Course Syllabus – BIOL 4463/6463 – Scientific Writing

Instructors:	René Malenfant	**Lecture:**	TTh: 13:00–14:20 (B27)
Email:	rene.malenfant@unb.ca	**Office Hours:**	By appointment

How to Contact Me

I want to ensure that I am available to answer your questions, to provide useful feedback, and to connect when needed.

- If you have comments or questions about our course, please feel free to email me at the email addresses above.
- If you wish, we can arrange a time to meet so that we can address whatever questions or issues you have as efficiently as possible.
- Please do not try to contact me any other way than email. I will not be checking other avenues, and I don't want your message to get lost.

Barring other commitments, replies to email questions will usually be prompt during the workweek (i.e., Monday–Friday, 9:00 AM to 5:00 PM), and much more slowly (or perhaps not at all) afterhours or on the weekend.

About the Course

Course Description:
A workshop and project-oriented course in scientific writing. The primary focus is on writing the journal paper. Enrolling students must have a research project (Honours thesis or other) advanced enough to be written up as part of the course activity, and must be able to share drafts with classmates. Limited enrolment.

Course Prerequisites:
Permission of the instructor. Credit can only be obtained for one of BIOL 6463, BIOL 4483, or BIOL 4463.

Required Textbook:
Heard, S.B. 2022. *The Scientist's Guide to Writing*, 2nd ed. Princeton University Press: Princeton, NJ.

Other Useful Resources:
Pinker, S. 2014. *The Sense of Style: The Thinking Person's Guide to Writing in the 21st Century*. Viking: New York, NY.
Pechenik, J.A. 2016. *A Short Guide to Writing about Biology*, 9th ed. Pearson: New York, NY.
Strunk Jr., W., & White, E.B. 1999. *The Elements of Style*, 4th ed. Pearson: New York, NY.
Tufte, E.R. 2001. *The Visual Display of Quantitative Information*, 2nd ed. Graphics Press: Cheshire, CT.
Zinsser, W. 2016. *On Writing Well: The Classic Guide to Writing Nonfiction*, 30th Anniversary Ed. Harper Perennial: New York, NY.

Course Topics and Outcomes:
Upon completion of this course, you will be able to:
- Develop and structure scientific narratives effectively, applying principles of clear and engaging writing to all components of a scientific paper.
- Create informative figures and tables, and write concise, impactful results and discussion sections.
- Review scientific manuscripts and revise effectively in response to critiques.
- Use effective communication strategies for a broader audience, including media outreach and presentation skills, to convey scientific research clearly and engagingly.
- Understand and apply ethical considerations in scientific writing, including proper citation practices, coauthorship responsibilities, and the judicious use of large language models.

Students' competency levels on these outcomes may vary. Outcomes achievement requires the meeting of all course expectations, including honouring of all course policies, regular class attendance, and completion of all assigned work in good faith and on time.

Grading, Marks, and Course Policies

Grading Scale

Letter Grade	Percentage Grade	Grade Points
A+	[93–100%]	4.3
A	[85–93%)	4.0 (Excellent)
A–	[80–85%)	3.7
B+	[75–80%)	3.3
B	[70–75%)	3.0 (Good)
B–	[65–70%)	2.7
C+	[60–65%)	2.3
C	[55–60%)	2.0 (Satisfactory)
D	[50–55%)	1.0
F	[0–50%)	0.0

Course Marking Scheme

Item	Value	Date Due	Details
Assignments	70%	See below	Seven assignments
Workshop products	20%	See below	To be submitted at the end of each workshop
Workshop participation	10%	N/A	Attendance and contributions to group
Total:	**100%**		

Course Policies:

- Please consult UNB's regulations regarding class attendance and decorum: http://go.unb.ca/tls1viWva and http://go.unb.ca/tlsmWzKLL

- Unless a student has prior approval from the instructor, there is a 20% penalty for each day an assignment is late.

- Assignments (and the final project) are **individual work**, and collaboration among students should not exceed the kind of help you would expect from an instructor or a TA. Any contributions from others must be clearly attributed, and the nature of any collaboration or assistance should be explained (e.g., in an Acknowledgements section). Academic misconduct will be dealt with strictly according to UNB policies. (See below.)

- Mobile devices are to be turned off during lectures. Anyone who wishes to video or audio record lecture presentations or distribute course notes or other similar materials provided by instructors must obtain the instructor's written consent beforehand. Otherwise, all such reproduction is an infringement of copyright and is absolutely prohibited and subject to academic penalties (see Academic Offences below). Classes may be recorded by students with documented disabilities for personal and private use.

- Extra credit for additional work will not be granted.

Lecture Schedule

The intended schedule is found below. It is subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better student learning. Students will be notified if and when changes are made (stay up-to-date via D2L Brightspace).

Date	Lecture	Workshop	Reading	Assignment due
Jan 9	L1: Intro, set up peer groups	W1: Peer groups get-to-know-you		
Jan 11	L2: Papers as stories	W2: Outlining three ways	Ch 1, 2, 7	
Jan 16	L3: Writing strategy	W3: Tip sheets	Ch 4, 5, 6	A1: Story summary
Jan 18	L4: Paper structure	W4: Finding IMRaD	Ch 8, 16	
Jan 23	L5: Methods	W5: Methods detail	Ch 11; pp 174-176	
Jan 25	L6: Figures and tables	W6: Figure/Table draft	Ch 12	
Jan 30	L7: Results	W7: Results critique		A2: Methods draft
Feb 1	L8: Discussion	W8: Discussion markup	Ch 13	
Feb 6	L9: Introduction	W9: Introduction markup	Ch 10	A3: Results draft
Feb 8	L10: Citation searching and reference management	*None*		
Feb 13	L11: Paragraphs	W10: Paragraph markup	Ch 17	A4: Discussion draft
Feb 15	L12: Peer reviewing	W11: Methods/Results peer comments	Ch 23; pp 267-269	
Feb 20	*No lecture, but meet for workshop*	W11: Methods/Results peer comments, cont.		
Feb 22	L13: Deep reading and writing	*None*	Ch 28	A5: Introduction draft
Feb 27	L14: Revision	*None*	Ch 21, 22	
Feb 29	L15: Response to reviews	W12: Response to reviews	Ch 24	
Mar 5	*Reading Week – no class*			
Mar 7	*Reading Week – no class*			
Mar 12	L16: Title and Abstract	W13: Titles	Ch 9	A6: Complete paper draft, with response to reviews
Mar 14	L17: Brevity	W14: Bloat and cut	Ch 20	
Mar 19	L18: Large language models	*None*		
Mar 21	L19: Citation practices	*None*	Ch 15	
Mar 26	L20: Coauthorship	*None*	Ch 27	
Mar 28	L21: Journal choice	W15: Evaluating journals		
Apr 2	L22: Outreach	W16: Media critique	pp 269-272	
Apr 4	L23: Beauty and humour	W17: Jargon	Ch 30	A7: Opinion piece
Apr 9	L24: Grants, posters, and presentations	*None*		
Apr 11	*No lecture, but meet for workshop*	W18: Three-minute thesis		

Student Support Information

D2L
Online course materials can be found in D2L Brightspace, UNB's online Learning Management System. You can access it through the MyUNB portal for single login to all UNB services (https://my.unb.ca/Pages/default.aspx) or directly at https://lms.unb.ca/.

D2L Brightspace Support for Students:
https://unbcloud.sharepoint.com/sites/adm/SitePages/D2L-Resources-for-Students.aspx

For D2L technical support, contact: d2l@unb.ca

Key Technologies
During the semester, there are a variety of technologies that students will be expected to use. Students can contact their course instructor or Information Technology Services (ITS) Help Desk (itservicedesk@unb.ca). These (free) resources include:
- Microsoft 365 – can be obtained through your UNB login account (https://my.unb.ca)
- Zotero – is highly recommended and available from https://www.zotero.org/
  - You are also free to use other reference management software, such as Mendeley, EndNote, RefWorks, etc.

Libraries
UNB Libraries supports your learning and academic success. Librarians will help you navigate academic resources and guide you through your research and information needs. Examples of this support include finding reliable sources for your assignments, searching scholarly databases, and offering advice on the quality of your research. A vast collection of resources is available to you online and in print at lib.unb.ca. Research help is available by phone, e-mail, chat, and in-person. See: www.lib.unb.ca

The libraries offer quiet and group study space. Book a Group Study Room online at:
http://www.lib.unb.ca/services/group_study.php

Tatiana Zaraiskaya is the STEM librarian for the Faculty of Science and the Faculty of Forestry & Environmental Management. Tatiana is available to meet one-on-one, online or in person. Contact information and research guides by subject: https://lib.unb.ca/profile/tatiana-zaraiskaya

Services for Students with Disabilities
If you are a student with a disability of any type (physical, mental, learning, medical, chronic health, sensory; visible or invisible) you are strongly encouraged to register with the UNBF Student Accessibility Centre (SAC) (https://www.unb.ca/fredericton/studentservices/academic-success/accessibility-centre/) so that you may receive appropriate services and accommodations. Once you are registered with SAC, you'll receive an accommodation letter you can share with instructors. If you would like to discuss your needs with the instructor, please book a time for a confidential appointment.

Student Services Writing and Study Skills Support
The UNB Writing and Study Skills Centre provides many coaching and mentoring services to assist with writing papers, effective study methods, and other skills development related to student success: http://www.unb.ca/fredericton/studentservices/academics/writing-centre/index.html

Student Services Learning Strategist Support
Any UNB student wanting to improve their academic skills may book appointments with the Learning Strategist. The Strategist offers instruction on topics such as: "learning how to learn" strategies, memory techniques, time management skills, test preparation and test taking methods, note-taking, and other learning and study skills.
https://www.unb.ca/fredericton/studentservices/academic-success/accessibility-centre/services-and-support.html

Math Skills Support
UNB's Math Learning Centre offers math help drop-in times and opportunity to book appointments: https://www.unbsu.ca/math-learning-centre

Technical Support
Information Technology Services (ITS) Help Desk can be reached by phone 457-2222, email - itservicedesk@unb.ca, or visited in person at the Harriet Irving Library Learning Commons.
http://www.unb.ca/its/get-it-help.html

Student Wellbeing
It is normal for university students to experience mental and physical health challenges. If you or a friend encounter difficulties and need assistance, it's important to reach out. Consider discussing the situation with a mentor or academic advisor. Learn about resources that assist with wellness and academic success at the University of New Brunswick by visiting:
https://www.unb.ca/fredericton/studentservices/be-healthy-at-unb.html

If you are in immediate crisis, please contact CHIMO helpline at 1-800-667-5005.

Plagiarism and Academic Offences

The university has carefully defined what it considers plagiarism, and these regulations are found in the UNB Undergraduate Calendar, Section B University-Wide Academic Regulations, VIII Academic Offences, or visit: http://go.unb.ca/tlsPb0XX5. It is the student's responsibility to know the regulations.

Plagiarism includes:

1. quoting verbatim or almost verbatim from any source, regardless of format, without acknowledgement;
2. adopting someone else's line of thought, argument, arrangement, or supporting evidence (such as, statistics, bibliographies, etc.) without indicating such dependence;
3. submitting someone else's work, in whatever form (essay, film, workbook, artwork, computer materials, etc.) without acknowledgement;
4. knowingly representing as one's own work any idea of another.

NOTE: In courses which include group work, a penalty may be imposed on all members of the group unless an act of plagiarism is identified clearly with an individual student or students. Also, please note that plagiarism is not difficult to spot; web sources can be quickly traced through a variety of specialty search engines. Professors are required to follow the disciplinary procedures outlined in the Calendar (see link above).

OTHER ACADEMIC OFFENCES you need to be aware of include:

1. Cheating on examinations, tests, assignments or reports, including but not limited to:
   Impersonating a candidate at an examination or test or in connection with any assignment in a course or availing oneself of the results of impersonation.
   Obtaining, through theft, bribery, collusion, purchase, or other improper manner,
   (i) an examination or test paper prior to the date and time for writing the examination or test;
   (ii) academic materials belonging to another person, e.g., laboratory reports, assignments, papers, computer materials, datasets.
2. Falsifying or knowingly submitting false assignments or credentials, records, transcripts, or other academic documents.
3. Submitting a false health or other certificate.
4. Submitting identical or substantially similar work for one course or program of study, which has been or is being submitted for another course or program of study, without the prior express knowledge and approval of the instructors.
5. Interfering with the right of other students to pursue their studies.
6. Knowingly aiding or abetting any of the above offences.

7. Tampering with, or altering, in any deceptive way, work subsequently presented for a review of the grade awarded.

Penalties for plagiarism and other academic offences range from a minimum of F (zero) in the assignment, exam or test to a maximum of suspension or expulsion from the University, plus a notation of the academic offence on the student's transcript.

Statement on Generative AI

Students are encouraged to use generative artificial intelligence (AI) throughout this course in whatever way enhances their learning. Use of generative AI should be documented in the Acknowledgments of every assignment in which it has been used. You should describe both the program you used (e.g., ChatGPT 4) and the purpose for which you used it (e.g., generating code, brainstorming, making revisions to your writing). Regardless of whether you use generative AI, you are entirely responsible for the content of the work you submit, including any errors committed by the AI.