

## **BIOC5915.03 — Scientific Communication in Biochemistry and Molecular Biology II**

**Transcript Title:** Biochem Communications II

<b>Instructor:</b> Dr. David Waisman	<b>E-mail</b> david.waisman@dal.ca	<b>Office location</b> Tupper 11-L2
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**Time and place:** Winter Term 2020  
Wednesdays 1:00-3:00 PM (plus Department Seminars, Wednesdays 4:00-5:00 PM)  
Pathology Conference Room for most sessions.

### **Course Description:**

This course provides students with experience in oral presentation of scientific data and in organization of a scientific symposium. Interactive faculty and peer feedback is used to hone student skills with an emphasis on both clarity of presentation and on the ability of students to discuss specialist topics in general terms.

**Format:** Symposium (including practice, organization and presentation) and attendance at Department Seminars

**Credit Hours:** 3

**General Learning Outcomes:** By the end of this course it is expected that students should be able to:

1. Prepare and deliver an oral scientific presentation to a peer audience.
2. Appraisal of scientific presentations to determine features that enhance or deter from communication of the science.
3. Present scientific data by critically analyzing the seminars of others.
4. Summarize the objectives and results of a published scientific study in a format similar to a scientific journal abstract.
5. Critically evaluate a scientific publication.
6. Organize an oral presentation session for a scientific meeting.

### **Course Material and Assigned Readings:**

Course prospectus, class material, links to papers discussed in class and other assigned readings are available for download from the course website (<http://www3.biochem.dal.ca/5915/>).

### **Course Organization:**

**Part 1** applies and hones presentation skills learned in BIOC 5914 through the mini-symposium presented by course participants. Students select a scientific topic of their choice and prepare individual presentations (specific guidelines for topic selection are provided). Each student, through a 5-10 minute 'sales pitch' talk, first convinces their BIOC 5915 classmates and instructor that their selected topic is exciting and worthwhile. Then, the students present a practice seminar to the class and the students will critique each other's presentations using the seminar evaluation form. Afterwards, an afternoon symposium is presented to the Department (and Faculty), with each student presentation ~25 minutes in length, including a 5 minute question period. Emphasis is on clarity of presentation and the ability to discuss the topic in general terms. Each student writes an abstract summarizing their

own presentation and a "News and Views" summary of their paper which highlights the significance and content of their paper. These are evaluated by 2 faculty members. As a group, the students organize the symposium, generate a symposium abstract booklet, and disseminate notices of the symposium and the booklet, in advance of the symposium date, to relevant departments at Dalhousie University. The final abstract and symposium presentation of each student is evaluated by two faculty members not involved in delivering the course and is based on clarity of the presentation, the ability to discuss the topic in general terms and the answer questions, based on background reading relevant to the topic.

## **Part 2**

As with BIOC 5914, this aspect runs throughout the term and provides opportunities to evaluate seminars by experienced speakers in the Departmental Seminar program. The critique form has been simplified relative to that used for 5914 to focus on the key messages you glean from each talk while still providing opportunities to comment on what you did and did not like about the presentation. By critiquing the seminar presentations of others the student will learn how to fine-tune their presentations to maximize clarity and promote the flow of ideas. These critiques are designed to develop the ability to fine-tune one's own presentations to maximize clarity and promote the flow of ideas.

## Schedule for Winter 2020

### **Part 1** – (1:00-3:00 PM) Pathology Conference Room, 11B01.

January 8 ( 1/2 h) Introduction, topic selection advice & abstract requirements

January 15 (2 h) 'Sales pitch' talks: 5-10 minutes

January 22 (2 h) Practice I (2 students)

January 29 (2 h) Practice II (2 students)

February 5 (2 h) Practice III (2 students)

February 12 (2 h) Practice IV (2 students)

February 15, 5:00 PM – Symposium abstracts submitted to instructor

February 17-21 no classes (Study Break)

February 26 (3 h) Practice (if required) - symposium abstracts and *News and Views* emailed.

March 4- Open practice and PowerPoint testing – Room: TBA

March 18 **GRADUATE STUDENT SYMPOSIUM** – Room: TBA

## **Part 2**

January 8- April 1. (Wednesdays 4:00-5:00) Theater A, Tupper Link

Critiques of all five Departmental seminars must be completed by April 6.

## **COURSE EVALUATION**

Evaluation components: Presentations, written abstract, and seminar critiques.

Course evaluation: Final grades for the course are awarded on a PASS/FAIL basis.\* The following grading scheme is used to ensure that minimum standards are met and that students perform consistently throughout the course. \*NOTE: A total grade of > 70% is required in each of the course parts for a passing grade.

### **90% for Part 1**

20%-*News and Views* style analysis of the paper presented at the symposium (average of two faculty members evaluations).

60% = presentation at symposium (average of two faculty members evaluations).

10% = abstract (average of two faculty members evaluations)

**10% for Part 2** = critiques of departmental seminars – see guidelines below

### **Guidelines for Mini-Symposium Topics and Talks**

1. Each student chooses a scientific topic and designs a presentation on that topic to be given as part of a mini-symposium by the course participants (March 12, 2020, 2:00-6:00 in Theatre A, Tupper Link).
2. Each topic is based on a 2019 research paper published in the journals, Nature, Science or Cell.
3. The overall topic permits the development of an in-depth understanding needed to prepare the talk and answer questions posed by the audience and faculty evaluators.
4. As a group, the course participants determine whether the symposium follows a specific theme or covers diverse topics, in each case focusing on exciting/interesting new discoveries.
5. Each student prepares a 250-word abstract for their topic suitable for compilation into a symposium abstract booklet. A selection of key references, including the primary paper, accompanies each abstract.
6. Course participants evaluate each other's abstracts and practice talks.
7. Course participants organize the symposium, including compilation and distribution of the abstract booklet as well as a notice, advertising the symposium to members of relevant departments at Dalhousie University, sufficiently in advance of the symposium to promote attendance.
8. The length of each talk, the amount of time allotted for questions at the end of each talk and the order in which the talks are given are determined by the course participants in consultation with the course instructor (with 8 students and a maximum of 4 h available, talks of 20-25 minutes with 5-10 minutes for questions could be accommodated with a short break in the middle of the session).

### **Guidelines for News and Views analysis of the student's symposium publication**

The *News and Views* articles are intended to inform nonspecialist readers about new scientific advances. Your *News and Views* paper (2-pages, single spaced, 12-point Times Roman font, plus a third page consisting of a single figure with figure legend). Your paper should highlight its importance and provide a synopsis of your paper in terms of what had been known previously, why this publication is not merely an incremental advance and how it has advanced the field. For a specific examples see -<https://www.nature.com/articles/d41586-019-03242-8>.

**Guidelines for Critiques of seminars.** A portion of your grade for this course is based on the critiquing of seminars. Five (5) seminars are critiqued for a grade in this part of the course. To pass the course, all 5 seminar evaluations must be submitted on or before April 8.

Critiques must be for original research seminars (not journal club or group meeting presentations), of which at least four (4) must be departmental seminars in Biochemistry & Molecular Biology. Note that attendance at departmental seminars is expected of *all* Biochemistry & Molecular Biology graduate students. For critiques of seminars outside the Department, the seminar must be related to the general theme of a graduate degree in Biochemistry & Molecular Biology (i.e., thinking about biomolecule(s) at the molecular and/or submolecular level). If you have degree requirement (e.g., TA activity or a class) that conflicts with the Wednesday 4 PM seminar slot, tell the 5915 instructor so that arrangements can be made.

Seminar evaluations should be provided for speakers at a variety of levels: evaluate some seminars given by faculty members and some by graduate students.

Your completed evaluation forms are submitted to Dr. Waisman at the end of the seminar or, at the latest, within one week of the seminar in question. Evaluations can also be placed in Dr. Waisman's mail slot in Tupper 11-L2. A critique must be analytical and detailed to count for credit – that is, a critique consisting only of a phrase such as “pretty PowerPoint slides and good speaking dynamics” would not result in a passing grade.

Your evaluations are confidential and will not be available to the speaker. Recognize the added value: keep in mind what you do and don't like about the presentations given by others as you design your own seminars.

## **COURSE POLICIES ON MISSED OR OVERDUE ASSIGNMENTS**

A student who misses an evaluation component of the course due to illness must notify the instructor, course coordinator, or department office prior to the scheduled time or due date for that component. The student must also complete a Student Declaration of Absence form (available on the course website) or provide alternate verification of the absence to their instructor via instructor e-mail within three (3) calendar days following the last day of absence. An alternative due date will be established by the instructor and shall normally be within 7 calendar days after the original due date. Absence for non-medical reasons is not ordinarily acceptable unless prearranged with the instructor. A missed evaluation component for which no satisfactory arrangement has been made will be given a mark of zero. All attempts will be made to accommodate requests for extensions of deadlines where illness or personal crisis, i.e., extenuating circumstances that would affect the student's ability to fulfill the criteria for the award of credit points or to perform to the best of the student's ability in assessment events, have occurred. It is the responsibility of the student to notify the instructor and/or course coordinator of any extenuating circumstances and to request an extension.

In the event of weather-related events and other natural disasters serious enough for the university to be closed, classes will be cancelled and the schedule will be adjusted to accommodate the missed date(s).

## DEPT. OF BIOCHEMISTRY & MOLECULAR BIOLOGY POLICY ON PLAGIARISM

### ***What is plagiarism?***

“Dalhousie University defines plagiarism as the presentation of the work of another author in such a way as to give one’s reader reason to think it to be one’s own. Plagiarism is a form of academic fraud.”<sup>†</sup> The Department is committed to protecting honest students against the devaluation of their work by students who resort to plagiarism.

Some examples of plagiarism include (but are not restricted to):

- Submitting as your own work any material created, in whole or in part, by someone else, **including material created in collaboration with other students**, unless specifically allowed by the course instructor and credited appropriately.
- Paraphrasing extensively or copying from sources such as the Internet, journal articles, or books (including textbooks) without crediting the original author or source.
- Using another student’s laboratory data, unless specifically allowed by the course instructor and credited appropriately.
- Submitting, in whole or in part, any work that has been submitted in another course, or re-submitting the same work in different years of the same course.

### ***How can plagiarism be detected?***

If required by the Instructor, work submitted for credit must be submitted in electronic as well as hard copy form.

Submissions may be screened by one or both of the following methods:

- A pattern recognition program that compares all submissions with one another as well as submissions from previous years. Every individual has a unique pattern of writing. This program will detect submissions that are derived from a common source, even if words or phrases have been changed.
- A third-party computer-based assessment system that compares submissions against a large database including previous submissions and Internet sources.

### ***What are the consequences of plagiarism?***

“Plagiarism is a serious academic offence which may lead to loss of credit [‘F’ in a course], suspension or expulsion from the University, or even the revocation of a degree.”<sup>†</sup> **At Dalhousie University, the Department is obligated to refer any cases of suspected plagiarism to the Senate Discipline Committee**, which will then conduct a hearing to evaluate the innocence or guilt of students alleged to have committed an act of plagiarism. <sup>†</sup>

[http://www.dal.ca/dept/university\\_secretariat/academic-integrity/academic-policies.html](http://www.dal.ca/dept/university_secretariat/academic-integrity/academic-policies.html)

### ***How can accusations of plagiarism be avoided?***

You can avoid accusations of plagiarism by:

9. Preparing all submissions independently and ensuring that they are expressed in your own unique writing style.
10. Never sharing any written or electronic material with other students. You may discuss ideas with other students but you may not work with another student while preparing materials you are planning to hand in.
11. Acknowledging any material paraphrased extensively or copied from sources such as the Internet, journal articles or textbooks. Paraphrasing of short phrases from the course textbook need not be acknowledged.
12. Guarding all your work, both drafts and final submissions, to ensure that no one else can copy it. If you provide access to your work and someone copies it, then you may have to appear before the Senate Discipline Committee to establish that you are the original creator of the work. If you suspect that someone has taken any of your work, notify your course instructor immediately.
13. Using only laboratory data that you actually collected in the lab. Altering laboratory data is not permitted.

## University Policies and Statements

This course is governed by the academic rules and regulations set forth in the University Calendar and by Senate (<https://academiccalendar.dal.ca/Catalog/ViewCatalog.aspx>)

### Academic Integrity

At Dalhousie University, we are guided in all of our work by the values of academic integrity: honesty, trust, fairness, responsibility and respect (The Center for Academic Integrity, Duke University, 1999). As a student, you are required to demonstrate these values in all of the work you do. The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity. **Information:** [https://www.dal.ca/dept/university\\_secretariat/academic-integrity.html](https://www.dal.ca/dept/university_secretariat/academic-integrity.html)

### **Accessibility**

The Advising and Access Services Centre is Dalhousie's centre of expertise for student accessibility and accommodation. The advising team works with students who request accommodation as a result of a disability, religious obligation, or any barrier related to any other characteristic protected under Human Rights legislation (Canada and Nova Scotia).

**Information:** [https://www.dal.ca/campus\\_life/academic-support/accessibility.html](https://www.dal.ca/campus_life/academic-support/accessibility.html)

### **Student Code of Conduct**

Everyone at Dalhousie is expected to treat others with dignity and respect. The Code of Student Conduct allows Dalhousie to take disciplinary action if students don't follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal manner—perhaps through a restorative justice process. If an informal resolution can't be reached, or would be inappropriate, procedures exist for formal dispute resolution.

**Code:** [https://www.dal.ca/dept/university\\_secretariat/policies/student-life/code-of-student-conduct.html](https://www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html)

### **Diversity and Inclusion – Culture of Respect**

Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported, which is why our Strategic Direction prioritizes fostering a culture of diversity and inclusiveness. **Statement:** (<http://www.dal.ca/cultureofrespect.html>)

### **Recognition of Mi'kmaq Territory**

Dalhousie University would like to acknowledge that the University is on Traditional Mi'kmaq Territory. The Elders in Residence program provides students with access to First Nations elders for guidance, counsel and support. Visit the office (Rm 3037, McCain Building), e-mail ([elders@dal.ca](mailto:elders@dal.ca)) or leave message (902-494-6803).

**Information:** [https://www.dal.ca/campus\\_life/communities/indigenous.html](https://www.dal.ca/campus_life/communities/indigenous.html)

### **Important Dates** in the Academic Year (including add/drop dates)

[https://www.dal.ca/academics/important\\_dates.html](https://www.dal.ca/academics/important_dates.html)

### **University Grading Practices**

[https://www.dal.ca/dept/university\\_secretariat/policies/academic/grading-practices-policy.html](https://www.dal.ca/dept/university_secretariat/policies/academic/grading-practices-policy.html)

## Student Resources and Support

### Advising

**General Advising** [https://www.dal.ca/campus\\_life/academic-support/advising.html](https://www.dal.ca/campus_life/academic-support/advising.html)

**Science Program Advisors:** <https://www.dal.ca/faculty/science/current-students/academic-advising.html>

**Indigenous Student Centre:** [https://www.dal.ca/campus\\_life/communities/indigenous.html](https://www.dal.ca/campus_life/communities/indigenous.html)

**Black Advising Centre:** [https://www.dal.ca/campus\\_life/communities/black-student-advising.html](https://www.dal.ca/campus_life/communities/black-student-advising.html)

**International Centre:** [https://www.dal.ca/campus\\_life/international-centre/current-students.html](https://www.dal.ca/campus_life/international-centre/current-students.html)

### Academic supports

**Library:** <https://libraries.dal.ca/>

**Writing Centre:** [https://www.dal.ca/campus\\_life/academic-support/writing-and-study-skills.html](https://www.dal.ca/campus_life/academic-support/writing-and-study-skills.html)

**Studying for Success:** [https://www.dal.ca/campus\\_life/academic-support/study-skills-and-tutoring.html](https://www.dal.ca/campus_life/academic-support/study-skills-and-tutoring.html)

**Copyright Office:** <https://libraries.dal.ca/services/copyright-office.html>

**Fair Dealing Guidelines** <https://libraries.dal.ca/services/copyright-office/fair-dealing.html>

### Other supports and services

**Student Health Services:** [https://www.dal.ca/campus\\_life/health-and-wellness/health-services/services.html](https://www.dal.ca/campus_life/health-and-wellness/health-services/services.html)

**Counselling:** [https://www.dal.ca/campus\\_life/health-and-wellness/counselling.html](https://www.dal.ca/campus_life/health-and-wellness/counselling.html)

**Student Advocacy:** <https://www.dsu.ca/dsas>

**Ombudsperson:** [https://www.dal.ca/campus\\_life/safety-respect/student-rights-and-responsibilities/where-to-get-help/ombudsperson.html](https://www.dal.ca/campus_life/safety-respect/student-rights-and-responsibilities/where-to-get-help/ombudsperson.html)

### Safety

**Research Lab Safety** [https://www.dal.ca/content/dam/dalhousie/pdf/dept/safety/lab\\_policy\\_manual\\_2007.pdf](https://www.dal.ca/content/dam/dalhousie/pdf/dept/safety/lab_policy_manual_2007.pdf)

**Biosafety:** <https://www.dal.ca/dept/safety/programs-services/biosafety.html>

**Chemical Safety:** <https://www.dal.ca/dept/safety/programs-services/chemical-safety.html>

**Radiation Safety:** <https://www.dal.ca/dept/safety/programs-services/radiation-safety.html>

**Scent-Free Program:** <https://www.dal.ca/dept/safety/programs-services/occupational-safety/scent-free.html>