Faculty members are required to have the outline submitted to the Academic Affairs Office. The course outline is the form used for approval of new courses by the Academic Affairs and Standards Council.

DEPT. BIOL _____ COURSE NUMBER: 1111

NUMBER OF CREDITS: ___4_____ Lecture: ___3___ Lab: ___1___

Course Title:
Principles of Biology II

Catalog Description:
Principles of Biology II examines biological diversity and the basic mechanisms and concepts in organismal biology including a survey of life forms (viruses, bacteria, protists, fungi, plants and animals.) Additional topics will include taxonomy, classification, structure and function of the major groups of plants and animals. Prerequisite: BIOL 1110.

FULFILLS MN TRANSFER CURRICULUM AREA(S) (Leave blank if not applicable)
Goal 1: Communication: ____ by meeting the following competencies:

Goal 2: Critical Thinking: ____ by meeting the following competencies:

Goal 3: Natural Sciences: __X__ by meeting the following competencies:
- Demonstrate understanding of scientific theories.
- Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students' laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
- Communicate their experimental findings, analyses, and interpretations both orally and in writing.
- 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 4: Mathematics/Logical Reasoning: ____ by meeting the following competencies:

Goal 5: History and the Social and Behavioral Sciences: ____ by meeting the following competencies:

Goal 6: The Humanities and Fine Arts: ____ by meeting the following competencies:

Goal 7: Human Diversity: ____ by meeting the following competencies:
Goal 8: Global Perspective: ____ by meeting the following competencies:

Goal 9: Ethical and Civic Responsibility: ____ by meeting the following competencies:

Goal 10: People and the Environment: ____ by meeting the following competencies:

### Prerequisites or Necessary Entry Skills/Knowledge:

| BIOL 1110 Principles of Biology I |

### Topics to be Covered (General)

- Evolutionary relationships
- Viruses
- Bacteria
- Protists
- Fungi
- Photosynthesis
- Plant diversity, growth and development, nutrition and transport, and reproduction
- Animal diversity, growth and development, nutrition, reproduction, and behavior
- Ecology

### Student Learning Outcomes

1. Compare and contrast the different domains and kingdoms of life by utilizing phylogenetic trees
2. Outline the relationships between structure and function of each of the groups of organisms (viruses, bacteria, protists, fungi, plants, and animals)
3. List and describe the features of viruses and bacteria.
4. List and describe the features of protists and fungi.
5. Examine and demonstrate knowledge of the processes of photosynthesis
6. Summarize plant diversity, growth, development, reproduction, and nutrition
7. Summarize animal diversity, growth, development, reproduction, nutrition, and behaviors
8. Identify ecological relationships between populations of organisms and their environment

### Is this course part of a transfer pathway:  Yes [ ] No [x]  

Revised 11/19