

Science 2011-12

BI101J Gen Bio: Unseen Life on Earth course revision and standardization

Summary:

This initiative is requesting curriculum development funding for course revision to update and standardize online BI 101J, Gen Bio, Unseen Life on Earth.

Description

BI 101J, Gen Bio, Unseen Life on Earth was recently converted (2008-2009) from a telecourse to an online Moodle course in order to meet demand for online learning and educational resources. However, course materials are based on the original telecourse videos tapes (circa 2000). These video tape segments are considerably outdated and the course is in need of significant revision. Initiative funding will support development of new updated materials, animations, labs and an extensive test bank. Funding will also allow for the standardization of course content. As the video tapes have become more antiquated, individual instructors have developed their own supplemental material which has led to an increased lack of standardization. In order to meet the Quality Matters standards along with maintaining the integrity of the course it is essential to update and standardized materials, labs, goals and objectives. Since converting formats from a telecourse to an online course the number of sections has increased from 2 per year to 6 per year. The increased number of sections has resulted in more faculty teaching the course and a broader disparity in the content.

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.**

This initiative continues the achievement of the two themes in the FY2011-12 Science Division Unit Plan which have been consistent over the past three years. This initiative also supports Lane's strategic direction for online learning and educational resources.

A) Optimizing sustainable access for students and options for quality learning

B) Optimizing the curricula and resources we already have.

Specific goals and activities are:

- 1) Manage enrollment effectively.

Updating and standardizing the BI 101J, Gen Bio, Unseen Life on Earth course will allow us to maintain quality learning and possibly add additional sections of this high demand course. This in turn will optimize enrollment within sustainable levels of faculty and support staff. The online course helps meet the needs of many non-traditional students and at the same time does not take up physical classroom space.

2) Increase retention among science majors, especially biology/pre-med/pre-pharm students

While not a prerequisite, BI101J Gen Bio: Unseen Life on Earth can be considered a precursor to our BI 234 Introductory Microbiology. The concepts introduced in the BI101J are expanded upon in the BI 234 course. BI 234 is a prerequisite for most health care professions.

6) Increasing online learning options for students

BI101J Gen Bio: Unseen Life on Earth has proven to be a very popular course and is one of the first to fill to capacity. We offered 3 sections in 09-10 and currently are offering 6 sections in 10-11. We could realistically offer even more. However, we are hesitant to do so until the course material is standardized.

7. Enhance curricula to support Health Professions, including online options

Our unit plan proposed pursuing development of a first year "science for health professions" experience. BI101J Gen Bio: Unseen Life on Earth fits perfectly as an online course that introduces microbiological concepts. Online classes also serve to prepare students for matriculation into the health Professions Programs, as more of the core didactic information is taught online.

8) Developing additional curricular enhancements

As part of this goal the Science Division unit plan states the need "to develop plans for ensuring that at least two faculty members can teach every course Science offers." Currently there are three faculty that can teach the course, but there is not consistency in content. In developing objectives and outcomes both full-time and part-time anatomy and physiology discipline faculty will work to identify content areas needing support, write learning outcomes, and develop course materials. Some of this work has already begun.

Describe the resources needed:

70 hours curriculum development

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 measurable outcomes are:

1. Increased online opportunities for non-traditional students.
2. Increased quality of online courses offered by the Science Division.
3. Increase FTE in BI101J Gen Bio: Unseen Life on Earth.
4. Learning outcomes consistent with Lane's core abilities and values and aligned with the Biology 100-level grid of learning outcomes.

Criteria for evaluation of outcomes

1. BI101J Gen Bio: Unseen Life on Earth sections fill to capacity (enrollment in these courses is currently at capacity)
2. BI101J Gen Bio: Unseen Life on Earth has met Review of Quality Matters standards
3. FTE has increased in BI101J Gen Bio: Unseen Life on Earth
4. Learning outcomes are consistent with Lane's core abilities and values and Biology 100-level grid.

Department Priority:

Unit Resources:

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

Anatomy and Physiology discipline faculty will engage in stakeholder meetings to review outcome criteria, goals, objectives and course revisions.

Funding Request: Carl Perkins

Is this a Career & Technical Education program approved by the state and offered through Lane for credit?

No

If not a Career & Technical Education program, does your request provide considerable support for students enrolled in these programs?

Yes

Do you have an advisory committee that meets 2-3 times per year?

No

If request is for personnel, will funds be used to replace an existing position?

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**

BI101J Gen Bio: Unseen Life on Earth

Katie Morrison-Graham, George Stearns

Previously approved as a telecourse; currently a fully online 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)**

BI101J, Gen Bio: Unseen Life on Earth

Review of Quality Matters standards at the beginning of the curriculum development process and again at the end for quality checking

Instructional goals, objectives, syllabi and outlines will be updated and standardized

Lab instruction packets: 10 labs supported by online activities and using lab kits students can purchase or borrow are currently in use. These will be updated and revised as needed.

Development of a large online testing bank, online presentations, discussions, and group interactions

Other (specify): Assessment methods appropriate for Quality Matters standards for DL classes

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

BI101J Gen Bio: Unseen Life on Earth

If funded the revisions will begin during summer 2011 and be completed by the end of Fall 2011

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

- Goal #2: Increase retention among science majors, especially biology/pre-med/pre-pharm students
- Goal #6: Increase online learning options for students.
- Goal #7: Enhance curricula to support Health Professions, including online options
- PLUS
 - Critical thinking (core ability)
 - Apply scientific understanding to life (science learning outcome)

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

BI101J Gen Bio: Unseen Life on Earth

Course development will be guided by the Quality Matters standards adopted by Distance Learning. The developers use of the standards will help other faculty to review and revise online portions of their classes to increase student engagement and success.

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

BI101J Gen Bio: Unseen Life on Earth

130 – 156 per year (five-six sections @ 26 students each)

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.

BI101J Gen Bio: Unseen Life on Earth

Students benefit from the online emphasis course by completing a science requirement through distance learning. The online course helps meet the needs of many non-traditional students.

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.

BI101J Gen Bio: Unseen Life on Earth

The online format reaches a wider population, including stay-at-home parents and working people who may be unable to attend during the day or regular class week. In terms of curriculum, the course addresses the microbiology of infectious diseases using examples from around the globe, focusing on the inequities of disease rates in developing nations.

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.

BI101J Gen Bio: Unseen Life on Earth

The new materials will be developed on the use of microbes in bioremediation. Students will gain scientific concepts and explore attitudes that contribute to sustaining a biodiverse world.

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.

BI101J Gen Bio: Unseen Life on Earth

This online course increases the Science Division's ability to offer students a full sequence of Survey of Biology in an online format.

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.

70

Can this initiative be partially funded?

Yes

Partially funded curriculum development HOURS requested:

50

Explanation of effect of partial funding:

The standardization and updating of all course materials, animations, labs and online test banks would not be completed fully.

Funding Request: Technology Fee