1. Prepared by: __________________________________________________
2. Date submitted: _______________________________________________
3. Date approved: 2/4/2015 Date revised:
4. Department/discipline: Biology
5. Department(s) endorsement(s):____________________________________
   (Signatures of the person(s) providing the endorsement are required.)
6. Course Title: Ecology of Minnesota
   Abbreviated course title (25 characters or less):
7. Course Designator: BIOL
8. Course Level: 1065
9. Number of Credits: Lecture: 3 Lab: 1
10. Control Number (on site): 48 Control Number (online): 24
11. Catalog/Course description:

   Students will explore the interrelationships of the plants and animals common to
   the region with an emphasis on developing an appreciation of the natural cycles
   and organism adaptations to seasonal changes. (Meets MnTC goal areas 3 & 10)
12. Course prerequisite(s) or co-requisite(s):
   Prerequisite(s): None
   Co-requisite: None
13. Course Materials (Recommended course materials and resources. List all that
    apply, e.g. textbooks, workbooks, study guides, lab manuals, videos, guest
    lecturers).

   Potential textbooks include: John R. Tester. Minnesota’s Natural Heritage.
Other course materials will be provided as needed.

14. **Course Content** (Provide an outline of major topics covered in course)

1. The Landscape
2. Climate and weather of Minnesota
3. Principles of Ecology
4. Deciduous Forest
5. Northern Coniferous Forest
6. Tallgrass Prairie
7. Wetlands
8. Lakes
9. Streams and Rivers
10. The Future

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. Identify the relationships that exist in Minnesota between glacial history, soil development, and vegetation type. (A, B)
2. Describe the basic relationships between energy flow, food webs, nutrient cycling, productivity, and population dynamics in Minnesota biomes. (A, B, C)
3. Identify current conditions and issues of concern in Minnesota’s terrestrial and aquatic biomes. (A, B, C)
4. Describe past and present management practices as they relate to Minnesota’s biological resources. (B)
5. Identify selected flora from various communities in Minnesota. (B, C)
6. Identify selected fauna from various communities in Minnesota. (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 & 10**

   **Goal and Outcomes:**
   - **Goal: Goal Area 3: Natural Sciences & Goal Area 10: People and the Environment**
   - **Outcome:** Goal Area 3: Natural Sciences
   - **Outcomes:**
     1. Demonstrate understanding of scientific theories.
     2. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
     3. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

   - **Goal Area 10: People and the Environment**
   - **Outcomes:**
     1. Explain the basic structure and function of various natural ecosystems and of Human adaptive strategies within these systems.
     2. Discern patterns and interrelationships of bio-physical and socio-cultural systems.
     3. Evaluate critically environmental and natural resource issues in light of understandings about interrelationships, ecosystems, and institutions.
     4. Propose and assess alternative solutions to environmental problems.
     5. Articulate and defend the actions they would take on various environmental issues.
Complete the following only if you are proposing a new course:

1. Planned pattern of offering: Fall, Spring, Summer
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. This course would be an additional course for students interested in environmental science and/or a science course to satisfy Goal 3 or Goal 10 of the Minnesota Transfer Curriculum. This course is more specifically tied to the geographic region in which we find ourselves and will be more relevant to students that a zoology or botany course. This course would also be more relevant to students wishing to continue in environmental science or biology than the native plant ID course currently on the books.
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. No
4. What is the apparent or expressed student need for this course? Students frequently express an interest in continuing with environmental science courses after they complete our BIOL 1060 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? No
   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? student evaluation, administrative evaluation
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. This course promotes scholarship and academic achievement in the biological and environmental sciences.
12. Relationship of course to the department’s mission statement and goals. This course fully supports the mission of the Biology Department at FDLTCC.
13. Relationship of course to colleges/university offerings (include tribal colleges).
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<tr>
<th>College or University</th>
<th>Course Number &amp; Title</th>
<th>Credits Awarded</th>
<th>General Education</th>
<th>Program</th>
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<td>Itasca CC</td>
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<td>Mesabi CC</td>
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<td>Lake Superior</td>
<td>BIOL 1110 The Ecology of Minnesota</td>
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<td>MEsOther</td>
<td>NSCI 201 Minnesota Ecology and Conservation Biology</td>
<td>4 credits</td>
<td>Yes. (MTC Goal 10 and Goal 3)</td>
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