Course Change Request

New Course Proposal

Date Submitted: 01/20/25 1:09 pm

Viewing: BIOL 400: News & Views: Selected

topics

Last edit: 01/21/25 1:41 pm

Changes proposed by: volmo

Are you completing this form on someone else's behalf?

In Workflow

1. BIOL
Undergraduate
Representative

2. SC Curriculum

Committee

3. SC Assistant Dean

Assoc Provost-Undergraduate

5. Registrar-Courses

6. Banner

Approval Path

1. 01/20/25 3:11 pm
Geraldine Grant
(ggrant1): Approved
for BIOL
Undergraduate

Representative

No

Effective Term: Spring 2025

Subject Code: BIOL - Biology Course Number: 400

Bundled Courses:

Is this course replacing another course?

Equivalent Courses:

Catalog Title: News & Views: Selected topics

Banner Title: News & Views: Selected topics

Will section titles

Yes

vary by semester?

Credits: 3

Schedule Type: Lecture

Hours of Lecture or Seminar per 3

week:

Repeatable: May only be taken once for credit, limited to 2 Max Allowable

attempts (N2)

Credits:

6

Default Grade

Mode:

Undergraduate Regular

Recommended Prerequisite(s): ENGH302

Recommended Corequisite(s):

Required
Prerequisite(s) /
Corequisite(s)
(Updates only):

Registrar's Office Use Only - Required Prerequisite(s)/Corequisite(s):

And/Or	(Course/Test Code	Min Grade/Score	Academic Level)	Concurrency?

Registration Restrictions (Updates only):

Registrar's Office Use Only - Registration Restrictions:

Field(s) of Study:

Class(es):

Level(s):

Degree(s):

School(s):

Catalog

Description:

Using primary literature published within five years, students will use their written communication skills to convey the exciting, technical aspects of these reports to both a general and scientific audience. This course is the writing-intensive course for the biology major.

Justification:

What: Creating a new course that fulfills the WI requirement.

Why: Currently, our writing-intensive requirement is fulfilled by including a writing-intensive component to our BIOL308 Ecology and Evolution course, which has been deemed ineffective as a writing course due to staffing and logistical issues. This new course is meant to address the issues we have with our current writing course by creating a course that can be taught by any faculty member in our department so that we can rotate teaching the course. This design should improve the quality of the writing education for our students while preventing faculty burnout from teaching the writing-intensive course.

Does this course cover material which crosses into another department?

No

Learning Outcomes:

All Writing-intensive courses in the university integrate the following learning outcomes into their course designs:

- Writing-to-Learn: students use informal or formal writing in ways that deepen their awareness of the field of study and its subject matter. To meet this criterion, students will read assigned primary literature and summarize the important points in their own words to deepen their understanding of cell biology facts/concepts that are only superficially covered in lower level coursework.
- Writing-to-Communicate: students compose one or more written genres specific to the field of study in order to communicate key ideas tailored to specific audiences and purposes; genres may be academic, public, or professional. Students will use summaries written from critical analysis of primary literature write News & Views articles intended for a scientific audience, then compose an infographic to communicate the relevant materials to a general audience.
- Writing-as-a-process: students draft and revise written works based on feedback they receive from instructors and peers, using strategies appropriate to the genre, audience, and purpose. Specifically, students will peer-review each other's News & Views articles and integrate that feedback with instructor feedback to produce final drafts of their News & Views articles.

Will this course be scheduled as a cross- No level cross listed section?

Attach Syllabus

Cell Bio Proposed WI syllabus - dh.pdf

Additional

Attachments

Bio WI course planner.pdf

Wu et al 2024 odorant paper.pdf

WI course Week 2 plan.pdf

Review of Cell Components and their functions.pdf

Peer review - in class form.pdf

Staffing:

Any biology faculty could teach this course. At present, this is confirmed list of faculty who intend on teaching this course in future: Elisabeth Epstein, Suzanne Gantar, Geraldine Grant, Daniel Hanley, Nisan Hubbard, David Luther, Valerie Olmo, Krista Shires. More faculty are expected to join the rotation of faculty who would teach this course.

Relationship to

Existing Programs:

Will be a core course in the BA and BS in Biology degree programs. Could be taken by Medical Laboratory Sciences majors to fulfill their writing-intensive requirement.

Relationship to			
Existing Courses:			
N/A			
Additional			
Comments:			
Reviewer			
Comments			

Key: 18894

George Mason University College of Science, Biology Department

BIOL400 News & Views: Cell Biology 3 Credits, Semester and Year Class meeting day/times and Modality

Instructor name	Contact Information	Office hours
Valerie Olmo, PhD	Volmo@gmu.edu	Mondays 2-3 pm or by appt

Course description

Using primary literature published within five years, students will use their written communication skills to convey the exciting, but technical aspects of these reports to both a general and scientific audience. This course is the writing-intensive course for the biology major.

Course learning outcomes

The Faculty Senate Writing Across the Curriculum Committee has approved this course to fulfill all of the Writing Intensive ("WI") requirement in Biology major. These requirements are met in three ways: 1) two 850-word, revised, News & Views articles due in the 9th and 15th week, 2) a twenty-three 50-word daily journal entries, and 3) a formal peer review assignment of at least 500 words due in the 13th week. Each revised work will include both peer as well as instructor feedback. Students will gain

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- Writing-to-Communicate: students compose one or more written genres specific to the field of study in order to communicate key ideas tailored to specific audiences and purposes; genres may be academic, public, or professional. <u>Students will use summaries written from critical analysis of primary literature write News & Views articles intended for a scientific audience, then compose an infographic to communicate the relevant materials to a general audience.</u>
- Writing-as-a-process: students draft and revise written works based on feedback they receive from instructors and peers, using strategies appropriate to the genre, audience, and purpose. <u>Specifically, students will peer-review each other's News & Views articles and integrate that feedback with instructor feedback to produce final drafts of their News & Views articles.</u>

Assessments	Minimum Word count	Grade weight (%)
Homework assignments	N/A	10
Daily journals	50 each	10

In-class discussions	N/A	5
Peer-review in-class assignments	150	10
Peer-review assignment	500	
News & Views #1	850	20
News & Views #2	850	30
Infographic	N/A	15

Assessments

Homework assignments (10%)

A variety of homework assignments (reading quizzes, worksheets, writing sample critiques, etc.) will be assigned to ensure students are ready for the day's activities. Each assignment will contain its own instructions that must be read and followed carefully. The due dates for the assignments are also

Grading scheme

Grade range	Letter
93-100	A
89-92.99	A-
85-88.99	B+
80-84.99	В
79-82.99	B-
75-78.99	C+
65-74.99	С
60-64.99	D
<60	F

posted both on the course schedule and in Canvas. Late assignments will not be accepted since late submission isn't conducive to being prepared for the planned class activities.

Journal entries (10%)

Most meetings will include time to write a reflection and/or summary of what was discussed during the class period. The purpose is to take the technical information discussed in class or read in a homework assignment and practice conveying the information into colloquial terms. This assessment is qualitative (complete or incomplete). As long as a good-faith effort was made, full credit will be given. The daily journals will be reviewed sporadically throughout the semester. Each entry must contain no less than 50 words.

In-class discussions (5%)

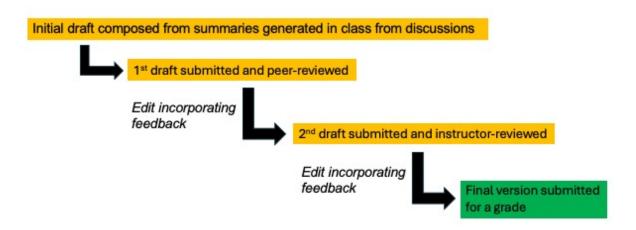
Students will use in-class worksheets to guide small group discussions of the salient material for the week. Students are expected to contribute significantly to conversation to gain the most benefit from the discussions. This assessment is qualitative (complete or incomplete).

Peer-review (10%)

Students will be required to read anonymized News & Views articles written by their peers. After reading and annotating the given News & Views article, you will use the given rubric to provide constructive feedback. Your peer review grade will be based on the quality of your feedback.

News & Views articles (50% of final grade)

The bulk of your grade will be based on the submission of two News & Views articles. The first article will be based on an assigned primary literature paper (worth 20% of final course grade). The second article will be based on a chosen primary literature paper (worth 30% of final course grade). Each article must include at least 850 words. Importantly, incorporation of peer and instructor feedback is critical for improving of writing skills. Therefore, each News & Views article will be subject to the following process:



Infographic assignment (15%)

Prior to the end of the semester, students will submit an infographic summarizing the most relevant points of the chosen primary literature paper. The infographic will include a section including what was already known in the field prior to the study chosen, the most exciting/important results of the study, and a glimpse into how that study might benefit society as a whole. The infographics will be displayed in a gallery format on the last day of class. Students will walk around from infographic to infographic and will provide feedback on five infographics that belong to their classmates. The forms to provide feedback can be made available either via electronic form or paper. The student's final grade on the infographic will be composed by combining the average grade earned from peer feedback and the instructor's grade using the same rubric as the students used to provide their feedback.

Additional policies

Academic Standards

Academic Standards exist to promote authentic scholarship, support the institution's goal of maintaining high standards of academic excellence, and encourage continued ethical behavior of faculty and students to cultivate an educational community which values integrity and produces graduates who carry this commitment forward into professional practice.

As members of the George Mason University community, we are committed to fostering an environment of trust, respect, and scholarly excellence. Our academic standards are the foundation of this commitment, guiding our behavior and interactions within this academic community. The practices for implementing these standards adapt to modern practices, disciplinary contexts, and technological advancements. Our standards are embodied in our courses, policies, and scholarship, and are upheld in the following principles:

- **Honesty:** Providing accurate information in all academic endeavors, including communications, assignments, and examinations.
- **Acknowledgement:** Giving proper credit for all contributions to one's work. This involves the use of accurate citations and references for any ideas, words, or materials created by others in the style appropriate to the discipline. It also includes acknowledging shared authorship in group projects, coauthored pieces, and project reports.
- **Uniqueness of Work:** Ensuring that all submitted work is the result of one's own effort and is original, including free from self-plagiarism. This principle extends to written assignments, code, presentations, exams, and all other forms of academic workViolations of these standards—including but not limited to plagiarism, fabrication, and cheating—are taken seriously and will be addressed in

accordance with university policies. The process for reporting, investigating, and adjudicating violations is <u>outlined in the university's procedures</u>. Consequences of violations may include academic sanctions, disciplinary actions, and other measures necessary to uphold the integrity of our academic community.

The principles outlined in these academic standards reflect our collective commitment to upholding the highest standards of honesty, acknowledgement, and uniqueness of work. By adhering to these principles, we ensure the continued excellence and integrity of George Mason University's academic community.

Student responsibility: Students are responsible for understanding how these general expectations regarding academic standards apply to each course, assignment, or exam they participate in; students should ask their instructor for clarification on any aspect that is not clear to them.

Accommodations for Students with Disabilities

Disability Services at George Mason University is committed to upholding the letter and spirit of the laws that ensure equal treatment of people with disabilities. Under the administration of University Life, Disability Services implements and coordinates reasonable accommodations and disability-related services that afford equal access to university programs and activities. Students can begin the registration process with Disability Services at any time during their enrollment at George Mason University. If you are seeking accommodations, please visit https://ds.gmu.edu/ for detailed information about the Disability Services registration process. Disability Services is located in Student Union Building I (SUB I), Suite 2500. Email: ods@gmu.edu. Phone: (703) 993-2474.

Student responsibility: Students are responsible for registering with Disability Services and communicating about their approved accommodations with their instructor *in advance* of any relevant class meeting, assignment, or exam.

FERPA and Use of GMU Email Addresses for Course Communication

The <u>Family Educational Rights and Privacy Act (FERPA)</u> governs the disclosure of <u>education records for eligible students</u> and is an essential aspect of any course. **Students must use their GMU email account** to receive important University information, including communications related to this class. Instructors will not respond to messages sent from or send messages regarding course content to a non-GMU email address.

Student responsibility: Students are responsible for checking their GMU email regularly for course-related information, and/or ensuring that GMU email messages are forwarded to an account they do check.

Title IX Resources and Required Reporting

As a part of George Mason University's commitment to providing a safe and non-discriminatory learning, living, and working environment for all members of the University community, the University does not discriminate on the basis of sex or gender in any of its education or employment programs and activities. Accordingly, all non-confidential employees, including your faculty member, have a legal requirement to report to the Title IX Coordinator, all relevant details obtained directly or indirectly about any incident of Prohibited Conduct (such as sexual harassment, sexual assault, gender-based stalking, dating/domestic violence). Upon notifying the Title IX Coordinator of possible Prohibited Conduct, the Title IX Coordinator will assess the report and determine if outreach is required. If outreach is required, the individual the report is about (the "Complainant") will receive a communication, likely in the form of an email, offering that person the option to meet with a representative of the Title IX office. For more information about non-confidential employees, resources, and Prohibited Conduct, please see University Policy 1202: Sexual and Gender-Based Misconduct and Other Forms of Interpersonal

Violence. Questions regarding Title IX can be directed to the Title IX Coordinator via email to <u>TitleIX@gmu.edu</u>, by phone at 703-993-8730, or in person on the Fairfax campus in Aquia 373.

Student opportunity: If you prefer to speak to someone *confidentially*, please contact one of Mason's confidential employees in Student Support and Advocacy (<u>SSAC</u>), Counseling and Psychological Services (<u>CAPS</u>), Student Health Services (<u>SHS</u>), and/or the <u>Office of the University Ombudsperson</u>.

Table 1. List of daily topics, assignments, and in-class activities. Your learning outcomes appear in bold.

Week	Day	Topic to be covered	Assignments due before class	In-class activities
1	Mon	Introduction to the course		 Discussion on the following questions: How do we communicate scientific discoveries/innovations to a general public? What role does writing play in scientific communication? How do scientists communicate discoveries/innovations with each other?
	Wed	Review of course- relevant cell biology concepts	Watched assigned videos and complete assignment requiring students to describe the important cell components in both scientific and colloquial terms (Writing-to-Learn)	 Lecture on relevant cell bio topics interspersed with students randomly selected to read aloud their descriptions of the cell component being highlighted throughout the lecture. Students can choose to read their scientific description or colloquial description. For each description read, discuss whether the description was meant for a scientific or general audience. How do we know?
2	Mon	Not all News & Views articles are the same!	Quiz: testing the two News & Views articles	• Create a Venn diagram comparing the language, content and format of News & Views articles intended for different audience (scientific vs. lay audience) (Writing-to-communicate)
	Wed		Quiz: testing highlighted sections of the associated primary literature paper	• Using guided worksheets from each group, discuss the highlighted sections of the primary literature with special focus on language in the primary literature vs. language used by students to describe what was in the paper
3	Mon	Making sense of an introduction to the primary literature	Quiz: Introduction of the assigned primary literature	• Journal entry: How were the first and second paragraphs of the introduction different from each other in scope? (Writing-to-learn)

Week	Day	Topic to be covered	Assignments due before class	In-class activities
				• In-class worksheet to guide small group discussion of the first half of the introduction of the primary literature (Writing-to-learn)
	Wed			• Journal entry: How were the first and last paragraphs of the introduction different from each other in scope? (Writing-to-learn)
				 In-class worksheet to guide small group discussion of the second half of the introduction of the primar literature.
				• At the end of class, create a generic outline of the major components of an introduction section to a primary literature paper (Writing-as-a-process)
4	Mon	Making sense of the results section	Quiz: testing reading/analysis of specific figures in the results section of the assigned primary literature	 Journal entry: Based only on what was written in the introduction, what questions were the scientists trying to answer with the data presented in the results section? (Writing-to-learn) In-class worksheet to guide small group discussion of assigned figures of the primary literature. Durin in-class discussion, rate each figure as proof-of-concept/supporting data or new data.
	Wed		Quiz: testing reading/analysis of specific figures in the results section of the assigned primary literature	• Journal entry: Summarize in a couple of bullet points the discoveries scientists presented in their results section. (Writing-to-learn)
				 In-class worksheet to guide small group discussion of assigned figures of the primary literature. Durin in-class discussion, rate these figures as proof-of-concept/supporting data or new data. Journal entry: Using information collected from class discussions, write a summary of what the innovative discoveries (AKA "news worthy") presented in the results section (Writing-to-communicate)

Week	Day	Topic to be covered	Assignments due before class	In-class activities
5	Mon	Making sense of the discussion section	Quiz: testing the discussion section of the assigned primary literature	 Journal entry: Explain how the introduction and discussion sections are different from each other in content and/or language. (Writing-as-a-process) In-class worksheet to guide small group discussion of the content in the discussion section. At the end of class, create a generic outline of the major components of a discussion section to a primary literature paper. (Writing-as-a-process)
	Wed			• Journal entry: Why was this article worth reporting to the scientific community? Why was this article worth reporting to the general public?
				• In small groups, create a 2- to 3-minute copy for a Science News segment for Good morning America One member from each group will read their copy of the segment. Discuss what information overlapped between different groups and the source of differences between the news segments. (Writing-to-communicate)
6	Mon	What is the purpose of peer review?	Submit a critique of the writing sample posted in Canvas (Writing-as-a-process)	 Write a journal reflection describing what constructive feedback would be for a draft of an article. (Writing-as-a-process) In-class discussion of the history of peer review, its
			*Recommended to use the daily journal entries from Weeks 3-5 to begin writing a first draft of the News & Views article on the primary literature you've been analyzing in class.	purpose, and practice composing a constructive peer review document. (Writing-as-a-process)
	Wed	Writing an effective peer review	Submit an edited peer review of the writing sample posted in Canvas (same as Mon sample) (Writing-as-a-process)	• Write a journal reflection on what was different between the original critique vs. the edited peer review submitted? (Writing-as-a-process)

Week	Day	Topic to be covered	Assignments due before class	In-class activities
				• Each group will co-write a finalized editor's <u>summary of the writing sample</u> (Writing-as-a- process)
7	Mon	Practice Peer review	Use the daily journal entries from Weeks 3-5 to finish writing the first draft of the News & Views article on the primary literature already analyzed in class. Upload the article into Canvas before class (Writing-as-a-process)	 In-class, read anonymized News & Views articles from peers and, using skills gained from Week 6, provide constructive feedback (round robin-style) (Writing-as-a-process) Write a daily journal reflection on the differences between the draft you reviewed and your News & Views article. (Writing-as-a-process)
	Wed	Responsible use of AI in writing assignments	Use daily summaries from Weeks 3-5 to generate a News & Views article using ChatGPT and upload the AI-generated article into Canvas	 Write a journal reflection describing two ways in which your first draft of the News & Views articl differed from the version generated by ChatGPT. (Writing-to-learn) In-class discussion on the ethical use of AI in writing assignments
8		Semester break		
9	Mon	Choosing primary literature: Using Pubmed and the University library system	Submit edited News & Views article incorporating peer reviewer feedback on Canvas for instructor feedback (Writing-as-a-process)	 Librarian workshop on how to find primary literature and research documents using library resources and PubMed Journal reflection will focus on brainstorming possible topics in cell biology that would be interesting to learn more about.
	Wed	The anatomy of an Abstract		• In-class discussion of the structure and purpose of abstracts of scholarly work. (Writing-to-communicate)
				• By the end of class, two or three abstracts will be selected as potential primary literature topic for second News & Views submission.

Week		Topic to be covered	Assignments due before class	In-class activities
10	Mon	Peer discussion: Introduction section	Submit the primary literature paper and mini-presentation materials for introduction section of the focus of the second News & Views article (Writing-as-a-process)	 Journal reflection will focus on why the primary literature submitted was chosen. Why do you think people will care about the publication of this paper? (Writing-to-communicate) In-class mini-presentation of introduction section of chosen paper to assigned groupmates.
	Wed		Receive instructor feedback on edited News & Views article in Canvas no later than the start of this class period. Begin editing and incorporating feedback in final version of first News & Views article (Writing-as-a-process)	 Continue in-class mini-presentation of introduction section of chosen paper to assigned groupmates. Journal reflection will have each student summarize, in their own words, the introduction section of their chosen paper. (Writing-as-a-process)
11	Mon	Peer discussion: Results section	Submit final version of 1 st News & Views article for a grade in Canvas Submit a mini-presentation of the results section of their chosen primary literature paper (Writing-as-a-process)	 Journal reflection will focus on which technical aspects of their chosen paper was the most difficult to understand and why. (Writing-to-communicate) In-class worksheet to guide small group discussion of the results of the primary literature of each individual student within their assigned groups.
	Wed			 Continue in-class worksheet to guide small group discussion of the results of the primary literature of each individual student within their assigned groups. Summarize the innovative results of the chosen paper in their own words in the daily journal. (Writing-as-a-process)
12	Mon	Peer discussion: Discussion section	Submit a mini-presentation of what was important in the discussion section of the chosen primary literature paper (Writing-as-a-process)	Journal reflection will focus on how the experimental results fit into the knowledge that already exists in the field. Did the results from your chosen field answer important questions in the field? Which unanswered question(s) do you think

Week	Day	Topic to be covered	Assignments due before class	In-class activities
				 are most important for scientists to tackle next? Why? (Writing-as-a-process) In-class mini-presentation of discussion section of chosen paper to assigned groupmates.
	Wed		Review grade and feedback from first News & Views article to incorporate into editing of first draft of second News & Views article	 Continue in-class mini-presentation to assigned groupmates. Summarize what was most impactful about the work presented in the primary literature and what questions still need to be answered in the field in the daily journal. (Writing-as-a-process)
13	Mon	Peer review	Submit draft of second News & Views article to use for in-class peer review (Writing-as-a-process)	• Read an anonymized News & Views article from a peer and use the rubric provided to generate constructive feedback. The feedback will be used to write a formal peer-review (similar to what was generated as a group in Week 6)
	Wed		Submit formal peer-review of at least 500 words using the assigned anonymized News & Views article in Canvas (Writing-to-communicate)	Optional attendance: "Writing retreat" - Use this class period to incorporate peer-review feedback and get real-time feedback from instructor
14	Mon	Audio Science News & Views	Submit edited version of the second News & Views article incorporating peer-review feedback for instructor feedback (Writing-as-a-process)	• Listen and compare two different science "News & Views"- like news clips and use the worksheet to determine who is the audience. Then, convert your News & Views article into an audio News & Views news clip! (Writing-to-communicate)
	Wed		Choose one of the posted items and complete the assigned worksheet to bring to class to learn how to create an infographic	Create infographic in-class on item chosen from the options posted in Canvas and share with groupmates. Use in-class worksheet to give and receive feedback on constructing infographics (Writing-to-communicate)

Week	Day	Topic to be covered	Assignments due before class	In-class activities
15	Mon	Visual News & View	Create an infographic using the subject of the second News & Views article and submit it in Canvas	• Walk around the classroom and take a look at the infographic gallery! Submit reviews of the infographics posted throughout the room (Writing-to-communicate)
	Wed			*Instructor feedback submitted on second News & Views article in Canvas prior to this class meeting
				Optional attendance: instructor will be available for in-person feedback during class period

^{*}Final version of second News & Views article due on week after instructor feedback is posted (during first week of finals week)- specific date will vary based on semester/year this section is being taught