

UNO Tier I Writing Across Biology Guidelines

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At the University of Nebraska at Omaha, the College of Arts and Sciences requires all students to meet minimum writing requirements. Students working towards the B.S. in Biology, B.A. in Biology, B.S. in Biotechnology, and B.S. in Environmental Studies [Life Sciences Concentration] are expected to satisfy the College Writing Requirement by completing two courses at each of three tiers in Biology. At the first tier (i.e. **Tier I**):

1. *Students should become familiar with the range of scientific communication and be able to identify features of the primary and secondary (review) literature¹ that distinguish these from popularized or non-scientific sources; and*
2. *Students should be asked to read from the secondary (review) literature and/or primary literature and compose cogent summaries in response to questions.*

This should be done in **BIOL 1450 (Biology I)** and **BIOL 1750 (Biology II)**. Both of these courses are required of every major in the Biology department.

To provide context, the requirements for the other two tiers are:

Tier II

1. *Students will focus on communicating results and conclusions that require analysis of data or results drawn from the scientific literature.*
2. *Written reports could include using carefully selected primary literature provided to them to compose cogent written responses to topical questions, as well as analysis of data collected in labs.*

Tier III

1. *Students will use the primary literature as sources in written assignments.*
2. *Alternatively, or in addition, students will follow the conventions of scientific communication to produce their own manuscripts or presentations based on their own laboratory work.*

In addition, the University requires that writing experiences include a process that includes iteration and feedback. This requirement can be satisfied by submitting drafts of a single writing project or by submitting multiple writing projects where there is feedback and progressive expectations across the projects.

MINIMUM REQUIREMENTS FOR TIER I (BIOLOGY 1450 & 1750)

Writing assignments intended to satisfy the first tier of Writing Across Biology requirement must meet the minimum requirements listed below, over the course of BIOL 1450/1750:

1. **Writing submissions must be in paragraph form (≥5 sentences). Overall, there must be evidence for iteration (at least 4) with constructive feedback provided to the student after each draft or assignment to address errors and improve writing.**
 - a. Examples may include but are not limited to:
 - i. Primary/secondary article summaries
 - ii. Direct comparisons of two types of articles (i.e. primary vs. secondary or primary vs. popular/non-scientific) on the same topic, with focus on aspects of literature and characteristics of scientific studies
 - iii. Take-home lab reports summarizing a complete experiment, with reference to relevant primary/secondary literature
 - iv. Take-home essays which require interpretation and synthesis of information from primary/secondary literature

¹ The Biology Dept. at UNO considers primary papers to include peer-reviewed publications that analyze original data and are written by the researchers; Secondary literature summarizes and reviews a topic and includes in-text citations to more than one primary paper.

- b. Excludes:
 - i. Exam essays and lab reports, *except* if they are take-home components that require students to refer to the primary/secondary literature to develop and compose their response
 - ii. Worksheets that include a series of short-answer responses
 - iii. Assignments that do not reference primary or secondary literature and/or are based solely upon literature that is not primary or secondary scientific literature
 - c. Oral, PowerPoint, video, and other presentation styles are also encouraged in addition to the 4 iterations of paragraph-style writing.
- 2. Demonstrate interpretation of the primary/secondary literature in the students' own words without using direct quotes.**
 - 3. Employ a range of scientific sources including primary/secondary literature, with emphasis on the features that distinguish these from popularized or non-scientific sources.**