Science 2010-11

Developing Field Ecology - Regional Immersion

Summary:

This initiative requests curriculum development funds to develop a template for field-based ecology courses (BI 103x) that incorporate field excursions to unique ecological areas around the world. The field intensive courses will add an international component and feature experiential learning. The template will be used to develop field courses in two new sites and to substantially revise an existing field biology course (BI 103B, General Biology - Field Biology-Costa Rica).

Description

Lane Community College has few study abroad opportunities. The Biology discipline is proposing to offer an innovative new series of field-based emphasis courses (BI 103X) taught in ecologically significant sites, both nationally and internationally. The course will be a template that faculty can use to quickly and efficiently develop courses to be taught at distant locations. Joe Russin's Field Biology in Costa Rica has demonstrated that such a class offers important pedagogical advantages. These include exposure to unfamiliar natural environments, new cultures and perspectives, and new approaches to sustainable living. Students spend time in class initially learning theoretical concepts, then move to a distant field site where they apply and experience the theory in real-life situations. Once the template has been established, it will be used to develop two new field courses: one in Alaska and one along the Baja California coast. In addition, the Costa Rica class will be revised to be a Field Ecology course following the template. The curriculum template will focus on cultural diversity, sustainability, evolution, ecology, and the classification, characteristics, and adaptations of different organisms in. Given the current trend in international education, this course will open opportunities for increasing global awareness and international connectedness.

The courses will be offered during term breaks or during summer to accommodate the intensive travel aspects of the immersion courses. Students will be able to complete a transfer biology course in a short time period. This innovative scheduling will increase options for students.

Questions and Answers

How is the initiative linked to the Unit Plans most recently submitted?

1. **How does it continue the achievement of those goals?**
2. **If this is a continuation of an initiative started last year, make sure that relationship is clear.**

How is this initiative linked to the efficiencies and productivities plans you had last year?

1. **How does it continue the achievement of these plans?**
2. **If this is a continuation of an efficiency or productivity plan started last year, make sure that relationship is clear.**

We will be working toward the themes and goals of our most recent unit plan:
Themes:
1) optimizing sustainable access for students and options for quality learning
2) optimizing the curricula and resources we already have
Goals:
3) increase sustainability-related curricula in support of sustainability in learning goals.
4) increasing online learning options for students
7) developing additional curricular enhancements to improve student success and provide more options for completing AAOT and other program requirements

In addition, the proposed courses support the Division's commitment to diversity and increasing cultural competence among our students. Lane is unique in offering biology emphasis courses. Expanding the emphasis courses internationally will give Lane students an opportunity to do a study abroad program that may attract additional students.

Describe the resources needed:

Developing the curriculum template will require 100 hours of curriculum development funding to be utilized by Joe Russin, Carrie Newell and Bert Pooth. This will result in two new courses plus will provide the basis for revisions to the existing BI 103B, Field Biology - Costa Rica. We are requesting an additional 70 hours for course revision.

What specific measurable program outcomes do you expect to achieve with this initiative? The outcomes should be specific enough to be measurable. Also, outline the method that will be used to determine the results.

Specific outcomes are:

- Increased options for student success.
- Increased FTE in Biology. (IRAP data)
- Depending upon the number of sections offered, up to 72 students a year would engage in Field Biology - Regional Immersions. (IRAP and EMPT data)
- The hands-on approach will result in high levels of student success both in grades and retention. (completion and success data, IRAP)
- Student learning outcomes will include diversity and sustainability outcomes. (course assessments)

Department Priority:

11

Unit Resources:

Priority ranking for this initiative was determined by SAC members drawing numbers randomly. All the initiatives are valuable to the proposing disciplines and all have the support of the Division.

Courses will be planned and taught by Biology Discipline faculty. The courses are supported by Science administrative staff and Life Science lab support staff. Other division faculty will engage in stakeholder review of the new courses.

Funding Request: Carl Perkins

Funding Request: Curriculum Development

1. List the following information

- **Course Numbers (titles if not currently offered)**
- **Instructor Name(s) who will work on the curriculum development**
- **Whether each of the courses is in, or has been through, the curriculum approval process**

BI 103x, General Biology: Field Ecology - Regional Immersion
Carrie Newell, Bert Pooth, Joe Russin
These courses will be new, and have not been through curriculum approval yet.

BI 103B, General Biology: Field Biology - Costa Rica Revised as Field Ecology
Joe Russin
This course will be transformed into a Field Ecology course following the template and put through curriculum approval as a new course.

2. List each course number (or title) and the materials to be created for each class

- **Instructional goals, objectives, syllabi and outlines**
- **Lab instruction packets**
- **Practice, quiz, presentation &/or demonstration materials**
- **Other (specify)**

BI 103x, General Biology: Field Ecology - Regional Immersion
BI 103B, General Biology: Field Biology - Costa Rica Revised as Field Ecology

The main focus will be in developing an innovative template for three new regional immersion courses plus any future courses. The new courses will include: Field Ecology: Southeast Alaska, Field Ecology: Baja California, and Field Ecology: Costa Rica.

Materials will include instructional goals, objectives, syllabi and outlines; course packets; cultural background materials; and learning assessments. Materials will incorporate diversity objectives and sustainability objectives in addition to the BI 103 grid learning outcomes.

If curriculum development hours are sufficient, we will begin working on the site logistics for the locations. In addition to the typical course material preparation (materials listed above), distant location courses require a great deal of logistical planning. These include transportation, food and lodging, reserving learning spaces and tours, and documentation needed for international travel, to name a few. In addition, it will be necessary to plan to meet with experts in the area to be visited.

3. List each course number (or title) and give your timeline for beginning and completing each course curriculum development.

BI 103x, General Biology: Field Ecology - Regional Immersion
BI 103B, General Biology: Field Biology - Costa Rica Revised as Field Ecology

Development will begin in summer of 2009. We anticipate completion by the end of winter break 2010.

4. What are up to 3 departmental instructional goals that are met through the development of curriculum in each class?

BI 103x, General Biology: Field Ecology - Regional Immersion
BI 103B, General Biology: Field Biology - Costa Rica Revised as Field Ecology

- Provide an additional sustainability related course
- Increase curricula for teaching ecological principles.
- Provide on-site opportunities to learn sustainability practices.
- Immerse students into the ecology and cultures of other countries and regions.
- Optimize sustainable access for students and options for quality learning; and
- Optimize the curricula and resources we already have (continuing from FY10).

5. List each course number (or title) and give the value of the development of curriculum in each course to other faculty members.

BI 103x, General Biology: Field Ecology - Regional Immersion
BI 103B, General Biology: Field Biology - Costa Rica Revised as Field Ecology

The aim of the proposal is to develop a template that would be available to all faculty that wanted to develop a field course.

6. List each course number (or title) and say how many students will be served by the development of curriculum in each class.

BI 103x, General Biology: Field Ecology - Regional Immersion
BI 103B, General Biology: Field Biology - Costa Rica Revised as Field Ecology

We anticipate enrollment in each of the courses to be 16-24 students each. If the demand is high enough, our template will easily allow us to open additional sections in exciting new destinations. We may also be able to recruit students from other institutions.

7. List each course number (or title) and give the specific benefits to students that you expect from the development of curriculum in each class.

BI 103x, General Biology: Field Ecology - Regional Immersion
BI 103B, General Biology: Field Biology - Costa Rica Revised as Field Ecology

Students will experience new cultures first hand and understand how these cultures practice sustainability. Students also will benefit from the intimacy of this nature experience by encountering such fascinating organisms as toucans in the rainforests, friendly gray whales in their breeding lagoon, and grizzly bears facing global warming. Besides being an unforgettable experience, these hands-on courses will strongly reinforce the material being presented in the best way possible, the natural environment.

8. List each course number (or title) and give the specific benefits for diversity that you expect from the development of curriculum in each class.

BI 103x, General Biology: Field Ecology - Regional Immersion
BI 103B, General Biology: Field Biology - Costa Rica Revised as Field Ecology

These courses will expose students to new cultures, both dominant ones and minorities. In Baja California, students will live and work with Mexican fishing and whale-watching guides and will learn approaches to diverse life-styles. Similarly, in Alaska, one student activity will be participation in cultural awareness workshops at the Native Alaskan Center. In Costa Rica, students will work with and observe local nature guides. These guides will demonstrate their role and responsibilities in helping their communities preserve the fragile environments around them and the interrelationships between those environments and their own culture.

9. List each course number (or title) and give the specific benefits to sustainability that you expect from the development of curriculum in each class.

BI 103x, General Biology: Field Ecology - Regional Immersion
BI 103B, General Biology: Field Biology - Costa Rica Revised as Field Ecology

In addition to items listed above, the challenges faced in different parts of the world allow students to get a broader understanding of sustainability issues. In Alaska, for example, the effects of global warming are severe and present an immediate danger that the Alaskans are struggling to deal with at environmental, social and economic levels. In Baja California, students will be in living in the Vizcaino Biosphere Reserve where everyday activities actively focus on sustainable living from preparing meals to disposing of trash. In Costa Rica, students will visit a

locally owned shade-grown coffee plantation, where they will learn about the sustainable ecological and economic benefits of this method of farming.

10. List each course number (or title) and give the specific effects on distributed learning that you expect from the development of curriculum in each class.

BI 103x, General Biology: Field Ecology - Regional Immersion
BI 103B, General Biology: Field Biology - Costa Rica Revised as Field Ecology

Various materials (photos, videos, samples) will be made available to those teaching distance learning courses.

Hours requested for Curriculum Development funding:

Please enter the amount of one of the following:

- **100 hours maximum for new development.**
- **70 hours maximum for course revision**
- **50 hours for 3-4 credit conversion**
- **other (use if multiple courses addressed in one initiative**

Do not enter any characters other than numbers and a decimal.

How many hours are you requesting? If there are multiple courses addressed in the initiative, please list each course number (or title) and give the number of hours requested for each course.

170

Can this initiative be partially funded?

Yes

Partially funded curriculum development HOURS requested:

130

Explanation of effect of partial funding:

Three faculty will collaborate on developing two entirely new courses and substantially revising a third. The reduction in hours will influence how quickly all three courses can be completed.

Funding Request: Technology Fee