Upon completing this course, you will be able to:

- Tell stories and use storytelling to become a more productive and impactful scientist or researcher.
- Share your ideas with people so that they understand, remember, and can use these ideas.
- Read scientific papers more quickly, thoroughly, and critically. You will be able to identify the core components of papers, including the big picture, the specific scientific question or challenge, and the key insight. Moreover, you will be able to identify the strengths and weaknesses of arguments, and be able to construct the strongest possible arguments.
- Use concrete, step-by-step tools to edit your own writing and other’s writing to improve clarity and develop gracefulness.
Sessions: Tuesday and Thursday 2:15 pm – 3:45 pm
Microsoft Teams—O365_Writing Science Fall 2020

Instructor: Assoc. Prof. Benjamín J. Alemán
Email: baleman@uoregon.edu
Office: 178 Willamette Hall
Phone: 541.346.3321
Office Hours: W, F from 11-12 noon, or by appointment; Teams Office Hours channel, or private chat if requested.

Teaching Assistant: Uriel Hernandez, Physics Graduate Researcher
TA Office Hours: M, W from 2 – 3 pm, Teams Office Hours channel.

Readings and Content:
Readings for this course will be provided to you in Teams. I will be using many different sources for this course. The most important sources (in order of subjective importance) include:

- Chip Heath, Dan Heath, Made to Stick (Random House, 2007)
- Joshua Schimel, Writing Science (Oxford University Press, 2012)
- Joseph M. Williams, Style: Toward Clarity and Grace (University of Chicago Press, 1990)
- Jean-luc Doumont, Trees, Maps, and Theorems: Effective communication for rational minds (Principiae, 2009)
- Anne Lamott, Bird by Bird: Some instructions on Writing and Life (Pantheon, 1994)

Grading:
Ultimately, your science colleagues and the broader community will grade you. They will see you as an impactful scientist if you do good, motivated science, and then communicate the meaning of your findings in a clear, compelling, lasting way, in a way that always tells a story. If your writing is unclear, or if it lacks coherence and motivation, or if it fails to tell a story, then your science will be misunderstood, overlooked, and forgotten. Your work will fade away.

I want you to impact the world. To do this, you will need to focus on improving your writing and communication, and work hard at it. Students that worry about grades will lose some of this focus, so I will attempt to remove the stress of grading judgement. However, the University requires that I give you a grade and that this grade reflects your work in the course. So, you will get an A in this class if you:

- Show up to class
- Participate in class (ask questions, do in-class activities, stay engaged, etc.)
- Do all the assignments
For each assignment or in-class activity (e.g. presentations) that you miss, your grade will be reduced by 1/3 a letter grade (A to A- or A- to B+ are examples of a 1/3 letter grade change.)

Assignments:

During this course, you will be assigned a variety of tasks to complete. All assignments will be posted in the General channel of the course Team. To give you a sense of what to expect, you will:

- Analyze published and peer papers for story structure, stickiness, data-to-understanding flow, sentence structure, etc.
- Analyze messages, papers, advertisements, etc. for SUCCESs “stickiness.”
- Make and analyze presentations emphasizing SUCCESs “stickiness.”
- Make a “living outline” that structures the story to drive and write science. For graduate students, the outline will be about their scientific work (completed or in progress), while undergrads will make an outline about a proposed project.
- Read papers and chapters from books.

Some assignments will take some time to think about and prepare, so I’ll give you the deadlines for those now:

Due Week 6 (Week of November 2nd)

- In-class presentation to sell an idea, make a point, or communicate science. It cannot be about your own research.

Due Week 7 or 8: Exact date/time to be determined by class progress

- Scientific paper or proposal draft 1.0. Submit on Teams as a Word document. You can obtain Microsoft Office for free from UO at https://office.uoregon.edu using your usual UO login credentials (i.e. DuckID (joe@uoregon.esdu) and password.)

Due by 12:30 p.m. on Tuesday, December 8th

- A cheat-sheet for editing writing and for effective communication. Throughout the term, we will learn about practical strategies for editing writing, so that your writing is more clear, concise, and coherent. Your task is to assemble these strategies into a personal cheat-sheet or reference. This cheat-sheet should also include the core ideas and tools for effective communication.
- Scientific paper or proposal draft 2.0. Submit on Teams as a Word document.
- In-class presentation on the topic of your research paper. 5-10 minutes max.

Completing assignments in Teams with Microsoft Word.

The problem sets will be posted on Teams as Word docs. You can edit your copy of each homework either directly in Teams, by using Word Online, or by using Word the desktop app. I recommend using the desktop app. To open the assignment, either click on it (which opens the assignment in Teams) or click on the ellipsis (i.e. three dots) and select your option (again, I recommend using the desktop app). The doc should autosave to our course cloud file-share, but be sure that it says “saved” near the top of whatever app you choose to use.

There are several ways you can input your responses:

- You can type it out in Word.
- You can write it out using a stylus together with a touch screen device (e.g. iPad, Surface Pro, tablet, etc.), then screenshot your response and paste it into the problem. If you decide to write out your solutions this way, I suggest doing it in OneNote. I’ve created a class OneNote which includes a sub-notebook for each of you. To make a selected screen
shot in Windows, use the keyboard shortcut “⊞ Win + Shift + s”. Please resize the pasted selection appropriately.

- Finally, you may decide to write out your solution using good-old-fashioned-flesh-and-blood pencil and paper. You can then take a picture or scan your work, then copy and paste your solutions under appropriate problem. I recommend scanning your work. I suggest you install a scanner app on your phone/tablet/laptop to scan your work. An excellent, free app is Adobe Scan. Please resize the pasted selection appropriately.

Whatever your method, please make sure to input it into the Word doc provided in the assignment. Do not submit PDFs of your work.
### Approximate Course Schedule (subject to change)

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<th>Week</th>
<th>Topics</th>
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| 1 (September 28 – October 2)              | **Writing Science** You are a professional writer (the importance of writing in science), re(writing), laws of communication and the golden rule(s)  
**Stories:** Science writing as storytelling, making stories sticky using SUCCESs. |
| 2 (October 5 – 9)                         | Simple, Unexpected, Concrete                                           |
| 3 (October 12 – 16)                       | Credible, Emotional, Stories                                          |
|                                          | **Story Structure:** Designing the floorplan                         |
|                                          | OCAR, LDR, LD, ABDCE Opening, The Funnel                             |
| 4 (October 19 – 23)                       | Challenge, Action, Resolution                                         |
| 5 (October 26 – October 30)               | The OUTLINE: driving science with writing.                            |
| 6 (November 2 – November 6)               | **Toward a clearer story:** Wood and Nails                            |
|                                          | **Style** Internal structure, paragraphs, sentences, words            |
|                                          | **In-class presentation due.**                                        |
| 7 (November 9 – 13)                       | **Clarity:** Characters and Actions, Cohesion: A Sense of Flow, Coherence: Well-formed (focusing on a coherent set of characters) Emphasis |
|                                          | **Paper rough draft due?**                                            |
| 8 (November 16 – 20)                      | **Fine Structure:** Gardens and Finials                               |
|                                          | **Grace:** Energizing writing, Concision, Shape, Elegance. Real editing. |
|                                          | **Ethics:** Your duties as a scientist and writer                     |
|                                          | **Paper rough draft due?**                                            |
| 9 (November 23 – 27) **No Class Thursday due to Thanksgiving Holiday** | Abstracts, figures, and tables.                                       |
|                                          | **Other Communication** Talks, posters, etc.                          |
| 10 (November 23 – December 4)             | Grants, loose ends, summary.                                          |
| 11 (December 7 – 11) **Finals Week**      | **Final documents and presentations:**  
12:30 p.m. on Tuesday, December 8th |