

BIOD17: Seminars in Cellular Microbiology
Professor Mauricio Terebiznik
Winter 2018 Syllabus



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, focusing on those related to bacteria invasion and replication in mammalian host cells. BIOD17 is a seminar course. As a team, you will work together to present a research paper, participate in a debate style discussion and complete 3 assignments. At the end of the term, you will have developed an ability to understand and critically analyze scientific literature in the field of cellular microbiology.

Lectures:

MW-130, Tues 11-1 p.m.

MW-120, Wed 4-5 p.m.

Office Hours:

Office: SW-535

Office Hours: Wednesday 2:30-3:30 p.m., or by appointment.

e-mail: terebiznik@utsc.utoronto.ca

TA:

Durga Acharya: durga.acharya@mail.utoronto.ca

Grading Scheme

Assignment (1)	15%
Seminar	30%
Participation	20 %
Final	35%

	100%

Course Structure and Grading Breakdown:

There will be a calendar (on Black Board) outlining the agenda for each class. Students must check the calendar to follow the course's activities and deadlines.

Lectures

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

Tutorials

Analyzing Papers:

In order to prepare you to analyze critically, you will receive 2 or 3 scientific papers electronically. You must read and analyze these papers (individually or preferably groups) to prepare for the tutorial (on Wednesdays). In the meetings, you are expected to discuss these papers and solve a set of questions that will help guide you in answering question that will be asked on the assignment and the final exam. The assignment questions are to expose you to the types of questions you might be asked in the final exam.

Preparing for the Seminar:

The papers that will be presented in the seminar will be analyzed in tutorials meetings scheduled a week ahead of the seminar presentation. The tutorial for the audience and the presenting groups will be held in different locations. The presenting group will meet with the professor in SW-535. This is a MANDATORY meeting that will last for 1-2 hs. The rest of the class will meet in the lecture room (MW-120). This tutorial meeting for the audience will be led by the TA but student contribution is important to start discussions. This is not mandatory but attendance is highly encouraged.

Assignment (15%)

Students will be assigned 1 research paper and a set of questions for MARKS. The students will be given one week to finish the assignment. The assignments will consist of 10 to 15 questions that must be answered individually and e-mailed to the TA as a PDF file before the announced deadline. Late submissions will be penalized with a 10% mark deduction.

Turnitin (Plagiarism Detection Software) - Students will be required to submit their answers for the assignment questionnaires to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their assignment to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site.

Seminar Presentations (30%)

Attendance to a seminar presentation is MANDATORY. Students, in groups, will present one research article in two different ways in two different days. The first presentation is a 10 min introductory talk on the subject of the paper. The second presentation (40mins) is on the “full paper”. Students will be divided into teams and will work together in these teams for the duration of the course. Each group will select a paper from a list of papers (first come, first serve). Groups and papers will be finalized by second week of class.

- a) **Short presentation:** Each group will present a 10 minute power point presentation (8 slides) on their seminar paper. The presentation must **be an introduction** to the paper and enunciate the **objectives**. **DO NOT INCLUDE** methods, results, discussion or conclusion. Each presentation will be followed by 2 minutes of questions from the students in the audience. The PowerPoint slides must be submitted to the professor by e-mail the day of the short presentations so that they can be made available to all the students.
- b) **Full Seminar Presentation:** Students will present their research paper in a PowerPoint format. The seminars start at the hour sharp (not 10 mins after)! Please come on time. Every member of the group must contribute equally to the preparation and presentation of their assigned research paper. Everyone must contribute to answering of questions during the Q/A sessions. There are additional guidelines at the end of this syllabus. The seminars will be structured as follows:
 - The presentation must be 40 mins long, followed by a Q/A session by professor. (total 50/55 mins)
 - The students in with their group will then complete a quiz (10mins)
 - Then there will be a 50/55 min Q/A with the entire class involved (this is individual)

Important Notes:

1. Everyone in the presenting group must attend the tutorial meeting to discuss the seminar's paper with the professor on the **Wednesday prior to the presentation** day. Attendance to this meeting is mandatory. For this tutorial meeting, the group must bring the power point presentation to be utilized in the seminar and any questions they may have on the paper.
2. The Monday prior to the seminar, at 1pm, the presenting group must send and email to the TA containing the following material: 1- **PDF handouts** of the power point presentation. 2- **7 questions** based on the paper to interrogate the students in the audience. Use **.doc format**. Groups failing to send the material to the TA on time will be penalized. The presenting group must **arrive in to the classroom 5min before 11am** to set up their presentation.
3. All the students in the audience must **read every seminar paper** and be prepared to answer **short quizzes** in class right after the presentation. **The quizzes will be answered in group**. Each seminar group in the audience team will prepare **5 questions** to interrogate the presenting group. The questions must be **emailed to**

the TA the Friday prior to the presentation, failing to do so will take points from the corresponding mark. Everyone in the group must participate in making the questions. Please send the **questions in .doc 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)

4. In addition to the group questions, the students in the audience are expected to ask as many questions as time allows. These questions must be formulated in class, individually, not by the group.

Participation (20%)

Students must participate in class discussions and activities to receive participation marks. Attendance to the seminars is not rewarded with participation points. You will receive participation marks for questions, answers and contributions to class discussions. The 5 questions that the groups make and the quizzes done after the seminar presentation will count as participation marks

CHECK THE CALENDAR ON BLACKBOARD FOR THE TUTORIAL AND SEMINAR SCHEDULE!!

Final Exam (35%)

The final exam is a questionnaire consisting in 10 to 15 short answer questions on a research paper, like the assignment. The final exam will be 3 hours long and date is to be determined.

A research paper will be assigned and posted in blackboard 1 week prior to the day of the exam. You will be able to read and discuss it with your course mates. You can bring and consult your notes on the paper during the exam but other papers, reviews, books or your lecture and or seminars notes are NOT ALLOWED. However, students have to write the exam in class and individually. It will be you against the paper!

IMPORTANT INFORMATION

AccessAbility

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the AccessAbility Services Office as soon as possible.

AccessAbility Services staff (located in Rm SW302, Science Wing) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations 416-287-7560 or email ability@utsc.utoronto.ca.

Academic Integrity

The University treats cases of cheating and plagiarism very seriously. The University of Toronto's Code of Behaviour on Academic Matters (<http://www.governingcouncil>).

utoronto.ca/policies/behaveac.htm) outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences.

Potential offences in papers and assignments include using someone else's ideas or words without appropriate acknowledgement, submitting your own work in more than one course without the permission of the instructor, making up sources or facts, obtaining or providing unauthorized assistance on any assignment.

On tests and exams cheating includes using or possessing unauthorized aids, looking at someone else's answers during an exam or test, misrepresenting your identity, or falsifying or altering any documentation required by the University, including (but not limited to) doctor's notes.

Additional Important Presentation Guidelines

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.

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 rational 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.

Seminar Presentation Rubric

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