

**From:** Charles Kinoshita <kinoshitac@CTAHR.HAWAII.EDU>  
**Subject:** **Agricultural Biotechnology, AG 494**  
**Date:** April 11, 2009 3:29:14 PM HST  
**To:** hasta <hasta-l@hawaii.edu>  
▶ 1 Attachment, 68.3 KB

---

Dear HaSTA members:

I'd like to draw your attention to an excellent opportunity to gain professional development credits, while having a lot of fun on the Big Island, under a travel stipend.

Agricultural Biotechnology, AG 494, is a "hands-on," intensive, 2-week educational course that will teach methods of agricultural biotechnology (transformation, PCR and cloning) within the context of commercial papaya production in Hawai'i. Place-based education draws from local culture, history, and geography to create a meaningful study of the area. Place-based educators use local particulars to teach universal concepts, engage students in scientific/ technological inquiry, community service, and involve people and resources unique to the home community. Through this course, you will be exposed to a variety of learning experiences through lectures, laboratory modules, and excursions to a commercial papaya farm, packing plant, Kamehameha Schools in Keaau, and Pacific Basin Agricultural Research Center. Course will meet DOE content standards for science and agriculture.

The course will be limited to 10 participants, and preference will be given to teachers in high and middle schools.

Charles Kinoshita

-----  
Charles M. Kinoshita  
Associate Dean for Academic & Student Affairs  
College of Tropical Agriculture and Human Resources  
University of Hawaii at Manoa  
3050 Maile Way, Gilmore 211  
Honolulu, Hawaii 96822  
Tel: (808)956-6997; Cel: (808)388-2964; FAX: (808)956-3706  
e-mail: [kinoshitac@ctahr.hawaii.edu](mailto:kinoshitac@ctahr.hawaii.edu)  
-----

**Announcement:**  
**Agricultural Biotechnology AG494**  
**June 15 – 26, 2009**

Instructors:

Dr. Mike Shintaku, UH-H CAFNRM  
Dr. Ania Wieczorek, UH-M CTAHR  
Dr. Susan C. Miyasaka, UH-M CTAHR  
Mr. Mario Patino, Science educator

**Agricultural Biotechnology AG494** is a “hands-on”, intensive, 2-week educational course that will teach methods of agricultural biotechnology (transformation, PCR and cloning) within the context of commercial papaya production in Hawai‘i. Place-based education draws from local culture, history, and geography to create a meaningful study of the area. Place-based educators use local particulars to teach universal concepts, engage students in scientific/ technological inquiry, community service, and involve people and resources unique to the home community. Through this course, you will be exposed to a variety of learning experiences through lectures, laboratory modules, and excursions to a commercial papaya farm, packing plant, Kamehameha Schools in Keaau, and Pacific Basin Agricultural Research Center. Course will meet DOE content standards for science and agriculture.

You will be required to turn in laboratory notes and present a 15-20 minute oral presentation on how you plan to incorporate molecular genetic methods into your classroom on the final day. In addition, you will participate in a discussion of the pros and cons of agricultural biotechnology. You may want to bring a laptop computer for taking notes and preparing your oral presentation.

There will be a limit of 10 participants; preference will be given to those who are actively teaching middle or high school classes. To be accepted into the class, teachers must submit an application either with a signed DOE approval form or a letter of approval signed by their principal. Those teachers from off-island or from West Hawaii may apply for a travel stipend that includes air fare and shared rental car (where applicable), lodging, and meals and incidentals. If the applicant doesn't complete the course successfully, then he or she must reimburse the University of Hawaii for his or her stipend. Teachers who need a lodging in Hilo are expected to share a dormitory or hotel room; they could request a particular roommate. Participants are expected to sign a liability release form.

For a course syllabus, application form, and liability release form, please contact Dr. Mike Shintaku ([shintaku@hawaii.edu](mailto:shintaku@hawaii.edu), 808-933-0855), Dr. Ania Wieczorek ([ani@hawaii.edu](mailto:ani@hawaii.edu), 808-956-7058), or Dr. Susan Miyasaka ([miyasaka@hawaii.edu](mailto:miyasaka@hawaii.edu), 808-981-5199).

***Objectives of the course***

- a. To model instructional methods of agricultural biotechnology for later use in the classroom. Course will meet DOE content standards for science and agriculture.
- b. To present the pros and cons of agricultural biotechnology for a sustainable future and a context for learning. At the end of the course, teachers should be able to present science-based information on the benefits and risks of agricultural biotechnology to their students.