I. Background Information
Instructor: Christa Mulder, office Irving 412, phone 474-7703, email cpmulder@alaska.edu

Lectures and discussions: TR 11:30 am – 1 pm. Location: Murie 230.

Materials:
We will draw on a range of books for this course, and a set of required readings (chapters and articles) will be available via Blackboard.

Required text:

Recommended reading:
Council of Science Editors, Style Manual Committee. 2006. Scientific style and format: the CSE manual for authors, editors, and publishers. 7th ed. The Council, Reston (VA), USA.


Books used extensively for examples:


Prerequisites: Graduate standing in the Biological Sciences or related field, plus permission of the instructor(s). This course is aimed at students who are ready to start writing a manuscript for publication, or a thesis chapter in the form of a manuscript. This means that data should already be analyzed and initial conclusions drawn. Preference will be given to students who have not previously published in the scientific literature. Class size is limited so these requirements will be strictly enforced.
Access to class materials and information:
This course will use Blackboard to make additional information available. Access is restricted to students enrolled in the course. All information associated with the course will be placed there, including lecture notes, slides or images used during class, handouts, links to relevant websites, and anything else that we can think of. Provided you have a university email address, you will already be enrolled through Blackboard as a user. Just go to https://classes.alaska.edu and log in using your UAF username and password (the same as you use for logging into your email).

Note: We will assume that we can reach you through your UAF email account and that you are regularly checking your email. If you do not use your UAF email address as your primary account, please put a forward on it to whatever account you do use.

II. Goals of the course:

Course goals: The primary goal of the course is to help you produce the best possible scientific manuscript given the quality of your research. A well-written scientific paper showcases the results of the study and allows the reader to focus on the scientific content, while poorly written papers require the reader to spend considerable time trying to figure out what the writer intends to convey. Over the course of the semester each student is expected to produce a manuscript of publication quality.

Most professional biologists, academic or otherwise, spend a considerable amount of time editing other people's work and revising their own. As part of this course you will learn how to review other students' manuscripts, how to revise your own manuscript, and how to respond to the critiques of editors and reviewers. You will gain an understanding of the publishing process. Since the majority of scientific articles include multiple authors, learning to work on manuscripts in a group context is critical for successful publication. You will be expected to communicate regularly with you major advisor and (where applicable) with other co-authors of your manuscript.

As a professional scientist you will be expected to communicate your science not only to other scientists but also to a broader audience. We will spend some time toward the end of the course honing your skills for writing for the a general audience.

Learning Outcomes:
By the end of the course the successful student will:
1. Produce a well-written, well-structured scientific publication suitable for submission to an academic journal in his/her field.
2. Develop reviews of other people's manuscripts that provide specific, constructive feedback to the writer.
3. Be able to revise their own work to effectively address critiques of reviewers.
4. Understand the role of each participant in the publication process
5. Be able to identify and reduce biases in the publication process.
6. Produce a short blog post aimed at a general audience that describes an aspect of their research.

**III. Instructional Methods**
During each class period the instructor or a guest lecturer will present a short lecture on that day’s topic. Each week, students will complete one or two assignments that cover small components of the paper (see Schedule). The results of these first submissions will be discussed in class (by the whole class or in smaller groups). This will be followed by class exercises and discussion aimed at improving the writing assignment that was due that day.

Students will turn in completed major sections at several points during the course, each of which will be reviewed by an instructor, one other student, and the student’s major advisor (but graded only by the instructor). Five sections will be submitted: Methods, Results, Introduction, Discussion, and Titles / Abstracts / Literature Cited. Each submission of a major section will include revisions to all previous major sections. Students will be asked to respond to all comments and will be required to review the paper with their co-authors before submitting the final complete product.

**IV. Assessment**
Assessment consists of two main components: 1) the student’s own work (the sections of the manuscript), and 2) the students’ contribution to other students’ work.

<table>
<thead>
<tr>
<th>Component</th>
<th>Proportion of grade</th>
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<tbody>
<tr>
<td>First drafts of sections (5 sections)</td>
<td>50%</td>
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<tr>
<td>Final manuscript</td>
<td>30%</td>
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<tr>
<td>Peer reviewing / editing</td>
<td>10%</td>
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<tr>
<td>Class participation</td>
<td>10%</td>
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Grades will be given based on a percent score (90-100%=A, 80-90%=B, 70-80%=C, 60-70%=D, <60%=F). I reserve the right to apply a curve up to 3%.

**Deadlines**
For assignments due in class students should email a copy of the assignment to the instructor before class, and bring hard copies or computer with documents to class (as assigned).

**Drafts of major sections and the final paper are due electronically by midnight on the due date; refer to the class schedule and notices from the instructor.**

This class involves extensive editing and reviewing on a tight schedule. Because of this, penalties for late assignments (whether the initial assignment, draft sections, or final version) will be substantial: assignments will lose 10% of the maximum value for each day they are late, including weekends.
Participation scores are determined by the contribution of the student during class time. This includes attendance, level of preparation prior to class (e.g. ability to discuss the readings), and level of contribution to whole-class and small group discussions and exercises.

V. Plagiarism:
Plagiarism is the overt or covert use of other people's work or ideas without acknowledgement of the source. This includes using ideas or data from a classmate or colleague without permission and acknowledgement, including sentences from journal articles (either in their entirety or with minor changes) in your writing without citing the author, or copying parts of a website into your essay. **You cannot use someone’s ideas without citing the originator; you cannot use someone’s words without quoting the writer. Any deviation from this will be regarded as plagiarism.**

When you plagiarize you are stealing the currency which science (and many other endeavors) uses: knowledge. Plagiarism and cheating are serious offenses that violate the student code of conduct may result in an “F” in the course and / or referral to the university disciplinary committee.

A few simple rules to prevent plagiarism:
1. When in doubt about whether you should cite or acknowledge someone, do so.
2. If you are unsure of how to cite someone’s writings or ideas, ask one of the instructors for help. Reference librarians are also a good source of information for help with citations.

Student Support
Students with special needs or concerns can contact Student Support Services (474-6844). Please let us know at the beginning of the semester if you will require accommodations due to a documented disability, and we will work with you in conjunction with the Office of Disability Services (203 WHIT, 474-7043).

Every qualified student is welcome in my classroom. As needed, I am happy to work with you, disability services, veterans’ services, rural student services, etc to find reasonable accommodations. Students at this university are protected against sexual harassment and discrimination (Title IX), and minors have additional protections. If I notice or am informed of certain types of misconduct, then I am required to report it to the appropriate authorities. For more information on your rights as a student and the resources available to you to resolve problems, please go the following site: [www.uaf.edu/handbook/](http://www.uaf.edu/handbook/).
BIOL 604: Scientific Writing, Editing, and Revising  
Schedule Spring 2019

This schedule is tentative and subject to change as needed. All assignments are due to the instructor an hour before the start of class EXCEPT major sections and their reviews, which are by midnight on the posted date. Changes will be updated via Blackboard. Readings are incorporated into assignments but not listed here. Readings (in addition to Schimel 2012) will be posted on Blackboard.

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Lecture/Group work</th>
<th>Assignment</th>
<th>Due Date</th>
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<tbody>
<tr>
<td>1</td>
<td>T 1/15</td>
<td><strong>L1</strong>: Preparing to Write I: Introduction to course, authors, journal selection&lt;br/&gt;<strong>Group</strong>: Authorship scenarios</td>
<td>Readings: authorship and journal selection&lt;br/&gt;<strong>A1</strong>: Journal selection, confirming authorship, journal Instructions to Authors</td>
<td>1/17 1/24</td>
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<td></td>
<td>R 1/17</td>
<td><strong>L2</strong>: Preparing to Write II: More on authorship and journal selection; scope and organization of ms;&lt;br/&gt;Story telling I&lt;br/&gt;<strong>Group</strong>: Authorship, journal selection, scope</td>
<td><strong>A2</strong>: Science writing as story telling I</td>
<td>1/22</td>
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<td>2</td>
<td>T 1/22</td>
<td><strong>L3</strong>: Story telling II; Methods: guiding the reader, structure, voice, intro to figures and tables&lt;br/&gt;<strong>Group</strong>: A2 (story telling), revising sentences</td>
<td><strong>A3</strong>: Working title, scope, outline for Methods; Science as Story Telling II</td>
<td>1/24</td>
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<td>R 1/24</td>
<td><strong>L4</strong>: Methods: study design, analyses; Tables&lt;br/&gt;<strong>Group</strong>: A3 (story telling, working titles, scope)</td>
<td><strong>A4</strong>: First draft of Methods</td>
<td>1/29</td>
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<tr>
<td>3</td>
<td>T 1/29</td>
<td><strong>L5</strong>: Results: Figures; editing / reviewing basics&lt;br/&gt;<strong>Group</strong>: A3 (student figures and tables)</td>
<td><strong>A5</strong>: First draft of figures for Results&lt;br/&gt;<strong>A6</strong>: Peer review of Methods</td>
<td>1/31 2/5</td>
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<td></td>
<td>R 1/31</td>
<td><strong>L6</strong>: Results: basic structure, reporting statistics&lt;br/&gt;<strong>Group</strong>: A5 (student figures and tables)</td>
<td><strong>A7</strong>: Figure and tables revision, first draft of accompanying text</td>
<td>2/5</td>
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<td>4</td>
<td>T 2/5</td>
<td><strong>L7</strong>: Results: common problems with Methods, more on statistics, revising for content and clarity&lt;br/&gt;<strong>Group</strong>: A7 (revised figures and tables, accompanying text), editing sample text.</td>
<td><strong>A8</strong>: Results text revision, addition of final section</td>
<td>2/7</td>
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First Draft of Methods 1/29
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</table>
| R 2/7 | **L8**: Introduction I (the five goals)  
*Group*: MS structure: OCAR vs ABCDE in sample papers | A9: Introduction: Questions / Hypotheses and Rationale  
A10: Results first draft+ revised Methods | 2/5 |
| 5 | T 2/12 | No lecture (Christa out of town)  
*Group*: A9 (Questions / Hypotheses and Rationale) | A11: Revised Questions / Hypotheses and Rationale | 2/12 |
| R 2/14 | **L9**: Reviewing Results and revised Methods sections  
*Group*: A11 (Revised questions and rationale) | A12: Review of Results 1st draft and Methods revision | 2/14 |
| 6 | T 2/19 | **L10**: Developing the hook; style tips; editing for readability  
*Group*: hook examples | A13: Hook first draft | 2/14 |
| R 2/21 | **L11**: Introduction: Background  
*Groups*: A13 (hooks)  
A14: Background first draft  
A15: Introduction first draft + revised Results | | 2/21 |
| 7 | T 2/26 | **L12**: Common problems with the Results sections  
*Group*: A14 (Background drafts) | A16: Review of Intro + revised Results | 2/21 |
| R 2/28 | *Group*: A14 (Background drafts cont’d) | | 2/28 |
| 8 | T 3/5 | **L13**: Discussion I (structure, flow, resolution)  
*Group*: Resolutions | A17: Poor and good resolutions; outline of Discussion section | 2/28 |
| R 3/7 | **L14**: Discussions: hooks and conclusions  
*Group*: resolution examples | A18: Resolution draft | 3/7 |
<p>| <strong>1st Draft Results + revised Methods</strong> | | | <strong>2/14</strong> |
| <strong>Review of Results + revised Methods</strong> | | | <strong>2/21</strong> |
| <strong>1st Draft Introduction + revised Results</strong> | | | <strong>2/28</strong> |
| <strong>Review of Intro + revised Results</strong> | | | <strong>3/7</strong> |</p>
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<tbody>
<tr>
<td>9</td>
<td>3/11-15</td>
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<td><em>SPRING BREAK</em></td>
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| 10   | T 3/19    | *L15: Building arguments I*
*Group: A 18 (Resolution drafts)* | **A19: Argument identification, alignment of Introduction and Discussion** | 3/21     |
|      | R 3/21    | *L16: Building arguments II*
*Group: A19 (Arguments and Intro – Discussion alignment)* | **A20: First draft of Discussion + revised Intro**                            | 3/26     |
| 11   | T 3/26    | *L17: Titles, abstracts, keywords, acknowledgements, literature cited*
|      |           | **1st Draft Discussion + revised Introduction**                                       |                                                                              | 3/26     |
|      | R 3/28    | *L18: Review process; journal business models*
*Group: A21 (titles)* | Readings: rejections, alternative reviewing models                             | 4/2      |
| 12   | T 4/2     | *L19: Responding to editors and reviewers*
*Group: rejections, letters from reviewers*                                        | Readings: peer review process I                                              | 4/4      |
*A22: Complete Draft*                                                             | 4/9/16   |
|      |           | **Review of Discussion + revised Introduction**                                       |                                                                              | 4/4      |
| 13   | T 4/9     | *Group: Biases in peer review: processes to reduce bias*                              |                                                                              |          |
|      | R 4/11    | Panel discussion: journal editors                                                    | Readings: Scientific fraud                                                   | 4/16     |
| 14   | T 4/16    | *Group: Scientific fraud*                                                            |                                                                              |          |
|      |           | **Review of 1st Complete Draft**                                                     |                                                                              | 4/16     |
| 15   | T 4/23    | Writing for a popular audience I                                                    | **A23: Final Paper**                                                        | 4/25     |
|      | R 4/25    | Writing for a popular audience II                                                   |                                                                              |          |
|      |           | **Wrap-up**                                                                           |                                                                              |          |