BI/BIO/BIOL 223Z Principles of Biology: Ecology and Evolution

The following provides a summary of the 2024 Recommendation Report for the CCN Biology Subcommittee. Transfer Council recommends that due to changes in course information under OAR 715-025-0065 through 0115, colleges and universities should ensure students' academic progress is not disrupted. Courses completed before CCN changes should count toward graduation, even if requirements shift. Holding students harmless means honoring their efforts, supporting them through transitions, and keeping learning—not compliance—the central focus. CCN course information should be adopted as written. For more detailed information on what can be added to the course description and course learning outcomes, see the CCN Revised Framework and for more general information, see CCN Reports & Memos on the Educator Resources—Common Course Numbering webpage.

Approved CCN Course Information

Date Approved:

November 21, 2024

Catalog Dates:

Required to begin appearing in the 2025-26 catalog.

Review Timeline:

- First Annual Review: Spring 2027
- First Triennial Review: Fall 2029

Course Number and Prefix:
BI, BIO, or BIOL 2223Z

Course Title:
Principles of Biology: Ecology and Evolution

Course Credits:

5 (The course must include both lecture and lab components. Both of these components are embedded under the same course number and appearing as a single grade item on transcripts.)

Course Description:

Explores the unity and diversity of life through evolutionary mechanisms and relationships, and adaptation to the environment. Examines population, community, and ecosystem ecology. Intended for science majors.

Course Learning Outcome Introductory Statement:

This work is based on the national 2011 American Association of Advancement of Science (AAAS) report "Vision and Change in Undergraduate Biology Education" that recommended 5 overarching Core Concepts and 6 Core Competencies for biology majors. For details about implementation refer to:

- For Core Concepts see BioCore Guide (see Supplement 2 from Brownell et al., 2017)
- For Core Competencies see BioSkills Guide (see Supplement from Clemmons et al., 2020)

Course Learning Outcomes:

Apply the iterative process of science to generate and answer biological questions by analyzing data and drawing conclusions that are based on empirical evidence and current scientific understanding.

Use evidence to develop informed opinions on contemporary biological issues and explain the implications of those issues on society.

Provide evidence for phylogenetic relationships which illustrate the unity and diversity of life.

Describe how adaptation, development, mutation, and the environment affect organismal evolution.

Apply mathematical models to describe how populations change through time in relation to biotic and abiotic factors.

Explain how organisms and their environments affect each other across different temporal and spatial scales.

Interpret models explaining the flow of energy and cycling of matter in ecosystems.

Review Cycle:

The subcommittee proposes both an annual and triennial review.

The annual review cycle for these courses should

Assess the transfer effectiveness of the courses across institutions

Collect feedback regarding challenges, concerns, or potential areas for improvement from the 24 participating two- and four-year schools in the state.
