1. Prepared by: ________________________________________________
2. Date submitted: ____________________________________________
3. Date approved: _______ Date revised: 10/14/2014
4. Department/discipline: Biology
5. Department(s) endorsement(s): ________________________________
   (Signatures of the person(s) providing the endorsement are required.)
6. Course Title: Principles of Ecology
   Abbreviated course title (25 characters or less):
7. Course Designator: BIOL
8. Course Level: 2050
9. Number of Credits: Lecture: 3__ Lab: 1
10. Control Number (on site): 45/24
    Control Number (online): 0
11. Catalog/Course description:
    Students are introduced to ecological principles demonstrating the relationship
    between organisms and their environment with special emphasis on ecosystems,
    energetics, population dynamics, and Native American philosophy of the natural
    environment. Labs include surveying environmental factors of local ecosystems
    and preparing one research paper. Lecture and Lab.
12. Course prerequisite(s) or co-requisite(s):
    Prerequisite(s): BIOL 1101 General Biology I or consent of instructor
    Co-requisite: N/A
13. Course Materials (Recommended course materials and resources. List all that
    apply, e.g. textbooks, workbooks, study guides, lab manuals, videos, guest
    lecturers).
    Course materials will be selected by faculty members to reflect the most up-to-
    date materials available.
14. **Course Content** (Provide an outline of major topics covered in course)

Lecture topics:
1. Natural History
2. Individual Ecology
3. Population Ecology
4. Interactions
5. Communities and Ecosystems
6. Large-scale Ecology

Lab topics to closely follow lecture material

15. **Learning Goals, Outcomes, and Assessment**

At FDLTCC we have 4 Competencies Across the Curriculum (CAC) areas. They are as follows:

A. Information Literacy (the ability to use print and/or non-print tools effectively for the discovery, acquisition, and evaluation of information)

B. Ability to Communicate (the ability to listen, read, comprehend, and/or deliver information in a variety of formats.)

C. Problem Solving (the ability to conceptualize, apply, analyze, synthesize, and/or evaluate information to formulate and solve problems.)

D. Culture (knowledge of Anishinaabe traditions and culture, knowledge of one’s own traditions and culture, knowledge of others’ traditions and cultures, culture of work, culture of academic disciplines and/or respect for global diversity.)

*Course learning outcomes will fulfill the identified competencies:*

**Course Learning Outcomes:**

Upon completion of this course, students will be able to:

1. Describe the geography, climate, physical/chemical conditions, and biology of the major terrestrial and aquatic biomes. (A, B)
2. Discuss the human influences on the earth’s biomes. (B)
3. Describe the major concepts in population ecology. (B, C)
4. Compare and contrast species interactions including competition, predation, herbivory, parasitism, and mutualism. (B, C)
5. Describe the major concepts in community ecology. (B, C)
6. Describe the major concepts in ecosystems ecology. (B, C)
7. Design experiments, collect and analyze data, and discuss the research in light of the primary literature. (A, B, C)

16. **Minnesota Transfer Curriculum (MnTC):** If this course fulfills an MnTC goal area, state the goal area and list the goals and outcomes below:

See [www.mntransfer.org](http://www.mntransfer.org)

Goal Area(s): 3

Goal and Outcomes:
   - Goal: Natural Sciences
   - Outcome:
Complete the following only if you are proposing a new course:

1. Planned pattern of offering:
2. Rationale for course: If this course is an ADDITION or replacement to current offerings, add a detailed explanation of the necessity for the change.
3. Does this course overlap with any course(s) offered at FDLTCC? If so, justify such duplication or indicate other adjustments to be made. Obtain signatures from affected departments.
4. What is the apparent or expressed student need for this course?
5. If this course includes a Native American or specifically Anishinaabe component list campus resource person/s—i.e., campus cultural/spiritual resource person/s and, if necessary, elder/s—consulted and include specific comments and written responses as appropriate.
6. Are there any additional licensing/certification requirements involved?
   a. Provide a copy of the required licensing/certification standards to the AASC chair and to the vice president of academic affairs.
   b. Attach the required documentation to show course meets required licensing/certification standards.
7. What types of tutoring will be made available through the CAA to students taking this course?
8. How will the course be evaluated?
9. Special resources—e.g. faculty, space, equipment, library, etc
10. Special course fees:
11. Relationship of course to the college mission statement and goals.
12. Relationship of course to the department’s mission statement and goals.
13. Relationship of course to colleges/university offerings (include tribal colleges).

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