

BIOD17H3

Seminars in Cellular Microbiology

Course Syllabus and Outline

Winter 2017

-Course Description

BIOD17 offers an overview of the basic and most significant advances in cellular microbiology. This discipline studies the interplays between bacteria and mammalian cells, combining knowledge and techniques from cell biology and microbiology. The curricula of BIOD17 includes the study of bacterial pathogenic mechanisms, specially those related to bacteria invasion and replication in mammalian host cells. BIOD17 is a seminar course. Students will work in teams to present seminars on research papers, debate in class and complete 3 assignments . At the end of the term, it is expected that the students will be able to understand and critically analyze scientific literature in the field of cellular microbiology.

-Time Table

| | | | |
|----|-------|-------|--------|
| TU | 11:00 | 13:00 | MW 130 |
| WE | 16:00 | 17:00 | MW 120 |

Office hours: Wednesdays 14:30 – 15:30 SW-535 or request time by e-mail terebiznik@utsc.utoronto.ca.

-Course structure and grading:

Students must check the calendar posted in blackboard to follow the course's activities and deadlines.

1- Lectures

Lectures will be provided during the first weeks of class. The lectures are aimed to introduce the students theoretical and methodological concepts on Cellular Microbiology. Lecture slides will be uploaded to the intranet 24h in advance.

2- Class Exercise

A scientific paper will be presented by the professor in the second week of class. The paper will be analyzed and discussed, in a seminar style, in class. At the end of the day, a questionnaire on the paper will be handle to the students to complete in groups and work in class the following day.

3- Assignments

Students will be assigned 3 questioners on research articles. The assignments will consist on 10 questions that must be answered individually and e-mailed to your T.A as a PFD file by the announced deadline.

📌 Assignments will contribute 30% of your final grade (1st 5%, 2nd 10% and 3rd 15%)

4- Seminar Presentations

Students divided in groups have to present one research article twice. The first presentation is a 10 min introductory seminar. The second presentation is a “full paper” presentation of 40 min, followed by a questioning and discussion period of 45 min. Presentation modality: power point slides. Papers for presentation will be assigned to each team in the first week of class. **Every integrant of the presenting team must participate in the preparation of the seminar and presentations and answering Q's from the audience.**

📌 Attendance to the seminar presentations is mandatory!

-Short presentation:

Each group presents a 10 minutes power point presentation (8 slides) on their seminar paper. The presentation must only include an **introduction** to the paper and **objectives**. **DO NOT INCLUDE** methods, results discussion and conclusion.

Each presentation will be followed by 2 minutes of questions from the students in the audience.

-Full paper presentation:

Each group delivers a **45 min** presentation on their seminar paper, **exceeding the time limit the group will be penalized**. The presentation will be followed by a **45 min** period of questions and discussion with the students in the audience.

The presenting group must attend a tutorial class to discuss the seminar's paper with the professor on the Wednesday prior to the presentation day. For this tutorial meeting, the group must bring a draft version of the presentation and any questions they may have on the paper.

The Monday prior to the seminar, at 1pm, the presenting group must mail to the TA the following material:

- 1- **PDF handouts** of the power point presentation
- 2- A **summary on the paper of 2 pages, single space** + figures in separate pages. The summary should be very, very, very clearly written and proof-read. I will be upload it to blackboard for your classmates to study- **PDF format**.
- 3- **Eight questions** based on the paper to interrogate the students in the audience. **PDF format**.

📌 Groups falling to send the material to the TA on time will be penalized

The presenting group must **arrive in to the classroom in advance** to load in the computer and set up their presentation.

📌 The seminar presentations will contribute 20% of the final grade

What is expected from the audience groups?

- 1- All the students in the audience must **read every seminar paper** and be prepared to answer **short quizzes** in class before the presentation.
- 2- Each seminar group in the audience team will prepare **5 questions** to interrogate the presenting group and will **emailed to the TA the Friday prior to the presentation**. Audience groups will ask as many questions as time allows, in rounds of 1 question per group. Please send the **questions in PDF format** and include the subject of the email and at the top of the page the group and seminar numbers (BIOD17 group 1/ questions for seminar 1)

📌 The quizzes and 5 questions will count in the final group participation mark and groups falling to do send the questions to the TA on time will be penalized

5- Participation

This is a seminar course, so students have participate in class discussions and activities.

You must ask questions and speak up your opinion in class! You will receive participation marks for individual and group questions and contribution to class discussions. I will ask questions to both the audience and the presenting groups.

 **Participation will contribute to 20% of your final mark**

6- Final Exam

Modality: Short answer questions on a research paper.

Duration: 3h

A research paper will be assigned and posted in blackboard 4 days prior to the day of the exam. You will be able to read and discuss it with your course mates or family. You can bring and consult your notes on the paper during the exam. However, students have to write the exam individually.

 **The final exam will contribute to 30% of the final grades**

7- In Summary

Assignments will contribute to 30% of your final grade

The seminar presentations will contribute 20% of your final grade

Participation will contribute to 20% of your final mark

The final exam will contribute to 30% of you final grades

Please check the course calendar!

Important considerations for your presentation

Groups have **40 minutes** for their presentation. They must not exceed this time!
Groups must practice their presentation. It is important to seek for the logical flow of the material presented. Speak slow, loud and clear. Be creative and critical. Keep it simple!
You will be critically reading primary scientific literature not textbook material.
Therefore, speculation, controversy, discussion, challenging of ideas are welcome.
Be open-minded and friendly when discussing with your pairs. Listen to the questions and try to answer in a clear way.

Sections in your presentation

Introduction

Don't jump right the way into the research. Show the big picture of the field and introduce the hypothesis and objectives in the intro. Introduce the relevance and history of the problem to the audience. Clearly explain the rationale behind the hypothesis of the paper. Use the paper's intro as a guide, use PubMed and internet for material.

Hypothesis and objectives

Identify the hypothesis and objective

Methodology

You must understand the methodologies utilized in the paper. Comment on the methodological approaches used in the paper and explain techniques. However, you don't need to present every technique utilized in the paper. If necessary, give your opinion about the appropriateness of the author's chosen methodology and think of alternative approaches.

Results

You have to do an excellent job for this section. Select the most relevant results for the presentation, always considering the duration of the presentation. Don't forget to look at the supplementary material and figures in link to the paper in the journal's website. Present the results clearly. Use an appropriate size for the graphs and figures. Decompose the original figures in the paper in order to keep slides simple and easy to understand. Make annotations and drawings on the figures to highlight what you consider relevant. Critic the paper in a constructive way, but don't be afraid to demolish the paper, if you believe it necessary. However, if you don't like the results and rationale behind the experiments, try to propose alternative approaches and/ or interpretations of the results. Pay attention to experimental controls!!

Conclusions

Remark on the most important findings and general conclusions in the paper; the take home message. Discuss the impact of the paper comparing it with other relevant papers in the field.

Scoring Rubric for Seminar Presentation

Style and delivery (20%)

- Good pacing
- Use of proper language
- Doesn't read
- Logic flow of the speech

Poor 1 2 3 4 5 excellent

Use of visual aids (15%)

- Size and labels are clear
- Very little text
- Figures are imaging are described correctly

Poor 1 2 3 4 5 excellent

Content (35%)

- Correctly identifies the hypothesis
- Has understanding of the experimental approach and significance
- Critically evaluates results, methodologies and conclusions
- Integrates results to a broader context
- Identifies future avenues of investigation

Poor 1 2 3 4 5 excellent

Ability to answer questions (30%)

- Understand audience questions
- Can integrate knowledge to answer question
- Thoroughly responds to most questions

Poor 1 2 3 4 5 excellent