**BIOB90 - Biology Integrative Research Poster Project**

**Course Syllabus – Fall 2021**

**Course Coordinators**

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**Project Goals and Learning Outcomes**

For this project, you will work with a group of 5 to 6 peers to explore a particular topic from the perspective of different biological disciplines and present your findings to two faculty members in a virtual poster session. (Ordinarily, you would present your poster in-person; however, due to physical distancing requirements resulting from the COVID-19 pandemic, poster presentations will be held remotely this semester).

Overall, this poster project has four major pedagogical objectives:

1. learn to communicate scientific concepts and ideas effectively in both oral and written forms;

2. develop a capacity to work collaboratively with diverse peers by managing workload, time, and

     group dynamics;

3. acquire information literacy skills (such as searching, evaluating, and critically reading scientific

     sources) and academic skills (such as taking detailed notes, thinking critically and creatively, and

     respecting academic integrity); and

4. integrate knowledge across various biological disciplines.

A major goal of this project is to recognize and highlight the links between different fields of study in the biological sciences. Your poster will explore a topic in biology for which insight can be gained by considering empirical research from at least two different fields of study (represented by the B-level core courses in the Department of Biological Sciences at UTSC). Successful posters will engage the interest of the audience in the topic; clearly and concisely outline understanding gained from the primary literature in (at least) two different fields; and discuss how understanding of the topic is enhanced by integrating knowledge from these fields.

The effective communication of information to an intelligent, but naïve, audience is a critical skill in many professions. Professional communication may take many forms, from an informal presentation of ideas in a group engaged in problem-solving tasks, to a formal oral presentation at board or executive meetings, to the creation and presentation of a written report, to the presentation of a poster at conferences and elsewhere. Professional communication also demands that the ideas being presented are supported by evidence, as, in many cases, the audience receiving the information will demand such evidence so that they can properly assess the merit of the ideas.

While a list of possible topics, as well as links to resources to help you begin exploring your topic, will be provided, it is expected that you will conduct a survey of the primary scientific literature (i.e., peer-reviewed scientific publications, for example, *Journal of Experimental Biology* or *Molecular and Cellular Biology*) and make reference to at least **six** primary published papers, equally divided among each field of study through which you are examining your topic. For example, if you are examining your topic from the perspective of both Cell Biology (BIOB10) and Ecology (BIOB50), then you should have (at least) **three** references to published studies for each of these perspectives. If you would like to study your topic from all three perspectives (BIOB10, BIOB34 and BIOB50), you would need (at least) **two** references for each course perspective, for a total of six references.

The group of peers that you will work with to complete this project will be chosen at random. It has been demonstrated that, when students are permitted to choose their own groups, they select to work with people who are similar to them, in terms of sex, race, etc; however, studies have shown that heterogenous groups are usually more successful than homogenous ones because they consider a wider diversity of perspectives and ideas. Moreover, in most professional settings, individuals will not have an opportunity to select their co-workers, so learning to successfully complete projects with a random subset of the population is a valuable, job-related skill.

**Project Support**

Due to physical distancing requirements related to the COVID-19 pandemic, no components of this course will be held in-person; rather, all components of this course will be delivered, conducted, and submitted remotely through the dedicated project-specific Quercus course page (from which you accessed this document). Please ensure that you check this site as regularly as any of your course sites.

The Course Coordinators (listed above) are dedicated to helping you through this project. Please contact one (or all, jointly) of the course coordinators whenever you have a question about any aspect of this project. Please **do not** contact the instructors of the B-level courses associated with this project to ask questions about this project. While these instructors value your learning in this project, they are busy helping the students in their particular courses.

**Evaluation**

Your final poster and its presentation will be evaluated by two faculty members. **Your entire grade for this project will be based solely on this evaluation.** This project constitutes **10% of your final grade in each of the three core B-level courses for which you are registered** in the Fall 2021 term. [E.g., a student enrolled in both BIOB10 and BIOB50 in Fall 2021 will have their poster project grade count towards 10% of their final grade in BIOB10 *and* in BIOB50].

The grade for this research poster project will be based on your poster and its presentation on the Poster Presentation Day (**Thursday, November 25th from 5-7pm**). Due to physical distancing requirements, this poster presentation will take place remotely via Microsoft Teams. Two faculty members will evaluate your poster and its presentation. The grading rubric that they will use will be posted on the project-specific Quercus course page so you can clearly understand the criteria for assessment. You are advised to consult this rubric before getting too far along in the process of designing your poster and rehearsing  your oral presentation.

You will be required to complete multiple tasks during the semester leading up to the poster presentation. These tasks and mini-deadlines are detailed in the *Project Timeline and Mini-Deadlines* section below. Please note that you will receive a penalty of 1% of your final grade in **each** course for **every** task that you do not complete by a given deadline. For example, if you fail to complete the tasks assigned to mini-deadlines 1 and 2, then you can achieve at most 8% of the 10% grade allotted for this poster project in each of the three courses; that is to say, if your poster receives a grade of 8.5/10, you would receive only 0.85 x 8 = 6.8% towards your final grade in each participating course you are enrolled in. This penalty reflects the importance of these tasks and mini-deadlines as they help to reinforce the pedagogical objectives for this project (see above) and guide you through the process of working with your peers, researching your topic, and designing and presenting your poster.

Please note that some of these mini-deadlines are individual-based (i.e., each individual student must complete them separately, and only individuals who do not complete them are subject to penalty), whereas some of these mini-deadlines are group-based (i.e., each group, as a whole, must complete them together, and the entire group receives a penalty for lack of timely completion). **Please also note that no extensions will be granted for the completion of these tasks and mini-deadlines for any reason**, so you are strongly encouraged not to wait until the last minute to complete them. We will endeavor to send out reminders throughout the semester, but, ultimately, you are responsible for meeting these mini-deadlines.

**Project Timeline and Mini-Deadlines for Fall 2021**

Week 1

Read the course syllabus--which you are already doing--and watch the video walk-through of the project, if desired, to familiarize yourself with the objectives and logistics of the course.

Projects groups were established before the course began. You should be able to contact your group members by going to **q.utoronto.ca/groups** and clicking on “Poster Group x”. Use the “Discussions” tab to make initial contact with your group members. You can continue to use the “Discussions” tab for all group communications, or you can arrange to use another platform (e.g., Facebook group chat). **If you are unable to contact any of your group members, please let the Course Coordinators know immediately.** [NOTE: Because students can still add courses until the start of Week 3, some members may leave your group (because they decide to drop this project) and new members may join your group (because they decide to add this project). There are no group mini-deadlines until after the deadline to add courses has passed.]

Week 2

1. **Mini-Deadline 1 (to be completed by September 17th at 5pm; individual):** Complete the module on Poster Design, including the associated quiz. (NOTE: You must get 100% on this quiz within 3 attempts in order to fulfil this mini-deadline.)

Week 3

Find a suitable time to get together with your group (virtually) and complete the Choose Your Own Adventure activity (available through Quercus). Prior to meeting with your group, you ***must*** complete the personality test (link available via Quercus). [NOTE: You must complete this activity in order to unlock the password necessary to access the topic list for this project.]

Week 4

1. **Mini-Deadline 2 (to be completed by October 1st at 5pm; individual):** Complete the module on Strategies for Successful Collaboration, including the associated quiz. (NOTE: You must get 100% on this quiz within 3 attempts in order to fulfil this mini-deadline.)

2. **Mini-Deadline 3 (to be completed by October 1st at 5pm; group):** After having reviewed the list of possible topics for this project, submit your top 5 choices for topics, ranked from most desired (1) to least desired (5).

Week 5

1. **Mini-Deadline 4 (to be completed by October 8th at 5pm; individual):** Complete the module on Effective Team Communication, including the associated quiz. (NOTE: You must get 100% on this quiz within 3 attempts in order to fulfil this mini-deadline.)

Reading Week

Take a break so you are mentally prepared to tackle the rest of the semester!

Week 6

1. **Mini-Deadline 5 (to be completed by October 22nd by 5pm; individual):** Complete the module on Searching, Reading, and Evaluating Scientific Sources, including the associated quiz. (NOTE: You must get 100% on this quiz within 3 attempts in order to fulfil this mini-deadline.)

2. **Mini-Deadline 6 (to be completed by October 22nd at 5pm; group):** As a group, meet with one of the Course Coordinators to discuss current progress and future plans. Meetings will be scheduled at a time that is convenient for all group members. The entire group must attend this meeting to avoid a penalty; ***any group member(s) who do not attend this meeting will be deemed as not participating in this project and will be removed from the course.***

Week 7

No mini-deadlines this week.

Week 8

1. **Mini-Deadline 7 (to be completed by November 5th at 5pm; group):** Submit your poster draft via Quercus. You must submit your poster as a PDF file. Submitted poster drafts will receive written feedback (within one week) from the Course Coordinators in order to help you improve your work. You are strongly encouraged to incorporate the feedback received into your final poster.

2. **Mini-Deadline 8 (to be completed by November 5th at 5pmz**;**individual):** Complete the Poster Draft Declaration. In completing this form, you will indicate whether you approve or disapprove of your group’s poster draft. Please note that any groups where at least one member disapproves of their group’s poster draft will be contacted by the Course Coordinators to set up a meeting during Week 9 where group issues will be discussed in hopes of getting the group back on track for successful project completion.

Week 9

No mini-deadlines this week.

The course coordinators will arrange to meet with any groups where at least one member indicated disapproval of the submitted poster via the Poster Draft Declaration. The goal of this meeting will be to address the concerns of the disapproving member(s) and devise a plan to help the group move forward successfully.

Week 10

1. Peer feedback on poster presentation. Based on your group’s availability, you will be partnered with another group so that you can present your poster and receive feedback. (You will also listen to the other group’s poster presentation and provide feedback to them.) These presentations will take place remotely via Microsoft Teams. This will give you an opportunity to get accustomed to presenting via Microsoft Teams, which is the same platform that you will use to deliver your presentation to the faculty members on Poster Presentation Day. To present your poster, one member of your group should share the PDF file. Familiarize yourself with the presentation tools (zoom, pointer, etc.). *It is strongly recommended that everyone has a microphone to use for presenting.*

2. **Mini-Deadline 9 (to be completed during the poster presentation rehearsal; group):** Fill out a copy of the poster rubric form, including comments, in order to provide feedback to the group that you were partnered with about their poster and its presentation. The Course Coordinators will forward this rubric to the group so they can use the feedback to improve.

Week 11,

1. **Mini-Deadline 10 (to be completed no later than Tuesday, November 23rd at 5pm; group)**: Each group must submit a PDF copy of their finalized poster via Quercus. This PDF version of the poster will be forwarded to your two faculty judges so that they can review it, if desired, prior to your presentation.

2. **POSTER PRESENTATION DAY IS THURSDAY, NOVEMBER 25th FROM 5-7PM EST.** You will be assigned two scheduled time slots (within this time range) to present your poster to two faculty judges. Each scheduled time slot will be 20 minutes, during which time you must present your poster while leaving adequate time for questions/discussion. To present your poster, one member of your group should share the PDF file. (This should be done about 5-10 minutes prior to your allotted presentation time in order to ensure that you are ready to begin presenting once the judge joins the session.) *NOTE: Many judges last semester commented that presentations were better when students had their camera turned on; therefore, while not required, it is strongly recommended that students turn their camera on during the poster presentation.*

[NOTE: If your group has members with a time zone conflict, please email the course coordinators as soon as possible so we can arrange an alternative time for your poster presentation.]

Week 12

You will receive the grading rubrics filled out by the faculty judges so you can review their feedback. If your group has any concerns about the feedback received, they should contact one of the faculty coordinators.