

**Specialization: Biosecurity (pending state approval as of 8/19/09)**

In this specialization, students receive instruction in the plant biosecurity emphasizing areas of entomology, nematology, plant pathology and weed science. The curriculum focuses on the study of invasive species, including their detection, identification, exclusion, regulation and management. Emphasis is placed on understanding the impacts nonindigenous species can have on financial, legal, political and social systems.

Students find employment in agribusiness or government agencies concerned with plant biosecurity, agro-terrorism, pest management, crop production and environmental protection. The specialization is excellent preparation for graduate study in the University of Florida Plant Medicine Program (PMP), a professional doctoral program leading to a Doctor of Plant Medicine (D.P.M.) degree.

An overall minimum 2.6 GPA is required for the specialization.

Critical Tracking and Recommended Semester Plan

Semester 1:

2.0 UF GPA required for semesters 1-5

2.0 GPA required for all critical-tracking coursework for semesters 1-5

Complete 2 of 5 critical-tracking courses, excluding labs: **CHM 2045/2045L**, **CHM 2046/2046L**, **MAC 1147**, **BSC 2010/2010L**, or **BOT 2010C**, and **BSC 2011/2011L**

Semester 2:

Complete 1 additional critical-tracking course, excluding labs

Semester 3:

Complete 1 additional critical-tracking course, excluding labs

Semester 4:

Complete other critical-tracking courses, excluding labs

Semester 5:

Complete all critical-tracking courses, including labs

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

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Recommended semester plan

<b>Semester 1</b>	<b>Credits</b>
<b>CHM 2045 and 2045L General Chemistry 1 (3) and Laboratory (1) (GE-P)</b>	<b>4</b>
<b>MAC 1147 Precalculus: Algebra and Trigonometry (GE-M)</b>	<b>4</b>
PLP 2000 Plants Plagues and People (GE-H) or other Humanities (GE-H)	3
Composition (GE-C, WR)	3
Approved elective	2
<b>Total</b>	<b>16</b>
<b>Semester 2</b>	<b>Credits</b>
<b>CHM 2046 and 2046L General Chemistry 2 (3) and Laboratory (1) (GE-P)</b>	<b>4</b>
PLP 3002C Fundamentals of Plant Pathology	4
Humanities (GE-H/D)	3
STA 2023 Introduction to Statistics 1 (GE-M)	3
<b>Total</b>	<b>14</b>
<b>Semester 3</b>	<b>Credits</b>
<b>BSC 2010 and 2010L Integrated Principles of Biology 1 (3) and Laboratory (1) or BOT 2010C Introductory Botany (3) (GE-B)</b>	<b>3-4</b>
PHY 2004 and 2004L Applied Physics 1 (3) and Laboratory (1) (GE-P)	4
AEE 3033C Research and Business Writing in Agricultural and Life Sciences (GR-E)	3
AEB 4224 U.S. Food and Agricultural Policy (GE-S)	3
ALS 4905 Extension Crop Biosecurity (online course)	1-2
<b>Total</b>	<b>14-15</b>
<b>Semester 4</b>	<b>Credits</b>
<b>BSC 2011 and 2011L Integrated Principles of Biology 2 (3) and Laboratory (1) (GE-B)</b>	<b>4</b>
AEB 2014 Economic Issues, Food and You (3)	3
AEE 3030C Effective Oral Communication	3

PCB 2441 Biological Invaders 3 (GE-B)	3
WIS 2552 Biodiversity Conservation: Global Perspectives 3 (GE-BN)	3
<b>Total</b>	<b>16</b>
<b>Semester 5</b>	<b>Credits</b>
AGR 3005 Principles of Crop Science or HOS 3020 Principles of Horticulture Crop Production	3
BCH 3023 Elementary Organic and Biological Chemistry (3) or CHM 2200 and 2200L Basic Organic Chemistry (3) and Laboratory (1)	3-4
ENY 3005 and 3005L Principles of Entomology (2) and Laboratory (1)	3
AEB 3103 Principles of Food and Resource Economics (GE-S)	4
<b>Total</b>	<b>13-14</b>
<b>Semester 6</b>	<b>Credits</b>
BOT 3503 and 3503L Physiology and Molecular Biology of Plants and Laboratory (5) or HOS 4304 Horticultural Physiology (3) or HOS 3305 Introduction to Plant Molecular Biology (3)	3-5
PLP 3103C Control of Plant Diseases or AGR 4214C Applied Field Crop Production or IPM 4254 Landscape IPM: Ornamentals and Turf	3
Approved electives	6
<b>Total</b>	<b>12-14</b>
<b>Summer</b>	<b>Credits</b>
ENY 4161 Insect Classification	3
Group 1 or 2 Approved elective	3
Approved elective	2
<b>Total</b>	<b>8</b>
<b>Semester 7</b>	<b>Credits</b>
AGR 3303 Genetics	3
NEM 3002 Principles of Nematology	3
PLS 4601C Principles of Weed Science	3
Approved electives	6

	<b>Total</b>	<b>15</b>
<b>Semester 8</b>		<b>Credits</b>
SOS 3022 and 3022L Introduction to Soils in the Environment (3) and Laboratory (1)		4
ALS 4905 Principles of Plant Pest Risk Assessment and Management		3
Approved electives		6
	<b>Total</b>	<b>13</b>

### Other Required Courses

Group 1- Law and Policy (One course required from this category)

AEB 4123 Agricultural and Natural Resource Law 3  
 ALS 4085 Ag Risk Management and the Law 3  
 AEB 4242 International Trade Policy in Agriculture 3 (GE-S)  
 AEB 4274 Natural Resource and Environmental Policy 3  
 ECO 3703 International Trade 3  
 FNR 4660C Natural Resource Policy and Administration 3  
 POT 3503 Environmental Ethics and Policy 3  
 PUP 3203 Environmental Law and Policy 3

Group 2- Geographic Information Systems (One course required from this category)

SUR 3393/3393L Geographic Information Systems 3  
 URP 4273 Survey of Planning Information Systems 3  
 EES 4027 Spatial Analysis using Geographic Information Systems 3  
 FNR 3410 Natural Resource Sampling 4 (take after STA 2023)  
 FOR 3434 Forest Resources Information Systems 2  
 LAA 4381C Environmental Methods and GIS 4

### Required and Approved Electives

Other courses will require adviser approval

ALS 3133 Agricultural and Environmental Quality 3  
 AOM 3333 Pesticide Application Techniques 3  
 BOT 3151C Local Flora of North Florida (GE-B) 3  
 ENY 3222C Biology and Identification of Urban Pests 3  
 ENY 3541C Tree and Shrub Insects 3  
 ENY 3565 Tropical Horticultural Entomology 2

FOR 3004 Forests, Conservation and People (GE-B) 3  
 FRC 3212 Introduction to Citrus Culture and Production 4  
 MCB 2000/2000L Microbiology and Laboratory (GE-B) 4  
 ORH 3513 Environmental Plant Identification and Use 3  
 ORH 3513L Environmental Plant Identification and Use Lab 2  
 ORH 4242C Arboriculture 4  
 ORH 4321C Palm Production and Culture 3  
 PCB 3601C Plant Ecology 4  
 PLP 3653C Introductory Mycology 4  
 PLP 4222C Introductory Plant Virology 4  
 PLP 4242C Introduction to Plant Bacteriology 3  
 PLP 4260C Introduction to Plant Pathogenic Fungi 4  
 PLP 4290C Principles of Plant Disease Diagnosis 2  
 PLS 4343C Identification and Ecology of Aquatic Plants 3  
 PMA 3022 Fundamentals of Pest Management 3  
 PMA 3931 Seminar in Basic Plant Pest Management 1  
 PMA 4570C Field Techniques in IPM 2  
 PUR 3000 Principles of Public Relations 3  
 SOS 4116 Environmental Nutrient Management 3  
 WIS 3401/3401L Wildlife Ecology and Management 4

### The University's General Education program:

Highlighted items show how this curriculum fills all requirements.

All undergraduate students (except those transferring with an AA from either a Florida public community college or a Florida public state university) are required to complete the 36-hour General Education requirement to graduate.

The University's General Education program requires courses in the following areas:

Areas		
Composition (C)	3	3
Humanities (H)	9	6
Mathematics (M)	6	7
Physical (P) and Biological (B) Sciences	9	12
Social and Behavioral Sciences (S)	9	13
Total Credit Requirements:	36	41

International (N) & Diversity (D)

3 credits in each taken in conjunction with C, H, S, P, or B

We have one BN required course & one HD elective to satisfy this requirement

- Some majors require or recommend specific gen ed courses.
- Students who entered UF prior to Summer B 2007 and/or whose catalog year is not 2007-08: Current students who have not already completed six hours of "I" -

international/diversity credits can do so now by taking "D" and "N" courses. New students, beginning with Summer B 2007, must take three hours each of "D" and "N" courses.

- The required credits for the humanities (H), social and behavioral sciences (S), and physical (P) and biological (B) sciences categories are flexible. Many colleges permit students to vary these 27 credits as long as there are no fewer than six credits in any of the three categories. For instance, students can take nine credits in each category (9-9-9) or they can take six credits in one category, nine in the second and twelve in the third (6-9-12). Consult an academic adviser for colleges, like LAS, that limit this flexibility, or refer to the requirements for the major.
- A grade of C or better is required to earn gen ed credit. Gen ed courses cannot be taken S-U.
- Certain classes are approved to count for multiple gen ed categories; for example, the same class may count as "C" or "H". Students can count a gen ed class toward one gen ed category only, except for "D" and "N" credits, which must be earned concurrently with another category.
- Students must take at least three hours of approved mathematics courses; the other three credits can be from approved courses outside the math department, such as statistics and computer science courses.