

Integration of Interdisciplinary Techniques: Agricultural Biotechnology



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University of Puerto Rico in Ponce



Award Number: 2009-38422-19873

\$249,848.00

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Institutions Involved



University of Puerto Rico in Ponce (UPRP): Baccalaureate Degree in Biology with a Sub-concentration in Biotechnology (BB)



University of Puerto Rico in Utuado (UPRU): Associate Degree in Agricultural Production Technology (APT)

NIFA/USDA Priority Areas

- ◆ Students' experiential learning
- ◆ Scientific instrumentation for teaching
- ◆ Students' recruitment and retention

USDA Collaborator



Objectives

- ◆ Specific performance-based objectives are:
 1. To create an interdisciplinary course: Agricultural Biotechnology (PREH 4990-C01, 3 credits, 45 hours) during the first project year, integrating biotechnology skills in agriculture.
 2. To design the six summer workshops (six hours each) which will be offered during two consecutive summer periods integrating agricultural skills in biotechnology.
 3. To recruit 28 students: twelve from BB and sixteen from APT that will participate in the Agricultural Biotechnology course offered during the second semester and in the summer workshops.
 4. To develop educational materials related to the topics that will be discussed in the course and workshops.
 5. To provide tutoring support in biotechnology.

Activities

- ◆ Developing ITAB *brochures* that will include the enrollment criteria to be distributed to the Agricultural Production Technology Department at the UPRU and Biology Department at the UPRP.
- ◆ Creating *PREH 4990-C01 course* that will be offered during the second semester of each consecutive project's year.
- ◆ Designing *workshops* that will be offered during the summer of each consecutive project's year.
- ◆ Developing of *educational materials* and designing *hands-on* and *research experiences* related to the course and to the summer workshops content.
- ◆ Providing *tutoring* support to participants.
- ◆ By *collaborating* with US Forest Service, will facilitate the coordination of activities with the International Institute of Tropical Forestry Research Division, rural forestry and agro forestry professionals from United States and Latin America, the Puerto Rico Department of Natural and Environmental Resources, and UPR Extension Service to provide guidance and advice in the development of the curriculum to improve technical capabilities of participants.
- ◆ The educational and research activities, as well as evaluation and documents related to the course and summer workshops, will be promoted in the newly designed *ITAB website*.

Evaluation

- ◆ Evaluation of the performance-based: Objectives 1, 3 and 4, will be evaluated based on Agricultural Biotechnology syllabus objectives and workshops assessments and follow up achievement.
- Objective 2 evaluation will be based on the analysis of students recruitment and retention index in the second semester and summer; efficacy of advertisement methods by means of number of students reached, applying and students and faculty impacted by the project.
- Objective 5, the impact of the tutoring support will be measured by the performance and outcomes of participants during the project's activities.
- ◆ An annual evaluation report will be presented to the Project Director and Chancellor by Dr. Rosario Ríos, External Project Evaluator.

Beneficiaries

For PREH 4990-C01 and Summer Workshops once a year during two years:

- ◆ Fourteen student: six from BB at the UPRP and eight from APT at the UPRU.
- ◆ Two professors: one professor for each course's semester from the UPRU and one professor for each summer workshops from UPRP

Expected Impact

- ◆ Participating students who graduate from the associate degree of APT, will keep studying toward their baccalaureate degree attainment in a food or agricultural related field.
- ◆ Participating students from both partners' institutions will participate in research and will finish a baccalaureate degree in a food or agricultural related field.

Website

Integration of Interdisciplinary Techniques:
Agricultural Biotechnology



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Research Area

Science Research Laboratory

