



## National Tropical Botanical Garden Fall Internship Program General Overview\*

### Weeks 1-8 South Shore Gardens\*\*

#### Week 1: Introduction to NTBG

- History of the National Tropical Botanical Garden
- Introduction to administrative support departments
- Guided tours of Allerton and McBryde Gardens
- Introduction to South Shore Visitor Program

#### Week 2 and 3: Living Collections

- Native Ecosystem Field Work
- Conservation Nursery work
- Rare plant propagation techniques including seeds, cuttings, air layers and grafting
- Living Collections, database, garden mapping etc

#### Week 4 and 5: Science and Conservation

- Tour: Botanical Research Center and Rare Book Room
- Lecture: Hawaiian plant habitats and their species
- Lecture and garden walk: Plant taxonomy and identification
- Workshop: Introduction to Botanical terminology and using a dichotomous key
- Workshop: Collecting, pressing, data entry
- Hike: Botanizing along Pihea and Alakai Swamp trails
- Lecture and lab: Introduction to seed conservation
- Workshop: Seed processing
- Workshop: GIS data collection, data analysis and cartography
- Lecture and lab: Plant anatomy and physiology
- Walk: Exploring Makauwahi Cave

#### Week 6 and 7: South Shore Horticulture

- Power Equipment Use / Pesticides/ General Safety in Horticulture
- Intro to Hort. (basic botany, etc.) --morning, Planting veggies/ herbaceous perennials--afternoon
- Intro to Arboriculture, (class and hands-on pruning --2 days
- Weeds and Invasive Plants (hands on invasive species removal) --2 days
- Soils and Fertilizers (mulching and feeding our collection) --2 days

\*Note that this outline is intended as a general overview and that the actual program sessions and materials may change prior to, or during, the program.

\*\*The program on the South Shore includes an Independent project that will be completed within the first 8 weeks of the program, with dedicated time during each week to work on the project and a dedicated staff member as your advisor. These projects will be presented at program completion/graduation.



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### Week 8: Breadfruit Institute

- Introduction to BFI
- Agroforestry Demo overview
- Harvest and Data Collection
- Practices in maintaining soil biodiversity
- IPM (Integrated Pest Management)
- Selective Pruning, Trimming, and Culling in an Agroforest
- Harvesting of Plant Material for propagation
- Irrigation Management
- Planting

### **Week 9 and 10: Kahanu Garden (Hana, Maui)**

- Understanding the significance of Pi'ilanihale Heiau
- Revitalization of the Kahanu Garden "Canoe Garden"
- Learning principles of organic farming at Mahele Farm.
- Planting endemic rare and endangered species
- Maintenance of the Breadfruit collection
- Participation in Aloha Week

### **Week 11 and 12: Limahuli Garden and Preserve (Haena, Kauai)**

- Aloha `Āina - Introduction to a Hawaiian world view and sense of place
- Biocultural conservation
- Social-ecological systems and resilience
- Traditional Ecological Knowledge (TEK)
- Traditional Resource Management (TRM)
- The role of botanic gardens in conservation
- Conservation horticulture
- Landscaping with native plants
- Subsistence agriculture
- Community outreach and engagement
- Approaches to forest restoration
- Approaches to riparian restoration

### **Week 13: Program wrap up at South Shore Gardens**

- Presentations/Graduation

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