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Course Name

Scientific Writing

Course Number

IB 514

Course Credits

3.0

**Class Meeting Times**

Lecture: Monday & Wednesday 2-3:20 pm

**Prerequisite and/or Corequisite**

*Prerequisite: None*

# Catalog Course Description

*Develops skills and strategies for producing clear, effective scientific manuscripts and professional documents. Covers the full writing process, including writing habits, workflow management, journal selection, and the peer review and publication process. Explores best practices for integrating literature, using reference managers, and adopting alternative writing and word-processing tools. Emphasizes practical, hands-on experience through real-world scientific writing, peer feedback, and collaborative accountability.*

# Course Content

***Week 1 – Writing Habits*** *Daily writing routines, time management strategies, workflow organization tools, early drafting practices, protected writing time, major and minor deadlines, writer’s block, meta-cognitive approaches.*

***Week 2 – Project Presentations: Topic, Goals, Timeline*** *Project introductions, writing goals, target outputs, timelines, accountability structures, peer progress tracking.*

***Week 3 – Manuscript Workflows*** *Project organization strategies, idea-to-manuscript pipelines, research notes and code integration, manuscript templates, word processing tools (MS Word, LaTeX, Scrivener, Markdown), digital lab notebooks.*

***Week 4 – Manuscript Meta-Structuring*** *Audience identification, journal selection, methods section detail, integration of equations, title and abstract design, analysis of effective papers, signposting strategies, structural coherence.*

***Week 5 – Literature Integration and Reference Management*** *Literature search strategies, staying current in the field, source organization, reference management tools, annotated bibliographies, literature integration techniques.*

***Week 6 – Collaborators and Collaborative Writing*** *Collaborative writing dynamics, version control, communication strategies, task delegation, authorship conventions, contribution tracking, co-authorship expectations.*

***Week 7 – Peer Review and Publication Process*** *Peer review stages, reviewer and author perspectives, reviewer feedback, revision and resubmission, rejection management, page charges, proofing processes.*

***Week 8 – Pre-Publishing and Alternative Review Models*** *Preprint server platforms, benefits and limitations, informal review processes, friendly review, alternative peer review models (e.g., Peer Community In).*

***Week 9 – Journal Submission and Formatting*** *Final formatting, author guidelines, journal-specific requirements, cover letter components, submission logistics, common pitfalls.*

***Week 10 – Final Project Presentations and Peer Feedback*** *Project outcomes, writing progress, successes and challenges, modified timelines, structured peer feedback.*

# Course Specific Measurable Student Learning Outcomes

***Master’s-Level Learning Outcomes***

1. *Develop sustainable writing habits and workflows for scientific and professional communication.*
2. *Apply strategies for organizing, drafting, revising, and formatting scientific manuscripts.*
3. *Evaluate published literature and peer feedback to improve clarity, structure, and impact in scientific writing.*

***PhD-Level Additional Learning Outcomes***

1. *Analyze disciplinary writing conventions and publication practices to strategically position research within the field.*
2. *Design collaborative writing and publication strategies across multi-author, interdisciplinary projects.*
3. *Synthesize feedback from peer review, pre-publication processes, and editorial responses to refine manuscripts for high-impact dissemination.*

# Evaluation of Student Performance

1. *Writing Project Portfolio – 45%*
2. *Process Documentation and Reflection – 25%*
3. *Peer Review and Feedback Participation – 15%*
4. *Project Presentation and Professional Engagement – 15%*

## *Grading Scale*

| *Grade* | *Percent Range* |
| --- | --- |
| *A* | *95-100* |
| *A-* | *90-94* |
| *B+* | *87-89* |
| *B* | *83-86* |
| *B-* | *80-82* |
| *C+* | *77-79* |
| *C* | *73-76* |
| *C-* | *70-72* |
| *D+* | *67-69* |
| *D* | *63-66* |
| *D-* | *60-62* |
| *F* | *59 and below* |

# Learning Resources

*None*

# Course Statements

**Academic Calendar**

All students are subject to the registration and refund deadlines as stated in the Academic Calendar: <https://registrar.oregonstate.edu/osu-academic-calendar>

**Statement Regarding Students with Disabilities**

Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval please contact DAS immediately at 541-737-4098 or at [http://ds.oregonstate.edu](http://ds.oregonstate.edu/). DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations."

**Student Conduct Expectations link**: <https://beav.es/codeofconduct>

**Student Bill of Rights**

OSU has twelve established student rights. They include due process in all university disciplinary processes, an equal opportunity to learn, and grading in accordance with the course syllabus: [https://asosu.oregonstate.edu/advocacy/rights](https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fasosu.oregonstate.edu%2Fadvocacy%2Frights&data=04%7C01%7Cmeilianty.gunawan%40oregonstate.edu%7C7dcbe43a7f474303984108d9d13aec20%7Cce6d05e13c5e4d6287a84c4a2713c113%7C0%7C0%7C637770873255816508%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=Ws9zCHbxEKCPT4I4s9A8nivAehvFWhTRz7I6dpQEA9w%3D&reserved=0)

**Reach Out for Success**

University students encounter setbacks from time to time. If you encounter difficulties and need assistance, it’s important to reach out. Consider discussing the situation with an instructor or academic advisor. Learn about resources that assist with wellness and academic success at [oregonstate.edu/ReachOut](https://counseling.oregonstate.edu/reach-out-success). If you are in immediate crisis, please contact the Crisis Text Line by texting OREGON to 741-741 or call the National Suicide Prevention Lifeline at 1-800-273-TALK (8255)

**Student Learning Experience Survey**

During Fall, Winter, and Spring term the online Student Learning Experience surveys open to students the Wednesday of week 9 and close the Sunday before Finals Week. Students will receive notification, instructions and the link through their ONID email. They may also log into the system via MyOregonState or directly at [beaves.es/Student-Learning-Survey](https://beav.es/Student-Learning-Survey). Survey results are extremely important and are used to help improve courses and the learning experience of future students. Responses are anonymous (unless a student chooses to “sign” their comments, agreeing to relinquish anonymity of written comments) and are not available to instructors until after grades have been posted. The results of scaled questions and signed comments go to both the instructor and their unit head/supervisor. Anonymous (unsigned) comments go to the instructor only.