

College of Agriculture and Life Sciences  
School of Plant and Environmental Sciences  
Bachelor of Science in Plant Science  
Major in Integrated Agriculture Technologies  
For students entering under UG catalog 2023-2024

APPROVED  
University Registrar

**Pathways to General Education (44-47 credits)**

**Concept 1 – Discourse**

**1F – Foundational**

- (3) ENGL 1105 First-Year Writing (3 credits)
- (3) ENGL 1106 First-Year Writing (3 credits)

**1A – Advanced/Applied**

- (3) – \_\_\_\_\_ Choose from Approved Courses

**Concept 2 – Critical Thinking in the Humanities**

- (3) – \_\_\_\_\_ Choose from Approved Courses
- (3) – \_\_\_\_\_ Choose from Approved Courses

**Concept 3 – Reasoning in the Social Sciences**

- (3) AAEC 1005 Econ Food Fiber Sys or ECON 2005 Principles of Economics

- (3) SPES 2244: World Crops: Food & Culture<sup>e</sup> – S

**Concept 4 – Reasoning in the Natural Sciences**

- (3) CHEM 1035: General Chemistry\*
- (3) CHEM 1036: General Chemistry\*
- (1) CHEM 1045: General Chemistry Lab\*
- (1) CHEM 1046: General Chemistry Lab\*

**Concept 5 – Quantitative and Computational Thinking**

**5f – Foundational**

- (3) MATH 1025: Elementary Calculus
- (3) CS 1014: Intro to Computational Thinking

**a – Advanced/Applied**

- (3) – \_\_\_\_\_ Choose from Approved Courses

**Concept 6 – Critique and Practice in Design and the Arts 6d –**

**Design**

- (3) – \_\_\_\_\_ Choose from Approved Courses

**6a – Arts**

- (3) – \_\_\_\_\_ Choose from Approved Courses

**Concept 7 – Critical Analysis of Identity and Equity in the United States**

**(3 credits)** (may be double-counted with another Pathways concept)

- (3) SPES 2244: World Crops: Food & Culture<sup>e</sup>

**Plant Science Degree Core Requirements (23 credits)**

- (1) ALS 1234: CALS First Year Seminar or SPES 1004: First Year Seminar
- (3) ALCE 3634: Comm Ag & Life Sci in Speaking  
*or* ALCE 3624: Comm Agriculture in Writing
- (3) BIOL 1105: Principles of Biology
- (3) BIOL 1106: Principles of Biology
- (3) ENSC 1015: Found Environmental Sci
- (3) BIOL/HORT 2304: Plant Biology\*
- PPWS 2104: Plants Genes and People
- (3) PPWS 4104: Plant Pathology

**Integrated Agriculture Technologies Major Requirements (25 credits)**

- (2) CSES 2444 Agronomic Crops  
*or* HORT-2234 Envir Factors in Hort  
*or* CSES 2564: Turfgrass Management
- (3) CSES 3114/GEOS 3614: Soils\*
- (1) CSES 3124/GEOS 3624: Soils Laboratory\*
- (3) CSES 2224 Foundations of Precision Agriculture
- (3) CSES 4224 Applied Concepts in Precision Agriculture\*
- (3) CSES 4234 Agrosience Data Integration\*
- (3) CSES 4524 Drone Applications in Ag Systems\*
- (3) CSES 4534 Internet of Things (IoT) for Smart Farming\*
- (3) GEOG 2084: Principles of GIS

**Restricted Electives (minimum 18 credits or approved Minor)**

- (3) AAEC 2434: Foundations of Agribusiness\*
- (3) AAEC 2104: Personal Financial Planning
- (3) AAEC 3004: Ag Prod & Cons Econ\*
- (3) AAEC 3314: Environmental Law
- (3) AAEC 3504: Marketing Ag Products\*
- (3) AAEC 3604: Agricultural Law
- (3) ALS 3404: Ecological Agriculture
- (3) BIOL 2804: Ecology\*
- (3) CS-1064: Intro to Programming in Python
- (3) CS-1044: Intro Prog in C

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**Restricted Electives continued. (minimum 18 credits or approved Minor)**

- (3) CS-1054: Intro to Programming in Java
- (3) CS 1114: Intro to Software Design
- (3) CSES 2244: Ag Global Food Sec and Health
- (3) CSES 2434: Crop Evaluation
- (3) CSES 3144: Soil Description & Interp\*
- (3) CSES 3614: Soil Phys & Hydro Properties\*
- (3) CSES 4214: Soil Fertility and Management\*
- (3) CSES 4144: Plant Breeding & Genetics
- (3) ENSC 3644: Plant for Env Rest\*
- (3) CSES 4134: Soil Genesis & Class\*
- (3) CSES 4344: Crop Physiology and Ecology
- (3) CSES 4544: Forage Crop Ecology
- (3) ENSC 4774: Reclamation of Disturbed Lands\*
- (3) CSES 4854: Wetland Soils and Mitigation\*
- (3) ENSC/CHEM 4734: Environmental Soil Chemistry\*
- (3) ENT/PPWS 4264: Pesticide Usage
- (3) ENT 4254: Insect Pest Management\*
- (3) HORT 2184: Plants, Places, Culture Globally
- (3) HORT 2234: Envir Factors in Hort
- (3) HORT 4334: Greenhouse & CEA Management\*
- (3) HORT 4064: Soil Microbiology\*
- (3) GEOG/GEOS: 4354 Intro Remote Sensing
- (3) PHYS-2205: General Physics\*
- (3) PHYS-2206: General Physics\*
- (3) PPWS 2754: Weeds that Shape our World
- (3) PPWS 4154: Plant Problem Diagnosis\*
- (3) PPWS 4604: Biological Invasions\*
- (3) SPES 2004: Cannabis Sci Ind & Culture
- (1-3) SPES 4964, 4974, 4994, or 3954: Field Study, Independent Study, Undergraduate Research, Study Abroad (only up to 3 credits total)

**Free Electives (to reach 120 Total Credit Hours)**

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**Approved Minors**

Agribusiness Management and Entrepreneurship  
Agricultural and Applied Economics  
Animal and Poultry Sciences  
Civic Agriculture and Food Systems  
Dairy Science  
Entomology  
Environmental Economics  
Environmental Science  
Global Food Security and Health  
Horticulture  
Food Science & Technology  
International Trade & Development  
Leadership & Social Change  
Plant Health Sciences  
Turfgrass Management  
Wetland Science

**Notes**

- Total Hours Required: 120
- € Satisfies Pathways 3 and 7
- \*Prerequisites: Some courses listed on this checksheet may have pre-/co- requisites; please consult the University Course Catalog or check with your advisor
- Satisfactory Progress: By the end of the academic year in which the student has attempted 60 credits (including transfer, advanced placement, advanced standing and credit by examination), "satisfactory progress" toward a BS PLSC degree will include the following:
  - At least 24 credits that apply to the Pathways to General Education
  - CHEM 1035 and 1036
  - ALS 1234 or SPES 1004, CSES/ENSC 3114 and CSES/ENSC 3124
  - 6 credits of Math GPA Requirements:
  - Includes classes in: CSES, HORT, and PPWS
- Graduation Requirement:
  - Overall GPA: 2.0 (each semester in order to be in good academic standing)
  - In-major GPA: 2.0 (by the time the student graduates)
- Language Study Requirement - Students who do not complete two years of a single foreign or classical language or American Sign Language in high school, may do so by taking six credits of college-level foreign or classical language or American Sign Language. The six credits used to meet this requirement may not be used to satisfy the minimum number of credits required for graduation.