

Communicating in Biology Biology CL2 (BIO 387) – Spring 2018

Meetings: Monday, Wednesday, Friday 12:00 - 12:50 PM Room: Clemens 204

Instructor: Dr. Kristina Blanke kblanke@buffalo.edu

Office: Cooke Hall 311

Office Hours: Wednesdays 1:30-2:30PM and Thursdays 2-3PM **or by appointment**

TA: John Traversone johntrav@buffalo.edu

Office Hours: Monday 10-11AM and Wednesday 10-11AM in Cooke Hall 221

BIO 387 counts as an elective for BS majors but **does not** count as an elective for BA majors.

Required text:

Pechenik, J. (2016). *A Short Guide to Writing About Biology* (9th Edition). NY: Pearson/Longman Publishers.

Required Text Readings:

All reading assignments are listed within the daily schedule below.

Goals of the Course:

This course introduces students to the ways biologists communicate, both with each other and the broader public. The focus is threefold: 1) describing data, 2) describing experimental design, and 3) presenting biology. Assignments from each section are designed to improve skills with scientific styles and modes of expression. The aim is to foster confidence in a scientific style of communication – which is often quite different from that taught in the humanities. Conciseness, clarity, and exactness are the hallmarks of successful written and oral work in this course. By completing Communicating in Biology, students will develop these traits in their written and oral expression.

Students who complete Communicating in Biology will be able to:

Course Learning Outcome	Maps to the Following Program Outcomes / Competencies:	Delivered through the Following Instructional Method(s):	Student Achievement Assessed with the Following Method(s)/Assignments:
1. Compose in academic, professional, and/or workplace genres related to a field of study.	UBGE, SUNY Basic Communication, MSCHE Oral & Written Communication	Lecture, Group discussion, Workshops, Projects	Caption, Results, Discussion, Methods, Summary/Critique
2. Apply writing processes common to that field.	UBGE, SUNY Basic Communication, MSCHE Oral & Written Communication	Lecture, Group discussion, Projects	Caption, Results, Discussion, Procedure, Summary/Critique
3. Compose and deliver a professional presentation.	UBGE, SUNY Basic Communication, MSCHE Oral & Written Communication	Lecture, Projects	Presentation, Poster
4. Describe the conventions of genres within a field.	UBGE, SUNY Basic Communication, MSCHE Oral & Written Communication	Lecture, Group discussion, Workshops, Projects	Summary/Critique, Presentation, Poster
5. Make effective disciplinary and professional arguments.	UBGE, SUNY Basic Communication, SUNY Critical Thinking, SUNY Information Literacy, MSCHE Oral & Written Communication, Critical Reasoning & Analysis	Lecture, Group discussion, Projects	Discussion, Summary/Critique, Presentation, Poster

Note: UBGE = UB General Education; SUNY categories in the above table are those required by the SUNY General Education Program (http://system.suny.edu/media/suny/content-assets/documents/academic-affairs/general-education/GenedCourseGuidelines_20120530.pdf), and MSCHE categories represent the areas of general education required by the Middle States Commission on Higher Education.

Course structure:

Biology is a field driven by data and data analysis. Part 1 starts with data descriptions, moving from figures to Results and Discussion sections from formal primary journal articles and lab reports. Part 2 focuses on how scientists explain what they do through protocols and methods, then transitions to reading full-length primary research articles to write a summary/critique. Part 3 finishes with oral communication through research presentations and posters for peer scientists, followed by skills to address the general public.

Attendance:

You are expected to attend every class session and participate in the activities; this will be reflected in your grade. Class meetings will vary in format, with heavy emphasis on student-led group discussion, group writing, peer evaluation, and self/peer reflection. Therefore, attendance is critical to student success. **Students can miss up to two classes without a university approved excuse to account for an illness or other circumstances - additional missed classes will significantly lower your grade.** You are responsible for any material covered during the absence.

- Class will start and end on time
- Learning is dependent on student-focused activities
- You need to be on time or early to class; being late is not acceptable since it disrupts the class and decreases the effectiveness of instructional teaching
- Coming to class late because of printing issues is not an excused absence
- If you are going to be *more than five minutes late*, reconsider your mode of operation – rearrange your schedule or resign from the class

Assignments:

All writing assignments need to be submitted online through SafeAssign. First drafts and final copies must be **typed, double spaced, and stapled** to facilitate instructor and peer editing; these assignments have to be submitted online through SafeAssign and 1-2 hard copies need to be brought to class to receive full credit. All assignments will be described in class and under the assignments posted on *UBlearns*. Please reference these sources for clarifications on expectations, requirements, and evaluation methods. All writing expectations will be posted in advance of the due dates.

- All assignments **must be submitted through SafeAssign on UBlearns** –any assignments not submitted through SafeAssign will not be graded and receive zero points
- All Analyses and Writing Prompts must be revised before submitted through SafeAssign on *UBlearns* - points will be deducted for incoherent thoughts and poor sentence structure
- All first drafts - submit through SafeAssign and bring two hard copies to class; students who are not prepared for class may be asked to leave and marked absent
- All final drafts - submit through SafeAssign and bring one hard copy to class
- All assignments are due at the beginning of class, or they will be late
- **Dr. Blanke will only grade paper copies; make sure you submit assignments before or during class when they are due (hard and electronic copies), or your work will be late and lose points**
- All assignments are due at their respective deadlines; there is a 48-hour grace period for late work to receive partial credit [-15% (B) when 0-24 hours late; -25% (C) when 24-48 hours late]. **Assignments will not be accepted and will receive zero points 48-hours after the assigned deadline.**

Writing:

Prompts – One writing prompt will be assigned during each unit (three total) based on the topics we cover. You will have one week to complete the assignment by answering a question in 200 or more words. These assignments **must** be revised and well written. Each prompt is worth 15 points.

Quizzes – Each class may start with one of seven quizzes to identify how well you are learning the in-class material and reading the assigned text. Quizzes cannot be made up and are worth five points.

Self and Article Analyses:

Self-analyses will identify your scientific progress/understanding from class activities, determine your writing improvements, and monitor what techniques need to be strengthened. Article Analyses will improve your scientific critical thinking skills by evaluating current research articles. Weekly entries focus on a particular writing skill and must be at least 150 words, revised, and **submitted through Ulearns on Fridays by 5PM.**

Grading:

All assignments will be discussed in class and guidelines will be posted on Ulearns with the corresponding due dates. Your grade will be determined by your performance on the following assignments.

Assignment	Points
Abstract #1	20
Methods Sample	10
Figure Caption draft three	20
Figure Caption final	20
Results draft	40
Results final	50
Discussion part I	30
Discussion parts I-IV	40
Full Discussion final	50
Procedure Assignment	20
Methods draft	20
Methods final	30

Assignment	Points
Group article questions	20
Summary/Critique draft	100
Summary/Critique final	100
Individual article questions	20
Abstract #2	20
Presentation	70
Poster	50
Writing Prompts	45
Quizzes	35
Weekly Self-Analyses	140
Attendance	50
Total	1000

Grades are as follows and will not be curved or adjusted. Final grading is done on a straight scale, with scores rounded to the nearest tenth of a percent.

Low	High	Grade
0.930	1.000	A
0.900	0.929	A-
0.870	0.899	B+
0.830	0.869	B
0.800	0.829	B-

Low	High	Grade
0.770	0.799	C+
0.730	0.769	C
0.700	0.729	C-
0.600	0.699	D
0.000	0.599	F

***Students who do not participate in the presentation or poster will fail (F) the course.**

Communication:

I will communicate regularly with you via postings on Ulearns and email. Please be sure you are receiving my emails and that your email account is below quota so my messages do not bounce from your inbox unread. Class changes will be sent through email during inclement weather, please check regularly.

Student Responsibilities:

It is your responsibility to notify Dr. Blanke if you have any conflicts with course expectations including, but not limited to, attendance and assignment submissions - *Communication is your most important responsibility.*

- **Dr. Blanke must be informed before class/assignments are due so accommodations can be made; otherwise, there will be no exceptions and work will be considered late**
- Emailing a few minutes before class starts is acceptable, and accommodations can be made
- **If Dr. Blanke is not informed before a deadline, no accommodations will be made**

Academic Dishonesty:

Academic integrity is a fundamental university value. Through the honest completion of academic work, students sustain the integrity of the university while facilitating the university's imperative for the transmission of knowledge and culture based upon the generation of new and innovative ideas.

Academic dishonesty, as defined at UB, includes submitting previously submitted work, plagiarism, using unauthorized materials, the giving and receiving of unauthorized assistance during an exam or on an assignment, falsification of academic materials, misrepresentation of documents, receipt or distribution of confidential academic materials, and selling or purchasing academic assignments.

SafeAssign.com – To facilitate academic honesty, all written assignments will be submitted via SafeAssign through *UBlearns*. Any work not submitted through SafeAssign will receive zero points.

Any academic dishonesty is unacceptable and can result in course failure.

Refer to the University at Buffalo's regulations for Academic Integrity for more information:
<http://catalog.buffalo.edu/policies/integrity.html>

Accessibility Resources:

If you have any disability that requires reasonable accommodations to enable you to participate in this course, please contact the Office of Accessibility Resources, 60 Capen Hall, 645-2608, and also Dr. Blanke. The office will provide you with information and review appropriate arrangements for reasonable accommodations.
<http://www.buffalo.edu/studentlife/who-we-are/departments/accessibility.html>

Daily schedule of lectures and assignments for Communicating in Biology:

	Date	Class Topic	Assignments Due & Readings
Part1: Describing Data			
1	1/29	Course Introduction & Goals	Read Syllabus
2	1/31	Journal Articles & Plagiarism	Read Journal Article
3	2/2	Introduction to data: Figures & Captions Designing Figures	Abstract #1
4	2/5	Revision Techniques: Content first	Figure Caption draft one Chapters 1 & 6
5	2/7	Editing Techniques: Quality Writing	Figure Caption draft two
6	2/9	Peer Review Process Guidelines Peer review: Figure captions	Figure Caption draft three Methods sample
7	2/12	Figures become Results	Chapter 4 & Chapter 9: Writing the Results Section
8	2/14	Peer review: Results	Figure caption final
9	2/16	Results vs. Discussion	Results draft
10	2/19	Interpretation of Results	Writing Prompt: Describe the techniques and process you use to revise/edit your writing assignments.
11	2/21	Peer review: Discussion I	Results final Chapter 9: Citing Sources -> Writing the Discussion Section
12	2/23	Writing Workshop 1	Discussion part I
13	2/26	Implications of Results	
14	2/28	Peer review: Complete Discussion (I-IV)	

	Date	Class Topic	Assignments Due & Readings
Part 2: Describing Experimental Design			
15	3/2	Review Part I & Procedures	Discussion: part I Revised & parts II-IV as one document
16	3/5	Methods Section	Procedure Assignment
17	3/7	Methods Workshop	Full Discussion final Chapter 9: Beginning through Writing the ... Methods Section
18	3/9	Peer review: Methods Section	
19	3/12	Reading Journal Articles	Methods draft Chapter 3
20	3/14	Journal Club	Read Journal Article
21	3/16	Writing Workshop 2	Methods final Writing Prompt: Compare and contrast Procedures and Methods Sections.
22	3/26	The Summary Assignment	
23	3/28	Librarian visit	Chapter 2
24	3/30	Discuss Group Article/Answering questions	Individual Article selected Chapter 7
25	4/2	Group Writing Session	Group Article Questions due Tuesday 4/3
26	4/4	Using Transitions to form a Summary	
27	4/6	Self-Revision Techniques	Chapter 5
28	4/9	Peer review: Summary	Individual Article questions
29	4/11	Writing Workshop 3 Review Part II	Summary draft
Part 3: Presenting Biology			
30	4/13	Introduce Group Projects	Chapter 11: Oral Presentations
31	4/16	Research Presentation formats	Summary final
32	4/18	Writing Abstracts	Chapter 9: Writing the Introduction Section -> End
33	4/20	Posters	Chapter 11: Poster Presentations
34	4/23	Project Check-In Final Presentation Discussion	Abstract #2
35	4/25	Communicating with the General Public	
36-41	4/27-5/9	Remaining days: Presentations	Writing Prompt: Identify two benefits and two challenges associated with group work. Due Wednesday 5/9. Posters due via UBlerns on Thursday 5/10
F	5/11	Poster Gallery	

Dr. Blanke reserves the right to modify, amend or change the syllabus (course requirements, grading policy, etc.) as the curriculum and/or program require(s) via announcements in class, email, or posts on UBlerns.