instrumentation for AOM	3
AOM 4455	Agricultural Operations & Systems	3
AOM 4461	Sustainable Ag Systems	3
AOM 4642	Environmental Systems for Ag Structures	3
AOM 4643	Principles & Issues in Environ Hydrology	3
AOM 4933	Professional Practices	1
Area of Concentration		19
TOTAL HOURS REQUIRED FOR GRADUATION		120 hrs

***Tracking courses**

****Tracking courses also <u>required</u> for transfer students from the 8 courses listed**

-Transfer students will select a minimum of 6 out of 8 courses listed in transfer guide.

Tracking Courses – All Concentrations

*BSC 2010, 2010L	Biological Science (B) or Botany 2010c	4 (or 3)
**CHM 2045, 2045L	General Chemistry (P)	4
**PHY 2004 or PHY2020 & Lab	Applied Physics (P) and Lab	4
*MAC 1147 or MAC2233	Precal Alg & Trig (4) or Survey of Calculus (3) (M)	4 (or 3)
***ENC 2210	Tech Writing (C)	3
SPC 2608	Public Speaking	
or AEC 3030C	Effective Oral Communication	3
ACG 2021	Intro Financial Acct	4 (or 3)
or AEB 3122	Financial Planning for Agribusiness (3)	
*PSY 2012	General Psychology (S)	3
		29

Core courses – All concentrations

**Physical Science	Gen Ed (B/P)	3
*Composition	State Core (GE-C, D or N)	3
*Humanities	State Core (GE-H, D or N)	3
IUF 1000	What is the Good Life (GE-H)	3
**ECO 2013 and ECO 2023	Macroeconomics and Microeconomics (GE-S)	8
or AEB 2014	Economic Issues Food & You (3) (GE-S)	
AEB 3133	Principles of Agribusiness Management	3
or MAN 3025	Principles of Management (4)	
Business Law or Business Ethics or Human Resources course		3
AEB 4126	Ag & Natural Resources Ethics	
AEB 4085	Agricultural Risk Management and the Law	
AEB 4123	Agricultural Law	
FOS 4731	Government Regulation & Food Industry	
***STA 2023	Statistics (GE-M)	3
AEB 3300	Agricultural & Food Marketing	3
or MAR 3023	Principles of Marketing (4)	
SWS 3022	Intro to Soils in the Environment	3
ALS 3133	Agriculture & Environmental Quality	3
or AOM4521	Intro to Biofuels	
AOM 2520	Global Sustainable Energy	3
AOM 3220	Agricultural Construction & Maintenance	3
AOM 3333	Pesticide Application	3
AOM 3734	Irrigation Principles & Practices in Florida	3
AOM 4314C	Power & Machinery Management	3
AOM 4434	Precision Agriculture	3
AOM 4444C	Electrical Power instrumentation for AOM	3
AOM 4455	Agricultural Operations & Systems	3
AOM 4461	Sustainable Ag Systems	3
AOM 4642	Environmental Systems for Ag Structures	3
AOM 4643	Principles & Issues in Environ Hydrology	3
AOM 4933	Professional Practices	1
Various	Concentration Courses	19
		91

Additional *State Core – (15 hours)
Additional **General Education Courses (12 hours)
Additional ***C & M (6 hours)

Total 120 hours

Courses of Concentration

Required Courses and Electives

The following courses are specific to each 19 hour concentration. All courses are 3 credits unless otherwise noted:

1. **Agribusiness Management (AG-AOMBM)**
    a. **Required Courses**
        i. AEB3144 - Introduction to Agricultural Finance
        ii. AEB3341 - Selling Strategically
        iii. AEB3315 - Futures Markets and Risk Management in Agriculture
    b. **Pick 3 of the following courses:**
        i. AEB4138 - Advanced Agribusiness Management
        ii. AEB4309 - Food Wholesaling and Retail Marketing
        iii. AEB4342 - Agribusiness and Food Marketing Management
        iv. AEB4343 - International Agribusiness Marketing
        v. AEB4424 - Human Resources Management in Agribusiness
    c. **Internship, Extension or Undergraduate Research (1 hour)**

2. **Fisheries and Aquatic Production (AG-AOMFSH)**
    a. **Required Courses (select 5, including BSC2011 & lab)**
        i. BSC2011 and BSC2011L (4) - **required**
        ii. FAS2024 - Global and Regional Perspectives in Fisheries
        iii. FAS4202C - Biology of Fishes (4)
        iv. FAS4270 - Marine Ecological Processes
        v. FAS4305C - Introduction to Fishery Science or
        vi. FAS4405 - Aquariums, Water and Aquaculture
    b. **Internship, Extension or Undergraduate Research (3 hours)**

3. **Animal Production Management (AG-AOMAML)**
    a. **Required Courses**
        i. ANS3006C - Introduction to Animal Science (4)
        ii. ANS3043 - Growth and Development of Farm Animals
        iii. ANS3246 - Beef Production Practicum (1)
        iv. ANS3404C - Food Animal Nutrition and Feeding
        v. ANS3440 - Principles of Animal Nutrition (4)
    b. **Internship, Extension or Undergraduate Research (1 hour)**
    c. **Elective (3 hours)**

4. **Forest Resources and Conservation (AG-AOMFOR)**
    a. **Required Courses**
        i. FOR3004 - Forests, Conservation and People
        ii. FOR3153C - Forest Ecology
        iii. FOR3162C – Silviculture (4)
        iv. FOR3202 - Society and Natural Resources
        v. FOR3855 - Agroforestry in the Southeast United States **or**
            1. FOR3430C - Forest Mensuration **or**
            2. FOR3434C - Forest Resources Information Systems
        vi. Internship, Extension or Undergraduate Research

5. **Horticulture & Crop Management (AG-AOMNUR)**
    a. **Required Courses**
        i. HOS3020 - Principles of Horticulture Crop Production
        ii. VEC3221C - Vegetable Production (4)
    b. **Pick 1 of the following courses:**
        i. FYC3521 - Community Food Systems
        ii. AGR4212 - Alternative Cropping Systems
        iii. AGR4214C - Applied Field Crop Production
    c. **Pick 2 of the following courses:**
        i. HOS3281C - Organic and Sustainable Crop Production
        ii. HOS4283C - Advanced Organic and Sustainable Crop Production
        iii. HOS3222C - Greenhouse and Protected Agriculture
        iv. VEC2100 - World Herbs and Vegetables
            Or pick 2 of the following courses:
                a. FRC3212- Introduction to Citrus Culture and Production
                b. FRC3252 (2)- Tropical and Subtropical Fruits
                c. FRC3274 - Tree and Small Fruit Production
    d. **Internship, Extension or Undergraduate Research (3 hours)**

6. **Agricultural Leadership (AG-AOMLDR)**
    a. **Required Course**
        i. AEC3414 - Leadership Development
    b. **Pick 3 of the following courses:**
        i. AEC3413 - Working with People: Interpersonal Leadership Skills
        ii. AEC4417- Leadership for Personal and Organizational Change
        iii. AEC4434 - Communication and Leadership in Groups and Teams
        iv. AEC4465 - Global Leadership
        v. FYC4408- Organizational Leadership for Nonprofits
    c. **Pick 2 of the following courses:**
        i. AEB4126 - Agricultural and Natural Resource Ethics
        ii. FYC4114 - Ethical Issues in Family, Youth and Community Sciences
        iii. POS3263 - Policy, Ethics and Public Leadership
        iv. BUL4310- The Legal Environment of Business
    d. **Internship, Extension or Undergraduate Research (1 hour)**

7. **Agricultural Extension (AG-AOMEXT)**
    a. **Required Courses**
        i. AEC3313 - Development and Role of Extension Education
        ii. AEC4500 Program Development and Evaluation or
            1. FYC4622 - Planning and Evaluating Family, Youth and Community Science Programs
        iii. AEC4506 Nonformal Teaching Methods and Delivery Strategies **or**
            1. AEC3209 Instructional and Event Planning in Agricultural and Life Sciences **or**
            2. AEC4200 Teaching Methods in Agricultural Education
    b. **Pick 3 of the following courses:**
        i. AEC3073 - Intercultural Communication
        ii. AEC3413 - Working with People: Interpersonal Leadership Skills
        iii. AEC3414 - Leadership Development
        iv. AEC4031 - The Communication Process in Agricultural and Life Sciences
        v. AEC4052 - Communication Campaign Strategies in Agricultural and Life Sciences
        vi. AEC4065 - Issues in Agricultural and Life Sciences
        vii. AEC4417 - Leadership for Personal and Organizational Change
        viii. AEC4434 - Communication and Leadership in Groups and Teams
        ix. AEC4944 - Cooperative Extension Internship

x. FYC4408 - Organizational Leadership for Nonprofits

c. Internship, Extension or Undergraduate Research (1 hour)

8. Soil and Water Science (AG-AOMSWS)

a. Required Courses

i. SWS 2007 – The World of Water
ii. SWS 3022L - Introduction to Soils in the Environment Laboratory (1)

b. Pick 4 of the following courses:

i. SWS4116 - Environmental Nutrient Management
ii. SWS4207 - Sustainable Agricultural and Urban Land Management
iii. SWS4231c - Soil, Water and Land Use
iv. SWS4233 - Soil and Water Conservation
v. SWS4244 - Wetlands

c. Internship, Extension or Undergraduate Research (3 hours)

Bachelor of Science
Agricultural Operations Management
2009 - 2010

Students in AOM will explore sustainable solutions for the 21st Century and can choose from multiple of areas of concentration.

Courses of concentration:

Production Systems Management	**(AG-TRACK)**
Landscape Management	(AG-AOMLM)
Technical Sales Management	(AG-AOMTSM)
Production Systems	(AG-AOMPSM)
Fishery & Aquatic Production	(AG-AOMFSH)
Forestry	(AG-AOMFOR)
Nursery Management	(AG-AOMNUR)
Business Management	(AG-AOMBM)
Organic & Sustainable Ecology	(AG-AOMORG)
Animal Production Management	(AG-AOMAML
Sustainable Systems Management	**(AG-TRACK2)**
Energy Systems Management	(AG-AOMESM)
Environmental Systems Management	(AG-AOMENV)
Agricultural Construction Management	**(AG-TRACK3)**
Sustainable Agricultural Construction	(AG-AOMCON)

NOTE:

To apply correct concentration to individual student must do the following requirement substitutions:

- **AG-Track2 or AG-Track3 for AG-Track**
- **AG-AOMHDR for AG-(specific concentration code, ex: AG-AOMFSH)**
- **For Environmental & Construction areas must sub UT requirements as follows**

Old Requirement Name	New Requirement Name
UT-PMTS1	UT-ENV1 or UT-CPM1
UT-PMTS2	UT-ENV2 or UT-CPM2
UT-PMTS3	UT-ENV3 or UT-CPM3
UT-PMTS4	UT-ENV4 or UT-CPM4
UT-PMTS5	UT-ENV5 or UT-CPM5

Bachelor of Science in Agricultural Operations Management

2009 - 2010

SUBJECT			CREDIT
Composition (C)			3
Humanities: Literature and the Arts/Historical and Philosophical Studies (H)			6
International Studies Diversity (N) (Double count with H or S)		(3)	
Diversity (D) (Double count with H or S)		(3)	
Social and Behavioral Studies (Suggest PSY2012, ECO2013 & ECO2023) (9)			
PSY 2012	General Psychology (S)		3
ECO 2013 and ECO 2023	Macroeconomics and Microeconomics (S)		8
or AEB 2014	Economic Issues Food & You (S)	(3)	
STA 2023	Statistics (M)		3
BSC 2010, 2010L	Biological Science (B)		4
CHM 2045, 2045L	General Chemistry (P)		4
PHY 2004	Applied Physics (P) (*and lab)		3 (or 4)
Phy Sci Course or PHY2005	Physical Science Course or *Applied Physics 2		3
MAC 1147 or MAC2233	Precal Alg & Trig (4) or *Survey of Calculus (3)		4 (or 3)
AEC 3033C	Research Business Writing		
or ENC 2210	Tech Writing (C)		3
AEC 3030C	Effective Oral Communication		
or SPC 2600	Public Speaking		3
ACG 2021C	Intro Financial Acct		4
or AEB 3122	Financial Planning for Agribusiness (3)		
Business Law or Business Ethics or Human Resources course			3
AEB 4126	Ag & Natural Resources Ethics		
AEB 4085	Agricultural Risk Management and the Law		
AEB 4123	Agricultural Law		
BUL 4443	Ethics in Global Business		
FOS 4731	Government Regulation & Food Industry		
SWS 3022	Intro to Soils in the Environment (P)		3
AEB 3133	Principles of Agribusiness Management		3
or MAN 3025	Principles of Management (4)(S)		
AEB 3300	Agricultural & Food Marketing		3
or MAR 3023	Principles of Marketing (4)(S)		
ALS 3133	Agriculture & Environmental Quality		3
AOM 2520	Global Sustainable Energy		3
AOM 3220	Agricultural Construction & Maintenance		3
AOM 3333	Pesticide Application		3
AOM 3734	Irrigation Principles & Practices in Florida		3
AOM 4314C	Power & Machinery Management		3
AOM 4434	Precision Agriculture		3
AOM 4444C	Electrical Power instrumentation for AOM		3
AOM 4455	Agricultural Operations & Systems		3
AOM 4642	Environmental Systems for Ag Structures		3
AOM 4643	Principles & Issues in Environ Hydrology		3
AOM 4933	Professional Practices		1
Area of Concentration (*some require higher math/science courses)			23
TOTAL HOURS REQUIRED FOR GRADUATION			120 hrs

Core courses – All concentrations

PSY 2012	General Psychology (S)	3
ECO 2013 and ECO 2023	Macroeconomics and Microeconomics (S)	8
or AEB 2014	Economic Issues Food & You (S) (3)	
AEB 3133	Principles of Agribusiness Management	3
or MAN 3025	Principles of Management (4)(S)	
ACG 2021C	Intro Financial Acct	4
or AEB 3122	Financial Planning for Agribusiness (3)	
Business Law or Business Ethics or Human Resources course		3
AEB 4126	Ag & Natural Resources Ethics	
AEB 4085	Agricultural Risk Management and the Law	
AEB 4123	Agricultural Law	
FOS 4731	Government Regulation & Food Industry	
STA 2023	Statistics (M)	3
AEB 3300	Agricultural & Food Marketing	3
or MAR 3023	Principles of Marketing (4)(S)	
SWS 3022	Intro to Soils in the Environment (P)	3
ALS 3133	Agriculture & Environmental Quality	3
AOM 3073	Safety in Agriculture	3
AOM 3220	Agricultural Construction & Maintenance	3
AOM 3333	Pesticide Application	3
AOM 3734	Irrigation Principles & Practices in Florida	3
AOM 4314C	Power & Machinery Management	3
AOM 4434	Precision Agriculture	3
AOM 4444C	Electrical Power instrumentation for AOM	3
AOM 4455	Agricultural Operations & Systems	3
AOM 4642	Environmental Systems for Ag Structures	3
AOM 4643	Principles & Issues in Environ Hydrology	3
AOM 4933	Professional Practices	1
		64

Track 1 Courses – Systems Management Concentrations (AOM-AGTRACK)

BSC 2007, 2009L	Biological Science (B)	4
CHM 2045, 2045L	General Chemistry (P)	4
PHY 2004 or PHY 2020	Applied Physics (P)	3
MAC 1147	Precalculus Algebra and Trig	4
Physical Science Course		3
		18

Track 2 Courses – Sustainable Systems Concentrations (AOM-AGTRACK2)

BSC 2010, 2010L	Principles of Biology 1 and lab (B)	4
CHM2045, 2045L	General Chemistry (P)	4
PHY 2004, 2004L	Applied Physics 1 and lab (P)	4
PHY 2005	Applied Physics 2	3
MAC 2233	Survey of Calculus	3
		18

Track 3 Courses – Agricultural Construction Management (AOM-AGTRACK3)

BSC 2007, 2009L	Biological Science (B)	4
CHM2045, 2045L	General Chemistry (P)	4
PHY 2004, 2004L	Applied Physics 1 and lab (P)	4
PHY 2005	Applied Physics 2	3
MAC 2233	Survey of Calculus	3
		18

Courses of Concentration

Required Courses and Electives

Track 1 – Systems Management Concentrations (AOM-AGTRACK)

BSC 2007, 2009L	Biological Science (B)	4
CHM 2045, 2045L	General Chemistry (P)	4
PHY 2004 or PHY 2020	Applied Physics (P)	3
MAC 1147	Precalculus Algebra and Trig	4
Physical Science Course or Geology Course (AOM2520)		3
		18

In addition to the above courses, the following are specific to each concentration:

Production Systems Management – AG-AOMPSM		**(Minor: PKS, Precision Ag, Business)**
BSC 2008	Biological Sciences 2	3
Electives	Advisor Approved (choose from list)	20
Total Additional Credits		**23**

Landscape Management – AG-AOMLM(Minor: Golf, Hort Science)			
IPM 3022	Fundamentals of Pest Management		3
Electives			20
AOM 3432	Computers in Ag & Nat Resources	3	
AGR 3005	Principles of Crop Science	3	
ORH 3222C	Turfgrass Culture	4	
ORH 4223	Golf & Sports Turf Management	2	
ORH 4236C	Landscape & Turfgrass Mgmt	3	
HOS 3020	Principles of Hort Science	3	
FRC 3212	Intro to Citrus Culture & Prod	3	
ORH 3513C	Environmental Plant Identification	3	
Total Additional Credits			**23**

Technical Sales Management – AG-AOMTSM		**(Minor: Sales in Ag Business)**	
ADV 3008	Principles of Advertising		3
AEB 3341	Selling Strategically		3
Electives			17
AOM 3432	Computers in Ag & Nat Resources	3	
AEB 4314	Term Marketing & Comm Exc	1	
FIN 3403	Business Finance	4	
MAR 3231	Intr Retail Sys/Manag	4	
MAR 3503	Consumer Behavior	4	
MAR 4403	Sales Management	4	
AEB 3315	Futures Markets & Risk	3	
AEB 4138	Adv Agribusiness Mngnt	3	
AEB 4343	International Agribus Market	3	

Total Additional Credits			**23**

Fishery and Aquatic Production – AG-AOMFSH		**(Minor: Fisheries)**	
FAS 2024	Global & Regional Perspectives in Fisheries		3
FAS 4202C	Biology of Fishes		4
FAS 4305C	Introductory to Fishery Science		3
FAS 4405	Aquariums, Water and Aquaculture		3
Electives			10
AOM 3432	Computers in Ag & Nat Resources	3	
PLS 4343C	Ident & Ecology of Aquatic Plants	3	
PLS 4353C	Culture & Prod of Aquatic Plants	3	
PLS 4613	Aquatic Weed Control	3	
FAS*****	Special Topics		

Total Additional Credits			**23**

Forestry – AG-AOMFOR		**(Minor: Forestry)**	
FOR 3004	Forests, Conservation and People		3
FNR 3131C	Dendrology/Forest Plants		3
FNR 3410C	Natural Resources Sampling		3
FOR 3162	Silviculture		4
FOR 4621	Forest Economics & Management		4
Electives			10
AOM 3432	Computers in Ag & Nat Resources	3	
FOR 2662	Forests for the Future	2	
FOR 4754C	Forest Operations and Wood Utilization	3	
FOR 4624C	Forest Health Management	3	
LEI 4833	Ecotourism	3	
FOR 4664	Sustainable Ecotourism Development		
AOM 4905	Individual Study		
AOM 4941	Practical Work Experience		

Total Additional Credits			**23**

Nursery Management – AG-AOMNUR		**(Minor: Environmental Hort)**	
ORH 3513C	Environmental Plant Ident & Use		3
ORH 3253C	Introduction to Nursery Management		4
Electives			16
AOM 3432	Computers in Ag & Nat Resources	3	
ORH 3000	Introduction to Ecosystems Restoration	4	
ORH 3773	Public Gardens	2	
ORH 4236C	Landscape and Turf grass Management	3	
ORH 4804/4804L	Annual & Perennial Gardening & Lab	3	
PLS 3221/3221L	Plant Propagation & Lab	3	
PLS 4343C	Ident & Ecol Aquatic	4	
FRC 3212	Citrus Culture & Production	3	
HOS 3020	Horticulture Crop Production	3	

Total Additional Credits			**23**

Business Management – AG-AOMBM		**(Minor: Business)**	
GEB 3113	Principles of Entrepreneurship		4
AEB 3341	Selling Strategically		3
Electives			16
AOM 3432	Computers in Ag & Nat Resources	3	
AEB 4124	Legal Issues in Agribusiness	1	
AEB 4242	International Trade Policy	3	
AEB 4314	Term Marketing & Comm Exc	1	
AEB 4342	Agri Business/Food Marketing	3	
FIN 3403	Business Finance	4	
GEB 2011	Intro to Business	3	
GEB 4110	New Venture Creation	3	
GEB 4117	Fundamentals of New Venture Planning	4	

Total Additional Credits			**23**

Organic and Sustainable Ecology – AG-AOMORG		**(Minor: Organic, Sustainable)**	
AGR 4212	Alternative Cropping Systems		3
AGR 4268C	Sustainable Agriculture Systems Analysis		3
ALS 3153	Agricultural Ecology		3
Electives			14
AOM 3432	Computers in Ag & Nat Resources	3	
HOS 3281C	Organic & Sustainable Crop Production	3	
GEO 3427	Plants, Health & Spirituality	3	
HOS 4283C	Adv Organic & Sustainable Crop Prod	3	
PLS 3221/3221L	Plant Propagation & Lab	3	
VEC 2100	World Herbs & Vegetables	3	
SWS 4245	Water Resources Sustainability	3	

Total Additional Credits			**23**

Animal Production Management – AG-AOMAML			
ANS 3006C	Introduction to Animal Science		4
Electives			19
AOM 3432	Computers in Ag & Nat Resources	3	
ANS 3236	Introduction to Equine Science	3	
ASG 3315L	Tech Horse Reproduction	1	
ANS 3319C	Reproduct Phys/Endocrin	3	
ANS 3404C	Food Animal Nutrition/Feed	3	
ANS 3440	Principles of Animal Nutrition	4	
ANS 4243C	Beef Cow-Calf Management	3	

Total Additional Credits			**23**

Track 2 – Sustainable Systems Concentrations (AOM-AGTRACK2)

BSC 2010, 2010L	Principles of Biology 1 and lab (B)	4
CHM2045, 2045L	General Chemistry (P)	4
PHY 2004, 2004L	Applied Physics 1 and lab (P)	4
PHY 2005	Applied Physics 2	3
MAC 2233	Survey of Calculus	3
		18

In addition to the above courses, the following are specific to each concentration:

Energy Systems Management – AG-AOMESM (Minor: Envir. Science, Sustainability)

BSC 2011, 2011L	Integrated Principles of Biology II (B)		4
CHM 2046, 2046L	General Chemistry (P)		4
AOM 2520	Global Sustainable Energy		3
Electives			12
AOM 3432	Computers in Ag & Nat Resources	3	
ALS 3153	Agricultural Ecology	3	
EES 4103	Applied Ecology	2	
AGR 4268C	Sustainable Agriculture Systems Ana	3	
SWS 4244	Wetlands	3	
SWS 4231C	Soil, Water and Land Use	3	
IPM 3022	Fundamentals of Pest Management	3	
Total Additional Credits			**23**

Environmental Systems Management – AG-AOMENV (Minor: Sustainab.,Environ Study, Soils)

BSC 2011, 2011L	Integrated Principles of Biology II (B)		4
CHM 2046, 2046L	General Chemistry (P)		4
SWS 4244	Wetlands		3
Electives			12
AOM 3432	Computers in Ag & Nat Resources	3	
AOM 2520	Global Sustainable Energy	3	
IDS 2935	Facets of Sustainability	3	
AGR 4268C	Sustainable Agriculture Systems Anal	3	
ALS 3153	Agricultural Ecology	3	
EES 3000	Environ Science & Human	3	
EES 4103	Applied Ecology	2	
SWS 4233	Soil & Water Conservation	3	
SWS 4231C	Soil, Water and Land Use	3	
SWS 4245	Water Resources Sustainability	3	
Total Additional Credits			**23**

Track 3 – Agricultural Construction Management (AOM-AGTRACK3)

BSC 2007, 2009L	Biological Science (B)	4
CHM2045, 2045L	General Chemistry (P)	4
PHY 2004, 2004L	Applied Physics 1 and lab (P)	4
PHY 2005	Applied Physics 2	3
MAC 2233	Survey of Calculus	3
		18

In addition to the above courses, the following are required in this concentration:

Sustainable Agricultural Construction – AG-AOMCON

BCN 1582	International Sustainable Development (S, I)		3
AOM 2520	Global Sustainable Energy		3
AOM 4062	Introduction to Food Engineering		4
AOM 4***	Sustainable Ag Development		3
Electives			10
AOM 3432	Computers in Ag & Nat Resources	3	
BCN 1251C	Construction Drawing	3	
BCN 2405C	Construction Mechanics	3	
BCN 3735	Safety/Health/Environment	3	
AOM 4941	Internship	3-4	
PKG 3001	Principles of Packaging	3	

Total Additional Credits **23**

Agricultural Operations Management-2015

Agricultural operations management combines emerging technologies with business principles to enable students to apply cutting edge techniques to a wide variety of career paths.

About This Major

- **College:** Agricultural and Life Sciences
- **Degree:** Bachelor of Science
- **Credits for Degree:** 120
- **Minor:** Precision Agriculture
- **Combined-Degree Program:** Yes
- **Academic Learning Compact:** Agricultural Operations Management
- **Website:** www.abe.ufl.edu/academics/undergraduate/ag-op-management-major.shtml

Overview

Students gain technical experience in systems management, environmental quality, energy efficiency, agricultural machinery, GIS/GPS remote sensing, irrigation, power systems, water control and precision agriculture.

The curriculum supports students who plan to seek career opportunities in commercial business operations and management. In addition to hands-on applied skills, students also will take courses in economics, accounting, business, finance, sales and business management. Graduates become an integral part of the profitable operations of many types of businesses, such as grove management, commercial nurseries, building construction and materials, cattle operations regulatory agencies and citrus processing.

The Agricultural Operations Management (AOM) program is housed in Rogers Hall with laboratories, classrooms and a student computing lab, and also features an additional off-site construction laboratory on Museum Road.

Students can choose a focus area based on their courses of concentration. Math and science requirements will be oriented toward the student's specific interests and must be adviser-approved. Examples of focus areas can include agricultural production, aquaculture, dairy and cattle operations, agribusiness management, forestry, energy and nursery operations.

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Critical Tracking

To graduate with this major, students must complete all university, college and major requirements.

Equivalent critical-tracking courses as determined by the State of Florida Common Course Prerequisites may be used for transfer students.

Semester 1

- Complete 2 of 8 critical-tracking courses, excluding labs, with a minimum grade of C: BSC 2010/2010L, CHM 2045/2045L. MAC 1147 or MAC 2233, PHY 2004 or PHY 2020, PSY 2012, ACG 2021 or AEB 3122, SPC 2608 or AEC 3030C, ENC 2210.
- 2.0 GPA required for all critical-tracking coursework
- 2.0 UF GPA required

- ~~Complete 2 of 6 critical-tracking courses, excluding labs, with a minimum grade of C: BSC 2010/2010L, BSC 2011, CHM 2045/2045L. MAC 1147 or MAC 2233, PHY 2004 or PHY 2020, and any physical science course or PHY 2005.~~
- ~~2.0 GPA required for all critical-tracking coursework~~
- ~~2.0 UF GPA required~~

Semester 2

- Complete 1 additional critical-tracking course, excluding labs, with a minimum grade of C.
- 2.0 GPA required for all critical-tracking courses
- 2.0 UF GPA required

Semester 3

- Complete 2 additional critical-tracking course, excluding labs, with a minimum grade of C.
- 2.0 GPA required for all critical-tracking courses
- 2.0 UF GPA required

Semester 4

- Complete 1 additional critical-tracking course, excluding labs, with a minimum grade of C.
- 2.0 GPA required for all critical-tracking courses
- 2.0 UF GPA required

Semester 5

- Complete all critical-tracking courses, including labs, with a minimum grade of C.
- 2.0 GPA required for all critical-tracking courses
- 2.0 UF GPA required

Recommended Semester Plan

To remain on track, students must complete the appropriate critical-tracking courses, which appear in bold.

Semester 1	**Credits**
BSC2010/2010L or	
BOT 2010c Integrated Principles of Biology & Lab or Introductory Botany 1 (GE-B/P)~~CHM 2045 and 2045L General Chemistry 1 (3) and General Chemistry 1 Laboratory (1) (GE-P)~~	**4**
State Core – Math - MAC 1147 or	**3-4~~3~~**
MAC 2233 Precalculus: Algebra and Trig (4) or Survey of Calculus (3) (GE-M)~~HUM 2305 What is the Good Life (GE-H)~~	
State Core - Composition (GE-C, WR, D or N)~~MAC 1147 Precalculus: Algebra and Trigonometry (4) or MAC 2233 Survey of Calculus (3)~~	3~~3-4~~
IUF 1000 What is The Good Life (GE-H)~~Composition (GE-C, WR)~~	3~~3~~
Total	***13-14***

Semester 2	**Credits**
State Core – Natural Science - CHM 2045 and 2045L General Chemistry 1 (3) and General Chemistry 1 Laboratory (1) (GE-B/P)~~AEB 3122 Financial Planning for Agribusiness (3) or ACG 2021 Introduction to Financial Accounting (4)~~	**4~~3-4~~**
ACG 2021 Intro to Financial Accounting ~~(4)~~ or ~~AEB 3122 Financial Planning for Agribusiness (3)~~approved alternative ~~BSC 2010 and 2010L Integrated Principles of Biology 1 (3) and Integrated Principles of Biology 1 Laboratory (1) (GE-B)~~	**4**
Physical Science (GE-B/P)~~STA 2023 Introduction to Statistics 1~~	3~~3~~
STA 2023 Introduction to Statistics 1 (GE-M)~~Approved elective (see adviser)~~	3~~3~~
State Core - Humanities (GE-H, D or N)~~Humanities (GE-H, D)~~	3~~3~~
Total	***17***

Semester 3	**Credits**
State Core – Social Science - PSY 2012 General Psychology (GE-S)~~AEB 2014 Economic Issues, Food and You (3) or ECO 2013 Principles of Macroeconomics (4) (GE-S)~~	**3~~3-4~~**
PHY 2004 Applied Physics 1 (GE-B/P) and Lab or	**4~~3~~**

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PHY 2020 Introduction to Principles of Physics and Lab~~BSC 2011 Integrated Principles of Biology 2 (GE-B)~~	
AOM 2520 Global Sustainable Energy~~PHY 2004 Applied Physics 1 (GE-P) or PHY 2020 Introduction to Principles of Physics~~	**3**
ECO 2013 Principles of Macroecon (4) (GE-S) or AEB 2014 Economic Issues, Food and You (3) ~~PSY 2012 General Psychology (GE-S)~~	3-4~~3~~
~~Business law, ethics or human resources (see adviser)~~	~~3-4~~
Total	***~~15-~~ ~~17~~13-14***

Semester 4 **Credits**

SPC 2608 Introduction to Public Speaking or AEC 3030C Effective Oral Communication~~AEC 3030C Effective Oral Communication or SPC 2608 Introduction to Public Speaking~~	3
ENC 2210 Tech Writing (GE-C) ~~AEC 3033C Research and Business Writing in Agricultural and Life Sciences (WR) or ENC 2210 Technical Writing~~	3
ECO 2023 Principles of Microeconomics (if needed) or Approved elective~~ECO 2023 Principles of Microeconomics (needed if ECO 2013 was taken) or Approved elective~~	4
Approved elective (see advisoer)	3
~~Total~~Physical Science (adviser approved) (GE-P) or PHY 2005 Applied Physics 2	***~~13~~13***
~~Total~~	~~16~~

~~*Use summer terms to make up general education requirements or first/second-year prerequisites for the major.*~~

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Semester 5 **Credits**

AOM 3220 Ag Construction and Maintenance~~AOM 2520 Global Sustainable Energy: Past, Present and Future~~	3
AEB 3300 Agricultural and Food Marketing (3) or MAR 3023 Principles of Marketing (4)~~AOM 3220 Agricultural Construction and Maintenance~~	3-4~~3~~

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AOM 3333 Pesticide Application Techniques	3
AEB 3133 Principles of Agribusiness Management (3) or MAN 3025 Principles of Management (4)~~Approved electives (see adviser)~~	3-~~4~~6
Approved electives (see advisor)~~Total~~	3~~15~~
Total	***15-17***
Summer	
AOM3734 Irrigation Practices in Florida	3
Total	***3***

Semester 6 **Credits**

SWS 3022 Intro to Soils in the Environment~~AEB 3133 Principles of Agribusiness Management (3) or MAN 3025 Principles of Management (4)~~	3~~3-4~~
ALS 3133 Agricultural and Environmental Quality or AOM 4521 Intro to Biofuels~~ALS 3133 Agricultural and Environmental Quality~~	3
AOM 4314C Power and Machinery Management~~AOM 3734 Irrigation Principles and Practices in Florida~~	3
Approved electives (see advisor)	6
~~AOM 4314C Power and Machinery Management~~	~~3~~
Total~~SWS 3022 Introduction to Soils in the Environment~~	***15~~3~~***
~~Total~~	~~15-16~~

Semester 7 **Credits**

AOM 4642 Environ. Systems for Ag Structures~~AEB 3300 Agricultural and Food Marketing (3) or MAR 3023 Principles of Marketing (4)~~	3~~3-4~~
AOM 4643 Environmental Hydrology: Principles and Issues~~AOM 4642 Environmental Systems for Agricultural Structures~~	3
AEB 4085, AEB 4123, AEB 4126 OR BUL 4310 Business law, ethics or human resources (see adviser)~~AOM 4643 Environmental Hydrology: Principles and Issues~~	3-4~~3~~
AOM 4933 Professional Practices in Agricultural Operations Management	1

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Approved electives (see advisoer)	65
TotalTotal	***16-17~~15-16~~***

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Semester 8	**Credits**
AOM 4434 Precision Agriculture	3
AOM 4444C Electrical Power and Instrumentation for Agricultural Operations Management	3
AOM 4455 Agricultural Operations and Systems	3
AOM 4461 Sustainable Ag Systems~~Approved electives (see adviser)~~	36
Approved electives (see advisor) ~~Total~~	3~~15~~
Total	***15***

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~~*To graduate, students may need additional credits to reach the total of 120.*~~