

SCIENTIFIC COMMUNICATION (BIOL 670/498-01)

Fall 2016

INSTRUCTOR Dr. Chiara Gamberi; email: chiara.gamberi@concordia.ca
COURSE HOURS Monday, 1:15-4:00 p.m., see university schedule
OFFICE HOURS Monday, 4:30 – 6:00 p.m. Tuesday 8:30-9 p.m. SP 375.35. Please take an appointment.

COURSE OUTLINE

This is a “learning-by-doing” course designed to help students improve the clarity, focus and fluency of their written and oral scientific work while maintaining content accuracy. Meetings will combine short lessons, discussions, and course exercises and assignments. Lessons and course assignments are designed to promote the capacity to write clear and effective research papers, deliver oral presentations, to prepare effective scientific posters and to summarize scientific contents to the public. Throughout the course, students will practice to provide constructive feedback on each other’s work.

GRADING COMPONENTS*	Writing assignments	30%*
	Participation	40%
	Final oral presentation	15%*
	Final poster	15%*
	*See below	

Writing assignments:

- A: ‘Abstract’ assignment (discussed lecture 1, realized in class during lecture 2): 5%
- B: ‘Introduction’ assignment (discussed lecture 2, realized in/out of class on week 3): 5%
- C: Draft of paper (discussed throughout course): 12%
- D: Final written paper (discussed throughout course): 8%

Participation:

This is a key part of this course. Attendance is NOT counted as participation. Your grade will be assessed based on your level of contribution to ongoing course discussions (15%: across all classes, the times you provide constructive comments to other students and ask questions; 10%: your motivation towards carrying out course assignments/exercises and improving your scientific communication skills; 10%: on the evaluations/feedback you provide to fellow students on their oral presentations and posters and the components of their writing; 5%: on completing critiques of literature and seminars and presenting these to the class.

COURSE MATERIALS AND RECOMMENDED READINGS

Bringing a laptop computer to the course will be essential to carry out in-course assignments/exercises. The laptop should have Microsoft Word and PowerPoint or equivalent programs.

For course exercises and assignments (e.g., writing exercises, oral presentations, and posters), students may use material that they are currently working on as part of their graduate studies or BIOL490 projects, or that they carried out as a BSc thesis project. If such material is not available, please discuss with Dr. Gamberi to find alternatives.

Costs for printing one final poster (see schedule below) will be covered by the student (usually between \$50 and \$70). The onus will be on the student to ensure that their poster is printed and ready to present during the poster symposium.

There are no mandatory text books for this course. Reading materials and various resources will be recommended throughout the course as starting assets to initiate an ongoing personal development practice.

COURSE SCHEDULE*

Week 1

Course introduction, aims, objectives, assignments

What is scientific communication?

Friday departmental seminar series

Students will find two papers in their field (one 'good', one 'bad') to report on in future classes

Weeks 2, 3, 4

Scientific writing I, II, III

Student critiques of their two papers

'Abstract' assignment, in class week 2

'Introduction' assignment, in class week 3

The revising mindset continues, week 4

Week 5

Scientific writing wrap up

Constructing scientific posters

Student critiques of their own papers

Week 6 (will be held in the Vanier Library Room VL-122)

Guest lecture by Biology Librarian Katharine Hall with hands-on practice

Effective searches of the scientific literature

Proper citation

Possibly predatory publishers

Week 7

Draft poster surveying and screening I

Students will provide feedback on each other's draft posters

Student critiques of their assigned seminar

Week 8

Draft poster surveying and screening II

Students will provide feedback on each other's draft posters

Student critiques of their assigned seminar

Week 9 (Exact timeslot to be determined)

Final poster symposium in the Department of Biology

Departmental staff and faculty, and students enrolled in the course, will assess individual posters.

The students' assessments will consider progress since the draft poster session.

Week 10

Constructing and presenting oral presentations

Speaking to the media

Student critiques of their assigned seminar

Week 11

Practice oral presentations, first half of students (8 minutes each)

Students will provide feedback on each other's practice oral presentations

Draft of the final writing assignment due

Week 12

Practice oral presentations, second half of students (8 minutes each)

Students will provide feedback on each other's practice oral presentations

Week 13 (Exact timeslot to be determined)

Final oral presentations (8 minutes each)

Students will assess each other on individual presentations, based on progress

Final writing assignment due

Week 14, 15

Course marks returned to students, one-on-one meetings as needed

*In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in this course is subject to change

IMPORTANT NOTE: This course (like all other courses offered at Concordia University), follows the university's 'Academic Integrity and the Academic Code of Conduct'. We strongly encourage students to take a moment to read over this code:

<http://registrar.concordia.ca/calendar/17/17.10.html>.

***Notes on grading assessments for writing assignments:**

Marks are deducted in relation to whether a student is satisfactorily applying course principles in their writing. This list is not intended to be exhaustive but to give the student a very clear sense of what their writing is expected to include:

- A, C, D: Scope of the investigation and principle objectives is not introduced
- A, C, D: General methods employed are not described
- A, C, D: Main results, if applicable, are not described
- A, C, D: Principle conclusions and implications are not described
- B, C, D: The nature/scope of the problem investigated is not clearly stated
- B, C, D: The review of relevant literature is insufficient to orient readers
- B, C, D: The general method of investigation is not introduced
- B, C, D: Definitions of key terms or abbreviations are not introduced (may not apply)
- B, C, D: There are no distinguishing statements that permit a reader to assess the significance and originality of the work relative to previous works
- B, C, D: The introduction does not have good flow (*e.g.*, linking sentences between paragraphs are used, funnel approach is applied)
- C, D: Title too long
- C, D: Repetition in results of what is already present in Tables/Figures
- C, D: Improper Table/Figure formatting or referencing
- C, D: Non-standardized literature reference style
- C, D: Discussion does not link well with the Introduction
- C, D: Implications of the work are not brought put in the end of the discussion
- C, D: Table contents read across, not down
- C, D: Word count exceeds that allotted for the project
- Other A,B,C, D: improper structural order
- Other A,B,C, D: improper tense used depending on the section
- Other A,B,C, D: long sentences
- Other A,B,C, D: incorrect grammar/spelling/excess jargon or verbiage

Notes on grading assessments for final posters and oral presentations:

Again, this is not an exhaustive list, it is meant as a guide:

- Too much text
- Too small a font
- Overload of figures/photos
- Poor spelling/grammar
- Misalignment of boxes in a poster, overall lack of neatness in layout
- Missing sections
- Background (*e.g.*, not dark on light, distracting photo background etc.)
- Presentation assumes audience already has background information
- Imbalances in presentation components (*e.g.*, too much time on introduction)
- Overtime (-1% for every 1 minute or fraction after the 8 minute mark)
- Insufficient eye contact with audience
- Mannerisms that do not follow presentation etiquette
- Use of cue cards