Program at

Kabi Neupane, Coordinator
Heather McCafferty, Instructor
UH system
Leeward CC
under Math and Science
Department
CTE Program
Hawaii’s Agriculture is Diverse

Diversified Agriculture

<table>
<thead>
<tr>
<th>Valuation (Million $)</th>
<th>Seed</th>
<th>Crops</th>
<th>Floriculture and Nursery</th>
<th>Aquaculture</th>
<th>Macadamia Nuts</th>
<th>Vegetables</th>
<th>Coffee</th>
<th>Tropical Fruit</th>
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<tbody>
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<td>$121.00</td>
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<td>$77.50</td>
<td>$75.70</td>
<td>$53.90</td>
<td>$45.40</td>
<td>$43.70</td>
<td>$7.50</td>
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Students in Agriculture Program
Small numbers but large diversity

- 39 Students in the Program
- 22 certificates or degree awarded since Fall 2015
- Very diverse
Program History

- In 2009, a strategic plan for transforming agriculture and natural resource noted that Leeward CC, which services the area of Oahu with the greatest density of agriculture and conservation lands, did not offer any degrees in these fields.

- Leeward CC is now the only UHCC on Oahu that offers multiple degrees and certificates in agriculture.

Hands-on learning

Place-based learning
Certificates in Plant Biology and Tropical Agriculture

- Students gain a certificate in Plant Biology and Tropical Agriculture while earning an AS degree.
- Offer education and skill set to enter agriculture workforce or transfer to a four year degree.

http://www.leeward.hawaii.edu/pbt
PLANT BIOLOGY and TROPICAL AGRICULTURE

Faculty

Kabi Neupane
Coordinator

Heather McCafferty
Agriculture

Daniela Dutra
Elliott
Botany, Horticulture

Alyssa MacDonald
Aquaponics

Nicola Davison, Organic
Agriculture
PLANT BIOLOGY and TROPICAL AGRICULTURE

Amy Amper
Program Counselor

Daniel Cordial
Academic Advisor

Advisors
Where are our students coming from?

- High Schools
- Military/Veterans Retraining
- USDA Plant Inspectors
- Entrepreneurs seeking knowledge or skills
- Starting own business

Students with Daniel at the Hawaii P-20 Middle School Career Fair

Discovery Fair, a community event
Certificates and Degrees

● **Plant Biology and Tropical Agriculture**
  ◦ Certificate of Competence (CO) 14 credits
  ◦ Certificate of Achievement (CA) 34 credits
  ◦ Associate in Science (AS) 64 credits

● **Aquaponics**
  ◦ Certificate of Competence (CO) 14 credits

● Provides the education and training to succeed in agriculture in Hawai‘i.
● It is also a perfect start to a four year degree in plant biology or another agricultural field.
Knowledge and Skills

● **Core Courses**
  ◦ Plant and Soil Science
  ◦ Botany and Horticulture
  ◦ Plant Propagation
  ◦ Integrated Pest Management
  ◦ Business and computer skills

● **Electives**
  ◦ Ornamental Plants
  ◦ Landscaping
  ◦ Aquaponics
  ◦ Sustainable Crop Production

Hands-on, Place-based learning
Aquaponics
Examples of student projects

A bean trial for an IPM class

Bean counters!

An introduction to plant propagation and tissue culture
Internships

2-Lady Farmers

Mari’s Gardens

Ethnobotany in Bethel, Alaska

Alluvion

Hawaii Agriculture Research Center (HARC)
Internships

Hui Kāpehe - Kahoʻolawe (Native Hawaiian Career and Technical Education Program)

KUPU
Wai`anae Mountains Watershed Partnership
Where are our graduates going?

- UH Manoa - CTAHR
- UH West Oahu
- UH Maui and UH Hilo
- Agriculture Industry
- Start/run their own business
Starting a Business

- Start/run their own business

Francesca Diaz, floral artist

Brunilda De Leon’s Nursery
What are our students saying?

This program allowed me to find my niche and catered to my learning style. They broke down the education in a way that I could digest and was applicable to nature, my profession, and life.

Whether in the books or in the field, I am definitely not afraid to get dirty! What I learned at school in the PBT program is priceless!

I apply everything I learned into my business, including how to write papers, how to elaborate ideas, and how to put action into them.
Industry Partnership

- Advisory Committee
- Curriculum ideas
- Internship host
- Guest lectures
- Field trips
- Research projects

2018 Variety Showcase: Collaboration of students and faculty on cauliflower breeding and value added products
Thank you.