



Plant Biology and Tropical Agriculture: Academic Subject Certificate

The Plant Biology and Tropical Agriculture (PBS) Academic Subject Certificate is designed to provide students with education and training in horticulture, propagation/micropropagation, agriculture, pest management, and crop improvement.

Program Student Learning Outcomes (PSLOs) approved 10/15/2014:

1. Communicate effectively both orally and in writing in Standard American English, and interpret, and/or express themselves in, some other form of communication at a basic level, whether from knowledge of a second language or through artistic or symbolic expression.
2. Make and express critical judgments about issues and ideas after accessing, analyzing, and synthesizing relevant information, using technology where appropriate; use creative and critical thinking skills to weigh the relative merits of opposing positions; and apply knowledge of formal systems of reasoning and logical fallacies in arriving at informed opinions.
3. Apply quantitative methods appropriately; analyze real-life situations using numeric, graphical, and symbolic models, and verbally explain these models; and recognize the impact of mathematics on the sciences, society, and everyday life.
4. Analyze the behavior of people from psychological, sociological, philosophical, and anthropological perspectives, and knowledgeably consider the social, political, and economic implications of human interactions in order to make informed personal and social choices.
5. Support opinions and make decisions based upon a scientific understanding of the physical and natural world, and appropriately apply the scientific method to test ideas, measure and evaluate results, develop models, solve problems, and generate new ideas.
6. Demonstrate a sympathetic awareness of the values and beliefs of their own and other cultures; explain the historical dimensions of contemporary affairs and issues; analyze the interactive roles that social, religious, artistic, political, economic, scientific, and technological forces play in society; and engage responsibly in their roles as citizens with issues affecting themselves, their families, their communities, and the world.
7. Demonstrate an aesthetic appreciation of creative and original expression and, making use of natural gifts, acquired knowledge, and the intense discipline of art, engage in creative activities which enrich their quality of life.
8. Make informed decisions based on an understanding of the qualities of a healthful lifestyle, explain the connection between a healthy body and a thoughtful mind, perform group activities cooperatively, and engage in healthful physical activity.

Fall (Semester 1)

| Course | Course Title/Category | Credits |
|----------|---|---------|
| AG 102 | Orientation to Hawai'i Agriculture Industry | 1 |
| BOT 101 | General Botany | 3 |
| BOT 101L | General Botany Lab | 1 |
| | Diversification: Physical Sciences (DP): Any DP course | 3 |
| | Diversification: Laboratory (science) (DY): Any DY course | 1 |

1. BOT 101/BOT 101L: SCI 121 and SCI 121L will fulfill the requirements for BOT 101 and BOT 101L.

Spring (Semester 2)

| Course | Course Title/Category | Credits |
|---------|---|---------|
| AG 141 | Integrated Pest Management | 3 |
| AG 200 | Principles of Horticulture | 3 |
| AG 200L | Principles of Horticulture Lab | 1 |
| AG 293V | Plant Biology and Tropical Agriculture Internship | 1-3 |

1. AG 293V: Although this course ranges from 1-3 credits, completion of this certificate requires only 2-3 credits.

Fall (Semester 3)

| Course | Course Title/Category | Credits |
|--------|----------------------------------|--------------|
| AG 264 | Plant Propagation | 3 |
| AG 271 | Introduction to Crop Improvement | 3 |
| | Total credits: | 24-25 |

Category Descriptions

Diversification: Laboratory (science) (DY): Any DY course

Credits required for category: 1

Refer to the "Diversification and Foundations Course List" under the "Programs (Certificates and Degrees)" section of the catalog for a list of courses that will fulfill this category.

Diversification: Physical Sciences (DP): Any DP course

Credits required for category: 3

Refer to the "Diversification and Foundations Course List" under the "Programs (Certificates and Degrees)" section of the catalog for a list of courses that will fulfill this category.