

# BIOD17H3

## Seminars in Cellular Microbiology

### Course Syllabus and Outline

Winter 2016

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.

**Office hours:** Fridays 2-3 pm in Room SW-535 (Science building) or by ask for an appointment by e-mail [terebiznik@utsc.utoronto.ca](mailto: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 45 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** and **introduction** to the paper and its **main objectives, excluding methods, results discussion and conclusion. Exceeding the time limit the group will be penalized.** 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 failing to do send the questions to the TA on time will be penalized**

## 4- 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**

## 5- 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**

## 6- 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 see the course calendar!**

Some important considerations for your presentation

The group has **45 minutes** the presentation. Use it well! **Exceeding the time limit the group will be penalized.**

Speak slow, loud and clear. Keep it entertaining. It is important to seek for a logical flow of the material presented.

Be creative and critical. Remember that you are not only presenting to me, you are presenting to the class. You will discuss the paper with your fellows; and a little bit with me too.

Notice that you will be dealing with real science not with textbook material. Therefore, speculation, controversy, discussion, challenging of ideas are part of science and science and papers are not absolute.

Be open-minded and friendly when discussing with your pairs. Listen to the questions and try to answer in a clear way. Make cartoons and use models to help people understand. Keep it simple.

The Force be with you!

## Sections in your presentation

**Introduction.** Don't jump right the way into the research. Show the big picture 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.** Make it clear to the audience, It is usually enunciated in the title.

**Methodology.** You must understand the methodology. Comment on the methodological approaches used in the paper and if necessary, explain new techniques that are introduced in the paper, take your time for this. You can have a separate section for the methods or present it as required during the discussion of the results. Give your opinion about the appropriateness of the author's chosen methodology and think of alternative approaches.

**Results.** You have to do a good job here. Sometimes papers include a large number of figures and supplementary material. Select the most relevant results for the presentation, considering the time. Present the figures clearly. Use an appropriate size for the graphs and figures. Decompose the original figures in order to keep slides simple and easy to understand and follow. Make annotations and draw on the figures to highlight what you consider important and will be commented in your speech. Discuss the results being critical, but in a constructive way, so we can learn from it. You can doubt and complain about the results and rational behind each experiments but try to propose alternatives. Pay attention to experimental controls.

**Conclusion.** Remark on the most important findings and general conclusions brought by the paper; the take home message. Discuss the impact of the paper comparing it with other relevant papers in the field. Always give the team impression. Bow to the class and applause.

## Scoring Rubric for Seminar Presentation

### **Clarity** (20%)

Well thought out  
 Use of proper language  
 Significance clearly stated  
 Subject properly introduced

Poor 1 2 3 4 5 excellent

### **Style and delivery** (20%)

Proper use of the time  
 Good pacing  
 Doesn't read  
 Logic flow of the speech

Poor 1 2 3 4 5 excellent

### **Use of visual aids** (20%)

Size and labels are clear  
 Very little text  
 Figures are imaging are described correctly  
 Well placed images

Poor 1 2 3 4 5 excellent

### **Content** (20%)

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** (20%)

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

Poor 1 2 3 4 5 excellent