

## 2008 Annual Report of Program Data Coversheet

**College:** Math and Natural Science

**Program:** Forest TEAM Program

<b>Check All Credentials Offered</b>	<b>AA</b>	<b>AS</b>	<b>ATS</b>	<b>AAS</b>	<b>CA</b>	<b>CC</b>	<b>COM</b>	<b>ASC</b>	
		<b>X</b>			<b>X</b>				

***College Mission Statement (or provide link)***

Hawai'i Community College promotes student learning by embracing our unique Hawai'i Island culture and inspiring growth in the spirit of "E `Imi Pono." Aligned with the UH Community College system's mission, we are committed to serving all segments of our Hawai'i island community.

***Program Mission Statement (or provide link)***

The Forest TEAM program is an Associate of Science degree program which is designed to prepare individuals for careers as Ecosystem Management Technicians, which includes work in native forest conservation and restoration, with commercial forest plantations, or with Agroforestry operations. Graduates are prepared for employment with state and federal agencies, the private sector, or to set up their own businesses. Students may also opt to continue with their four-year degree.

TEAM graduates at HawCC are prepared with knowledge and skills for entry-level positions in the fields of plant propagation, forest restoration, forest surveying, agroforestry, and use of GIS in decision making and management.

TEAM students should be able to:

- I. Apply basic eco-system concepts to natural resources.**
  - A. Acquire knowledge of forest ecology in Hawai'i;
  - B. Demonstrate awareness of wildlife population dynamics;
  - C. Demonstrate knowledge of natural cycles such as water, carbon, minerals, etc.;
  - D. Understand unique Hawaiian ecosystems;
  - E. Acquire knowledge of natural disturbances such as hurricanes, volcanoes, and fires;
  - F. Acquire basic knowledge of hydrology;
  - G. Be familiar with water quality and chemistry;
  - H. Understand habitat for aquatic animals;
  - I. Be familiar with the geography of the Hawaiian Islands;
  - J. Understand edges and corridors;

- K. Conduct an environmental assessment for a specific site;
- L. Understand volcanic geology.

**II. Use an understanding of general science concepts to apply experimental designs.**

- A. Complete core courses in science and math; Science courses to include ecology and either botany or zoology;
- B. Apply simple experimental designs;
- C. Analyze simple experimental data.

**III. Use knowledge of applicable laws and regulations to make decisions about managing ecosystems.**

- A. Identify applicable regulations;
- B. Comply with regulations;
- C. Communicate with regulatory agencies and/or supervisor;
- D. Apply chemicals in a safe and appropriate manner;\
- E. Able to determine applicability of various laws and regulations to specific projects.

**IV. Apply effective interpersonal and communication skills.**

- A. Demonstrate leadership skills;
- B. Be able to write reports, correspondences, etc.;
- C. Be able to work collaboratively as part of a team;
- D. Give effective oral presentations;
- E. Demonstrate computer literacy;
- F. Write a management plan.

**V. Recognize, collect, and interpret field data.**

- A. Inventory natural resources;
- B. Demonstrate survey techniques—must include land survey, GPS aerial photo interpretation, data loggers, and assorted survey equipment;
- C. Use GIS and other modeling programs in field analyses;
- D. Interpret GIS and other modeling programs in field analyses;
- E. Produce reports on data analysis (both oral and written).
- F. Analyze and summarize data;
- G. Demonstrate knowledge of field identification methods of plants and animals;
- H. Demonstrate knowledge of an environmental management plan;
- I. Conduct property title search and tax map key search;
- J. Review aerial photo images;
- K. Interpret maps.

**VI. Apply effective management practices to commercial or conservation efforts.**

- A. Demonstrate general business skills;
- B. Demonstrated knowledge of integrated pest management;
- C. Be familiar with mensuration and inventory management;
- D. Identify forest restoration principles;
- E. Practice silviculture;
- F. Be aware of tropical agro-forestry practices and products;
- G. Understand the issue of biodiversity;
- H. Prepare and write a management plan for a specific parcel of land;
- I. Be aware of tropical agro-forestry practices.

***OVERALL PROGRAM HEALTH (Check one)***

<i>Healthy</i>	<i>Cautionary</i>	<i>Unhealthy</i>

***Part II. Analysis of the Program (strengths and weaknesses in terms of demand, efficiency, and effectiveness based on an analysis of the data)***

The strengths of the Forest TEAM program are:

- Requires internships with potential employers;
- Produces qualified graduates that are employed in the local community;
- Through articulation agreements with Oregon State University and University of Hawai'i at Hilo, the program provides graduates with opportunities to complete 4-year degrees in natural resources;
- The program is situated in an ideal environment which provides students with the opportunity for hands-on field experience;
- The program has a strong relationship with its Advisory Board, which strengthens the program and provides internship opportunities for students.
- Utilizing the latest technology, the program is distributing its courses throughout the entire island of Hawai'i.

Challenges for the program are:

- Under-prepared students that require remedial/developmental education prior to entering the program, which reduces enrollment;
- Students from other islands find it difficult to relocate to the Big Island.

***Significant Program Actions (new certificates, stop-out; gain/loss of positions, results of prior year's action plan)***

- Continue to expand recruiting through brochure mailings to all public and private high schools statewide. Continue to participate in career fairs at local high schools in the Career Pathways career fairs held in Hilo each year. Continue to visit classes of high school teachers in agriculture and natural resources. Offer two summer Explorations classes to high school students. – **Progress –Ongoing. Due to budgetary shortage we discontinued the employment of a student worker who was responsible for recruitment. However, another student employee has tried to cover much of these responsibilities such as visiting High Schools, coordinating the Junior Forest TEAM Club and teaching summer field classes to High School students.**
- Extend work with the Natural Resources Career Pathways program, targeting teachers on the Big Island schools who are participating in the program **Progress – Ongoing.**
- Send applied TEAM distance education classes to the West Hawai`i campus. **Progress – Completed. During this academic year 3 classes were delivered to West Hawaii via Polycom.**
- Work with the Advisory Board to continue to meet the needs of employers **Progress – Ongoing. This year we had an advisory board meeting in February and another is planned on December 18<sup>th</sup>. Last summer, members of the advisory board helped to support 5 Forest TEAM student internships.**
- Continue to work with federal and state agencies in service learning and internships **Progress – Ongoing. Students worked with the HawCC Service learning program, and service learning with DHHL, HVNP, DLNR and private land owners.**
- Complete articulation agreements with UHH, UHM, and OSU **OSU – completed, UHH – very close to completion, UHM – in the initial phase of articulation.**

***Part III. Action Plan***

The Forest TEAM Program plans to do the following:

- Continue to expand recruiting through brochure mailings to all public and private high schools statewide. Continue to participate in career fairs at local high schools in the Career Pathways career fairs held in Hilo each year. Continue to visit classes of high school teachers in agriculture and natural resources. Offer a summer Explorations class to high school students. Continue to promote the Junior Forest TEAM club at locations around Hawaii Island.

- Extend work with the Natural Resources Career Pathways program, targeting teachers on the Big Island schools who are participating in the program
- Send applied TEAM distance education classes to the West Hawai`i campus
- Work with the Advisory Board to continue to meet the needs of employers
- Continue to work with federal and state agencies in service learning and internships
- Build full-size greenhouse for shared use with Agriculture and Hawaiian Life Styles programs
- Continue 20% course review
- Implement the assessment of PLO 1
- Develop an assessment rubric for PLO 2
- Continue to identify assessment strategies for course SLOs
- Continue with curriculum development in response to student and program needs
- Continue to update the software on the Forest TEAM computers
- Update the Forest TEAM website
- Improve our field-based learning program with updated tools and methods to ensure that our graduates are competitive in the shrinking employment scenario
- Continue professional development for faculty
- Complete articulation agreements with UHH, UHM, and OSU

***Part IV. Resource Implications (physical, human, financial)***

- New and back-up inventory for classroom and office equipment: Elmo, computer projector, laptop, bulbs, DVD/VCR players, TV monitors, overhead projector, Polycom
- Technical support staff for course delivery
- Funding and resources for professional development
- Funding for distance learning course delivery
- Materials and supplies for greenhouse and shadehouse