BIMM 122- Microbial Genetics
Course Syllabus

Fall 2019 – Lectures, Tuesdays & Thursdays, 5:00PM-6:20 PM in Mandeville B-210

Instructor: Giorgia Pirino, Ph.D. Email: gpirino@ucsd.edu
Please include BIMM122, your full name, ID, and IA name in all emails to Dr. Pirino
Office: HSS 1145F
In- person Office Hours: Tuesdays, 7:00-8:00PM. Location: Muir 1102. You are encouraged to take advantage of office hours. Please present your questions about course material in person during office hours, NOT by email.
I cannot guarantee an answer to your email, unless it is an urgent issue.
Office hours function as a relaxed forum to ask questions and discuss course content. Regular in-person O*ffice Hours will start in week 2 (Tuesday, October 8th)*.
Virtual Office Hours: Every Monday Dr. Pirino will hold 1 hour of virtual office hours through Google Hangout (from 8 to 9PM; more information will be provided). Virtual O*ffice Hours will start in week 2*

Instructional Assistants:
Erin Harryman- eharryma@ucsd.edu
Joseph Chang - joc035@ucsd.edu

Discussion Sections/Office Hours - Time, Location & IA
Discussion A01: Wednesday, 3:00 PM-3:50 PM in Central 217B - Joseph Chang
Discussion A02: Wednesday, 4:00 PM-4:50 PM in Central 217B - Joseph Chang
Discussion A03: Wednesdays, 8:00 AM-8:50 AM in Central 217B - Erin Harryman
Discussion A04: Wednesday, 11:00 AM-11:50 AM in Solis 105 - Erin Harryman
Discussion Sections will start in week 2.

Instructional Assistant - Office Hours
Erin Harryman - Wednesdays, 1:30-2:30 PM at Perk's Coffee (UCSD Bookstore)
Joseph Chang - Thursday, 4-5 PM at Mandeville Coffee Cart
Office hours will start in week 2.

COURSE DESCRIPTION: In this course we will discuss fundamental aspects of microbial genetics mainly in prokaryotes and bacteriophages, with a focus on gene regulation, and how this information can be used to understand microbial diversity, microbial communities and their ecological niches, the human microbiome, and human health.

Learning goals: At the end of the course students will be able to explain the mechanisms of replication, transmission and action of chromosomal and extra chromosomal genes and sequences, how internal and external signals regulate gene expression, affect microbial diversity, and shape microbial communities and their environment.

Course Website/Canvas & Podcast

This course is on Canvas (https://coursefinder.ucsd.edu) and should automatically appear on your Canvas account as soon as you register for the class. We will use Canvas to post information on exams, schedules, readings, quizzes, etc. This website will also be used to post any announcements that pertain to the entire class. Please check the site regularly and update yourself on the information provided.
Prerequisites: BIMM 100. Podcast is available (https://podcast.ucsd.edu)

Preparation and expectations: To do well in BIMM 122, students should have a strong background in molecular biology. Although this is not a lab course, and no lab skills are required, it is expected that students know how a general biology research lab functions and how the scientific method is applied to research, based on information acquired in previous courses and scientific publications. Students should review this material before the start of the quarter or during the first week. We will not specifically cover these principles in class because students should already know this material from their prerequisites. Students are responsible for any remedial learning required to understand the material presented in this course.

***Discussion Sections**: You are encouraged to take advantage of discussion sections. Although they are *optional*, extra credit points will be awarded for *active* participation during discussion. Discussion sections represent a great opportunity to ask for clarification and discuss course content. IAs will review class material, answer questions, and review for exams. Students should attend the section they are registered for to receive the extra credit points for participation. We will have 8 discussion sections during the quarter. Students who attend at least 5 of them and actively participate, will receive all extra credit points. Also, since students will not be able to keep their midterm exams after they have been graded, students should come during the discussion section they are enrolled into to see their midterm exams. IAs will *only* bring exams of the students enrolled in that specific discussion. Otherwise, students may make an appointment with their IA to see the midterm exams.

Textbook: There is not a required textbook for the course, since we will mostly integrate background information with research articles. However, the following textbooks represent an excellent source for background information to brush topics: “Molecular Genetics of Bacteria”, 5th edition Dale & Park, Wiley; “Molecular Genetics of Bacteria”, 4th Edition by Snyder, ASM Press (2015). A few copies of these two textbooks will be available on reserve at the Geisel Library as soon as the library locates them.

Other textbooks of general microbiology may be useful as well: "Microbiology, an evolving science, 4th edition" Foster & Slonczewski; "Brock Biology of Microorganisms", 15th edition, Madigan & coworkers.

Final grade: Your final grade will be determined by the following assignments:

- Participation: 10 % of final grade (22 points) divided as followed:
  -Class participation/iClickers 5% (12 points; 1.2 points per week).
  -Discussion via Piazza 5% (10 points; 1 point per week).

- Homework/surveys: 3% of final grade (6 points)

- Exams: 80 % of final grade (160 points):
  - Midterm Exam: the best of the two midterm exams' scores (70 points) will count toward the final grade
  - Final Exam: 90 points

  Total points available: 200 points (100%)

* *Extra Credit Points*: Discussion sections (6 extra credit points, 3%; page 2) and concept videos (4 extra credit points, 2%; page 5).

Grading scale: Please assume this class is NOT curved and use the raw score (rounded up to nearest 0.01%) that you receive to calculate your grades.
For example, <60/100 is a F; <70/100 is a D; 70/100 is a 70 or C-; 73/100 is a 73 or C; 78.5/100 is a 78.5 or a C+; 80/100 is an 80 or B-; 83/100 is an 83 or a B; 88.5/100 is an 88.5 or B+; 90/100 is a 90 or A-; 93/100 is a 93 or A.

Examinations: We will have 2 midterm exams and 1 final exam: 1) Midterm Exam 1 – October 17, 2019; 2) Midterm Exam 2 - November 7, 2019; 3) Final Exam - December 13, 2019. Midterm Exams will be held during class time. The final Exam will be held in a TBA location as announced in the schedule of classes. Exams are **not** cumulative.

Make-up Exams: *There are no make-up exams*. No exceptions! However, considering that unforeseen circumstances may cause a student to miss an exam or not to perform well in one exam, the lowest score received in one of the 2 midterm exams will be dropped. Only one of the two midterm exams (the one with the higher score) and the final exam will count toward the final grade. *The final exam cannot be rescheduled or its grade substituted with a midterm score for any reason. In case of a dare emergency, please contact the instructor within 24 hours. After review by the instructor, the student may take a different exam as a substitution; most likely it will consist in an oral exam.* If you have a job/graduate school/medical school interview, schedule it on a non exam day; interviews are not considered dare emergencies. Personal commitments/conflicts are also not considered dare emergencies.

Exams: Exams will consist in short answer, true/false, fill in the blank, and multiple choice questions. Regrade policy for the exams are discussed under the folder "Regrade Policy" on Canvas. Please read the entire regrade policy before submitting a regrade request.
You must bring your **student ID** and a **pen (no pencil, if you like to have a regrade)**. Only exams written in nonerasible pen will be considered for regrades, and white-out may not be present on such exams (see regrade policy). **No** calculators, phones, smart watches, or other electronic devices are required or allowed. ALL personal items must be **CLOSED** and placed in front of the classroom. Make sure your phone is turned **OFF** and put away. Students may not use the restroom during exams.

During the exam: If you are sure that a question is written ambiguously, raise your hand and ask for clarification. Most ambiguities and problem questions should be identified this way, so that clarifications can be announced to the entire class and so that the grading key can be modified before the exams are graded. Exams will use scientific language, make sure that you are familiar with scientific terms. IAs *cannot* define scientific words, help you understand a question, or confirm that you have chosen the correct answer.

Class Participation in an Inclusive Learning Environment: Participation in class is very important. The classroom should be active all week, not just during class hours. Student class participation should incorporate responses to their peers, their opinions, pertinent information regarding subjects covered in class, from things that students have read, and examples from their experience. *Students should seat next to the same classmates during lecture to facilitate discussion*. Class participation points will be assigned via 3 ways: iClickers, class discussion, and Piazza (see below).
To receive points for class participation, students should answer iClickers questions, share their opinions within the group and occasionally within the class, and participate in the class' Piazza group.

iClickers/Class Discussion: To facilitate class discussion, we will use iClickers during lecture (frequency AC). Students will receive points for clicking, NOT for giving a correct answer.
We will start recording iClickers participation in week 1 (second meeting of the course). However, we will practice with iClickers during the first lecture (Thursday, September 27th). iClickers are available for purchase at the UCSD bookstore. Once you have purchased your Clicker, you can register it on TritonEd – go to the tools section and look for the iClicker registration link. I strongly recommend the i>Clicker 2 as it is very convenient. Older versions of i>Clicker are acceptable if you already have one, but you may need to reset your clicker every time it goes into sleep mode. **Do NOT count on sharing a clicker with another student in the same quarter as the software only records scores for one student, even if both of you are in different classes. After registration, your iClicker is linked to your name on the class roster. Therefore, sharing iClickers is illegal.**
Participation will also be evaluating via class discussion. Students who participate in class discussion together with iClickers (points for clicking, not for correct answers) and are present

for 85% of the lectures will receive full credit. *During class, some questions may be asked through iClickers and, most of the times, will expand through a group discussion.*

Piazza page: Our Piazza page should work as a message board: students may post/answer questions on that page. Students who have a specific question about the course/course material are encourage to post it on the Piazza page. Other students may wonder the same and the answers will provide an instant clarification to the entire class without misunderstandings. Students who participate **actively** to the class' discussion page receive points that will count toward the final grade. There is a total of 10 points, 1 point per week. To receive participation for a specific week, students must actively participate within that week. For instance, each week starts at midnight of Sunday (00AM) and ends at 11:59PM of the Saturday in the same week.
I suggest you to download the Piazza app so you can be more engaged and receive participation points easily. Follow this link to enroll into Piazza: piazza.com/ucsd/fall2019/bimm122

Virtual Office Hours: On the weeks in which we will have the midterm exams, Dr. Pirino will hold 1 hour of virtual office hours through Google Hangouts (Monday of weeks 3 and 6, from 8 to 9PM). Instructions will be posted on Canvas.

Homework/survey: Students enrolled in BIMM121 will complete 3 homework/surveys assigned in advance by the instructor. Homework will be completed via the course website on Canvas (more information will be provided later). Students are required to bring the answers to their homework to the following class period or when instructed. The answers will be used for class discussion.

Concept Videos**: Students enrolled in BIMM122 may make 2 videos on specific topics assigned by the instructor one week in advance (dates to be announced). After the deadline, the entire class will have few days to watch the videos, and related questions will be asked during exams. Students who make both videos will receive extra credit points (4 points; extra 2% of final grade). To receive 4 points students must make **BOTH** 2 videos as a group. No extra credit will be given to students who do not make concept videos (no points for watching only) or make only 1 video or make a video/s him/herself. **If interested on the video preparation**, **please sign up by adding your name to one of the concept videos groups on Canvas by Friday of week 2 at 11:59 PM. No further requests will be accepted after the deadline. Sign up sheet will open in week 1.** ***Think twice before enrolling in this extra credit activity. Students who signed up and then decide not to do the videos will receive -1 point, since their negligence will jeopardize other students' performance.
Instructions to sign up will be provided.
Instructions on how to upload videos will be provided later in the course. Videos must be uploaded by the deadlines specified in the course schedule.

Regrade Requests: All regrade requests should be submitted in writing (either by email or giving them to Dr. Pirino or IAs) *within 5 days* of receiving the graded material (*aka, the day that graded exams are brought to discussion sections*). Please check the regrade policy on Canvas for more information.

Scientific articles: We will read several articles throughout the course and they are fair game for the exams, unless otherwise instructed. As you read the scientific papers, focus on the big picture and look for the following points:

1. What were the main goals this paper? What was/were the hypothesis/es?
2. What experiments were performed to test the hypothesis/es?
3. Did the results confirm or refute the hypothesis/es?
4. What were the main conclusions of the paper?

If there is something that you do not understand, skip it temporarily, you can return to it later.

Statement on Office for Students with Disabilities (OSD): To receive accommodation, students must present or email their "Authorization for Accommodation" (AFA) form provided by the Office for Students with Disabilities (OSD) to the instructor. Extended exam times will overlap with the regular exams and usually start at the same time as the regular exams. If OSD exam times for this course conflict with another class, then this course should not be taken. It is the student's responsibility to make sure class and exam schedules for all of their classes do not have any conflicts.

Statement on Academic Integrity: Integrity of scholarship is essential for an academic community. The University expects that both faculty and students will honor this principle and in so doing protect the validity of University intellectual work. For students, this means that all academic work will be done by the individual to whom it is assigned, without unauthorized aid of any kind. The consequences of being caught cheating can be severe. Information can be found here: http://www.ucsd.edu/current-students/academics/academic-integrity/index.html
Students are expected to do their own work, as outlined in the UCSD Policy on Integrity of Scholarship: http://senate.ucsd.edu/Operating-Procedures/Senate-Manual/Appendices/2
Academic misconduct will NOT be tolerated. Any student who engages in suspicious conduct will be confronted and subjected to the disciplinary process. Cheaters will receive a failing grade on the exam or assignment, and/or in the course. They may also be suspended from UCSD pursuant to University guidelines. All class material, such as syllabus, readings, homework, scientific articles, lecture slides, etc. are copyrighted and cannot be posted to websites and/or distributed without instructor's approval for any reason. Students that sell and distribute course materials not only violates the student code of conduct, but also violates UC's 2005 policy on the Use of Recordings of Course Presentations: http://copyright.universityofcalifornia.edu/resources/recorded-presentations.html .

Academic misconduct includes but is not limited to:

1. **Cheating**, such as using "crib notes", copying answers from another student during the exam, or forge assignments.
2. **Plagiarism**, such as using the writings or ideas of another person, either in whole or in part, without proper attribution to the author or the source. Copying anything from any source is plagiarism if the source is not clearly cited. Plagiarism is stealing someone else's ideas and presenting them as your own.
3. **Collusion**, such as engaging in unauthorized collaboration on exams or assignments, completing for another student any part or the whole of an exam or assignment, or procuring, providing or accepting materials that contain questions or answers to an exam or assignment to be given at a subsequent time.

Electronic Devices: Textbooks, notes, cell phones, pagers, laptop computers, smartwatches, and all other electronic devices must be off and stored out of sight during exams. The use of these devices during an exam is considered an act of academic dishonesty and will be dealt with accordingly. Also, during class students cannot surf the web, use their cell phones, or do anything not related to the class, unless otherwise instructed.

