

## **BIOL 796-1004: Graduate Seminar – Advanced Topics in Microbiology**

### **Instructor:**

Dr. Boo Shan Tseng, Assistant Professor

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Office hours: By appointment

**Class Time and Location:** Thursdays 5:30p – 7:30p in WHI 102A (Faculty Lounge)

**Course Description:** In this course, the students will obtain a broad view of research in the field of microbiology. In addition to gaining knowledge in both basic and applied microbiology, students will also learn about the broad variety of techniques used in the field. Furthermore, through reading and presenting journal articles, students will hone their critical analysis and scientific communication skills, which are needed for the successful completion of the comprehensive exam (for PhD students) and thesis/dissertation defense (for both MS and PhD students).

### **Learning Objectives:**

Students will be able to:

1. Critically analyze scientific literature
2. Communicate scientific research in a clear, concise way
3. Build on the current literature and develop new ideas

**Format:** This class will be conducted in a seminar format with students giving ~60-minute presentations on peer-reviewed, primary literature of their choice. Students are to notify Dr. Tseng at least two and a half weeks before the date of their presentation with their choice of article. After obtaining approval, the presenting student is responsible for emailing the paper and the supplemental files two weeks in advance to the class ([MicroJC-group@unlv.edu](mailto:MicroJC-group@unlv.edu)). The presentation should include appropriate background, a discussion of the paper (the techniques, data, and interpretation), and strengths and weakness of the paper (see presentation rubric for full list of expectations). Students not presenting should come to class having read the paper and be prepared to participate in the discussion (see participation rubric for full list of expectations). Classroom discussions should always be carried out in a respectful manner: talking over others, side conversations, or not listening to those that are speaking will be considered disrespectful behavior, resulting in demerits.

**Selecting journal articles:** The paper must focus on some aspect of microbiology (bacteria, archaea, viruses or microbial eukaryotes) that is not directly related to your research and was published within the past year. Selecting papers in the major journals of a field is suggested.

**Technique presentation:** Each student will present a comparison of “new(er)” technique with its “older” counterpart. This 20-minute presentation should include 1. what the techniques are used for; 2. how they each work and differ in their output; 3. what controls are typically used for each; 4. what the advantages and limitations are for both; and 5. a discussion of when each technique is most appropriate.

**Grading:** Students will be evaluated on their presentation(s) (80%) and on their participation (20%). Journal club presentations will be evaluated by both the instructor (50%) and by the other students (20%), using the provided rubric. The technique presentation will be evaluated by the instructor only (10%). Participation will be graded on in-class performance and submission of the peer-evaluations, which are due immediately at the end of class. Failure to either hand in peer-evaluations at the end of class or failure to send the JC paper to the class 2-weeks in advance will result in a 1 point deduction from the final grade for every day it is late. Final grades will be based on the following standard scale: A, 100-90%; B, 89-80%; C, 79-70%; D, 69-60%; and F, below 60%.

**Absences:** Attendance at class is required. Two or more unexcused absences will result in a failing grade. If a student knows that s/he will be missing class due to research activities, the student’s graduate advisor must

notify Dr. Tseng in writing at least two weeks in advance. If the absence is due to a personal issue, the student must provide documentation on official letterhead, signed by a physician or legal authority justifying the absence within 3 business days of the missed class. This documentation must clearly state that the student was unable to attend class on the specified date and time.

**Syllabus Certification Form:**

All students must fill out the Syllabus Certification Form in Webcampus within the first 14 days of the semester. Failure to complete the form on time will result in a forced administrative withdrawal from the course.

**Presentation Schedule:**

<b>Date</b>	<b>Presenter</b>
Aug 29	Syllabus
Sept 5	Melissa
Sept 12	Alex
Sept 19	Erin
Sept 26	Cale
Oct 3	Time for working on Technique Presentation
Oct 10	Nancy
Oct 17	Corina
Oct 24	Molly
Oct 31	Time for working on Technique Presentation
Nov 7	Technique Presentations (Melissa, Alex, Erin)
Nov 14	Cale
Nov 21	Corina
Dec 5	Technique Presentations (Nancy, Cale, Corina, Molly)

## Evaluation of Journal Club Presentation

6 = Exceptional (no flaws) to 0 = Unacceptable (not included)

### Presentation Skills

6	5	4	3	2	1	0	
							Presented in organized, clear, understandable and succinct way
							Delivered presentation well (eye contact, distracting mannerisms, volume of voice)
							Used appropriate scientific language
							Presented information without unnecessary detail
							Transitioned well between ideas
							Created clear, effective slides (amount of text to images, font size, slide titles)
							Answered questions well

### Presentation of Article

6	5	4	3	2	1	0	
							Placed into bigger picture (why should I care?)
							Provided sufficient background to set up/understand the question/hypothesis
							Identified the central question/hypothesis
							Described the significance of the central question/hypothesis
							Described any uncommon techniques used or complex experimental flows
							Described the important findings
							Accurately summarized the author's conclusions
							Related author's conclusions to past work/bigger picture
							Discussed the limitations of the findings/interpretations
							Provided discussion questions
							Derived a new hypothesis from the paper
							Discussed how to experimentally test the hypothesis

### Leadership of Discussion

3	2	1	0	
				Kept discussion on target
				Sought involvement from and was courteous to all participants

## Evaluation of Journal Club Participation

Yes (1)    No (0)

		Did the participant attend the journal club and were they on time?
		Was the participant prepared and add constructively to the discussion?
		Was the participant engaged in the journal club?

No (0)    Yes (-2)

		Did the participant distract from the discussion?
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**Dr. Tseng reserves the right to modify this syllabus as needed.**

## **UNIVERSITY POLICIES**

### **Academic Misconduct**

Academic integrity is a legitimate concern for every member of the Campus community; we all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility, and professionalism. By choosing to join the UNLV community, students accept the expectations of the Student Academic Misconduct Policy, and are encouraged to always take the ethical path whenever faced with choices. Students enrolling at UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's educational mission. An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another person, from the Internet or any other source without proper citation of the sources. See the Student Conduct Code, <https://www.unlv.edu/studentconduct/student-conduct>.

### **Auditing Classes**

Auditing a course allows a student to continue attending the lectures and/or laboratories and discussion sessions associated with the course, but the student will not earn a grade for any component of the course. Students who audit a course receive the same educational experience as students taking the course for a grade, but will be excused from exams, assessments, and other evaluative measures that serve the primary purpose of assigning a grade.

### **Classroom Conduct**

Students have a responsibility to conduct themselves in class and in the libraries in ways that do not interfere with the rights of other students to learn or of instructors to teach. Use of electronic devices such as pagers, cellular phones, or recording devices, or potentially disruptive devices or activities, are only permitted with the prior explicit consent of the instructor. The instructor may rescind permission at any time during the class. If a student does not comply with established requirements or obstructs the functioning of the class, the instructor may initiate an administrative drop of the student from the course.

### **Copyright**

The University requires all members of the University Community to familiarize themselves with, and to follow copyright and fair use requirements. You are individually and solely responsible for violations of copyright and fair use laws. The University will neither protect nor defend you, nor assume any responsibility for employee or student violations of fair use laws. Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional copyright policy information is available at <http://www.unlv.edu/provost/copyright>.

### **Disability Resource Center (DRC)**

The UNLV Disability Resource Center (SSC-A, Room 143, <https://www.unlv.edu/drc>, 702-895-0866) provides resources for students with disabilities. Students who believe that they may need academic accommodations due to injury, disability, or due to pregnancy should contact the DRC as early as possible in the academic term. A Disabilities Specialist will discuss what options may be available to you. If you are registered with the UNLV Disability Resource Center, bring your Academic Accommodation Plan from the DRC to the instructor during office hours, so that you may work together to develop strategies for implementing the accommodations to meet both your needs and the requirements of the course. Any information you provide is private and will be treated as such. To maintain the confidentiality of your request, please do not approach the instructor in front of others to discuss your accommodation needs.

### **Final Examinations**

The University requires that final exams given at the end of a course occur on the date and at the time specified in the Final Exam schedule. The general schedule is typically available at the start of the semester, and the classroom locations are available approximately one month before the end of the semester. See the Final Exam Schedule, <https://www.unlv.edu/registrar/calendars>.

## **Identity Verification in Online Courses**

All UNLV students must use their Campus-issued ACE ID and password to log in to WebCampus.

UNLV students enrolled in online or hybrid courses are expected to read and adhere to the Student Academic Misconduct Policy, <https://www.unlv.edu/studentconduct/misconduct/policy>, which defines, “acting or attempting to act as a substitute for another, or using or attempting to use a substitute, in any academic evaluation or assignment” as a form of academic misconduct. Intentionally sharing ACE login credentials with another person may be considered an attempt to use a substitute and could result in investigation and sanctions, as outlined in the Student Academic Misconduct Policy.

UNLV students enrolled in online courses are also expected to read and adhere to the Acceptable Use of Computing and Information Technology Resources Policy, <https://www.it.unlv.edu/policies/acceptable-use-computing-and-information-technology-resources-policy>, which prohibits sharing university accounts with other persons without authorization.

To the greatest extent possible, all graded assignments and assessments in UNLV online courses should be hosted in WebCampus or another UNLV-managed platform that requires ACE login credentials for access.

## **Incomplete Grades**

The grade of “I” (Incomplete) may be granted when a student has satisfactorily completed three-fourths of course work for that semester/session, but cannot complete the last part of the course for reason(s) beyond the student’s control and acceptable to the instructor, and the instructor believes that the student can finish the course without repeating it. For undergraduate courses, the incomplete work must be made up before the end of the following regular semester. Graduate students receiving “I” grades in 500-, 600-, or 700-level courses have up to one calendar year to complete the work, at the discretion of the instructor. If course requirements are not completed within the period indicated, a grade of “F” will be recorded, and the student’s GPA will be adjusted accordingly. Students who are fulfilling an Incomplete grade do not register for the course, but make individual arrangements with the instructor who assigned the “I” grade.

## **Library Resources**

Librarians are available to consult with students on research needs, including developing research topics, finding information, and evaluating sources. To make an appointment with a subject expert for this class, please visit the Libraries’ Research Consultation website: <http://guides.library.unlv.edu/appointments/librarian>. You can also ask the library staff questions via chat and text message at: <http://ask.library.unlv.edu/>.

## **Missed Classwork**

Any student missing class, quizzes, examinations, or any other class or laboratory work because of observance of religious holidays will be given an opportunity during that semester to make up the missed work. The make-up opportunity will apply to the religious holiday absence only. It is the responsibility of the student to notify the instructor within the first 14 calendar days of the course for Fall and Spring courses (except for modular courses), or within the first 7 calendar days of the course for Summer and modular courses, of their intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit the Policy for Missed Work, under Registration Policies, on the Academic Policies webpage, <https://catalog.unlv.edu/content.php?catoid=6&navoid=531>.

In accordance with the policy approved by the Faculty Senate regarding missed class time and assignments, students who represent UNLV in any official extracurricular activity will also have the opportunity to make up assignments, provided that the student provides official written notification to the instructor no less than one week prior to the missed class(es).

The spirit and intent of the policy for missed classwork is to offer fair and equitable assessment opportunities to all students, including those representing the University in extracurricular activities. Instructors should consider, for example, that in courses which offer a “Drop one” option for the lowest assignment, quiz, or exam, assigning the student a grade of zero for an excused absence for extracurricular activity is both

contrary to the intent of the Faculty Senate's policy, and an infringement on the student's right to complete all work for the course.

This policy will not apply in the event that completing the assignment or administering the examination at an alternate time would impose an undue hardship on the instructor or the University that could reasonably have been avoided. There should be a good faith effort by both the instructor and the student to agree to a reasonable resolution. When disagreements regarding this policy arise, decisions can be appealed to the Department Chair/Unit Director, College/School Dean, and/or the Faculty Senate Academic Standards Committee.

For purposes of definition, extracurricular activities may include, but are not limited to: fine arts activities, competitive intercollegiate athletics, science and engineering competitions, liberal arts competitions, academic recruitment activities, and any other event or activity sanctioned by a College/School Dean, and/or by the Executive Vice President and Provost.

### **Rebelmail**

Rebelmail is UNLV's official email system for students, and by University policy, instructors and staff should only send emails to students' Rebelmail accounts. Rebelmail is one of the primary ways students receive official University communications, information about deadlines, major Campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the University. Emailing within WebCampus is also acceptable.

### **Tutoring and Coaching**

The Academic Success Center (ASC) provides tutoring, academic success coaching, and other academic assistance for all UNLV undergraduate students. For information regarding tutoring subjects, tutoring times, and other ASC programs and services, please visit the ASC website, <https://www.unlv.edu/asc>, or call 702-895-3177. The ASC building is located across from the Student Services Complex (SSC). Academic success coaching is located on the second floor of SSC A, Room 254. Drop-in tutoring is located on the second floor of the Lied Library, and on the second floor of the College of Engineering building (TBE A 207).

### **UNLV Writing Center**

One-on-one or small group assistance with writing is available free of charge to UNLV students at the Writing Center, <https://writingcenter.unlv.edu/>, located in the Central Desert Complex, Building 3, Room 301 (CDC 3-301). Walk-in consultations are sometimes available, but students with appointments receive priority assistance. Students may make appointments in person or by calling the Center, 702-895-3908. Students are requested to bring to their appointments their Rebel ID Card, a copy of the instructions for their assignment, and two copies of any writing they have completed on their assignment.