Syllabus

This syllabus is subject to change, particularly because of campus efforts to contain COVID-19. Any schedule changes will be posted on the course website. Make sure to frequently check the website to keep updated.

Virtual zoom link for lectures: https://ucsd.zoom.us/meeting/register/tJwof-ChqzMiG9V2vkYUo3fv4HLEQH6pqbPo (Links to an external site.)

Personal Meeting ID: 985 8995 8811

Password: 585986

Day/Time for synchronous classes: Mondays, Tuesdays, Wednesdays, and Thursdays 8:00 – 9:20 AM

Instructor: Sergio Ita, Ph.D.

Office hours: 9:30 – 10:30 on Tuesdays and Thursdays

Zoom link for office hours: https://ucsd.zoom.us/j/7483576307?pwd=bHpvL0xvc0pXZ1l5VWppakRmMDRLZz09 (Links to an external site.)
(Links to an external site.)**Personal meeting ID**: 748 357 6307

Password: 585986

Email: sita@ucsd.edu (Put BIMM 114 in the subject line :))

Please make sure that you check out this website for resources on how to learn remotely:

https://digitallearning.ucsd.edu/learners/learning-remote.htmlLinks to an external site.

Course Summary:

We are currently living through a global pandemic from the recent emergence of SARS-CoV-2 which is responsible for COVID-19. Viruses are responsible for human illnesses and millions of deaths annually. Some of the most feared, widespread and devastating human diseases such as smallpox, influenza, dengue fever, yellow fever, measles and AIDS (Acquired immunodeficiency syndrome) are caused by viruses. Similarly, viruses cause a number of recently emerging diseases, including Ebola hemorrhagic fever, severe acute respiratory syndrome (SARS), Zika virus infection and influenza pandemics. In addition, viruses infect animals, plants and insects of importance to humans, where they can have tremendous consequences for the world economy and environment. During this summer session, we will explore the complex biology of viruses, their life cycle and pathogenesis, how they evade the immune system and how they often disable or kill their host. We will cover the history of virology, general principles of viral infections, and specifics of viral families with emphasis on individual

viruses that have changed human history, are currently major health burden and/or represent a serious threat for mankind.

Prerequisites: BIMM100 (Molecular Biology), and its prerequisites.

Textbook:
The **required** textbook is ***Fundamentals of Molecular Virology****, 2nd edition* by Nicholas Acheson. Mandatory reading assignments, indicated on the schedule, are associated with every lecture. The reading assignments should be completed before the corresponding lecture. This will significantly contribute to your understanding of the lecture, even if you did not understand all the material the first time you read it. Do not be discouraged. It is normal for new understandings to develop over multiple exposures to any novel material. Research in psychology has shown that students who read before coming to lectures gain far more from the lecture than those who do not. Further reading material from outside sources will be posted on the Canvas website and announced in class.

An eBook of the textbook is available as a purchasing option for this course through Inclusive access. For more information on Inclusive Access go to the following link: https://ucsandiegobookstore.com/t-inclusiveaccess.aspx (Links to an external site.)

Your digital course materials are provided by the UC San Diego Bookstore through Canvas and are free for the first two weeks of classes. After two weeks, your student account will be charged a special reduced price unless you opt-out. If you decide to opt-out you must complete the process by ***Tuesday, July 7th, 2020*** *and you will be responsible for sourcing the materials elsewhere.*

For any questions about billing please contact textbooks@ucsd.edu.
For any questions about using your eBook please reference RedShelf Solve (Links to an external site.).

To opt-out:

- Click the RedShelf link in Canvas

- Click View Course Materials

- Scroll down to the gray opt-out button and follow the prompts

You will have until ***Tuesday, July 7th 2020*** *to complete this process and you will be responsible for getting access to the materials elsewhere.*

Lectures:

All educational sessions (classes, sections, etc) will be recorded and made available asynchronously. Lectures will provide information not contained in the reading and are important to get a perspective on the most important aspects of each topic that will be

evaluated in the exams. Please note that the indicated schedule and readings may be modified somewhat during the summer session, and any changes will be announced in lecture. Lecture slides will be posted on the class website <24 hours after the lecture, with all attempts to make them available before class. However, these notes are not intended to replace lecture, as there will likely be material presented in class that does not appear in the lecture slides. You will be responsible for information provided in lecture in addition to the material assigned in the text.

Virtual Classroom etiquette:

Because this summer session will be a virtual lecture format, maximizing interactions is important! As we have all become accustomed to virtual meetings using a Zoom format, we will all use best practices to maximize participation and reduce distractions.

Office hours with Dr. Ita:

I will hold office hours virtually through zoom twice a week on Tuesdays and Thursdays from 9:30 AM to 10:30 AM. If you cannot attend at those times please email me and we can schedule to meet at another available time. I am available to discuss the course, the current pandemic, science and your studies.

Email communication:

Please put BIMM114 in the subject and remember to include your first and last name in the body of the email. I will not respond to any questions regarding the content of the exams by email or answer lengthy questions on course material, or schedule a meeting with you or anything else that can be done in person before/after class or during office hours. I will address questions about the course material during office hours.

Instructional assistants:

We have a great set of IAs for the class this year. They are:

IAs	Email	Virtual Office Hours
Jaxon Wagner	jdw035@ucsd.edu	Thurs 10:30-11:30 962 2624 2515
Connor Lennan	clennan@ucsd.edu	Wed 9:30-10:30 283 527 9799

Please make sure you include “BIMM 114” in all email correspondence.

Discussion sections:

Discussion sections are a valuable part of this course, and attendance will be worth 5% of your final grade. These sections serve to clarify, emphasize and expand points that

have been introduced in lecture. The IAs will craft each meeting to include opportunities for problem-solving, discussion, and expansion on particularly timely topics. Please attend the section you are assigned to so that the IAs can assess attendance.

Section	Day	Time	Virtual Room	IA
A01	Friday	10:00 – 11:50 AM	946 1349 9536 password: 114114	Jaxon
A02	Friday	12:00 – 1:50 PM	946 1349 9536 password: 114114	Jaxon
A03	Friday	2:00 – 3:50 PM	946 1681 8268 password: 114114	Connor

Review sessions:

I will hold review sessions each Thursday from 6:30pm – 8:20 pm prior to each quiz.

Zoom link for review sessions: https://ucsd.zoom.us/j/7483576307?pwd=bHpvL0xvc0pXZ1l5VWppakRmMDRLZz09

Exams and grading:

Your performance in the course will be evaluated by four virtual weekly quizzes, the final exam, and participation during synchronous classes. Exam and grading policies are as follows: Quizzes will consist of fill in the blank, short answer, and multiple-choice questions. There are no scheduled make-up exams. Failure to take the exam will result in a zero. Extraordinary circumstances preventing you from taking an exam must be discussed in >24 hours in advance with the Student Affairs Office (1128 Pacific Hall) and Professor Ita. If exceptions are made for these special circumstances, the make-up will be an ORAL or ESSAY exam given by Professor Ita. There will be only one final given, I am sorry but it is impossible to accommodate those with multiple finals on the same day.

Quiz I: Available in Canvas from July 3 to July 5 (48 hours). It is worth 15% of your grade. Will cover all lecture and reading material assigned for lectures 1-4.

Quiz II: Available in Canvas from July 10 to July 12 (48 hours). Will cover all lecture and reading material assigned for lectures 6-9.

Quiz III: Available in Canvas from July 17 to July 19 (48 hours). Will cover all lecture and reading material assigned for lectures 11-14.

Quiz IV: Available in Canvas from July 24 to July 26 (48 hours). Will cover all lecture and reading material assigned for lectures 16-19.

Final: Given on **August 1 8:00 AM – 10:59 AM**. Worth 20% of your grade. Covering all lecture and reading material assigned the entire class with emphasis on material and reading assigned for lectures 21-24.

Clickers/participation: Worth 5% of your grade. Starting in the second or third week of lectures, there will be questions during the virtual lecture that you can answer for participation. You will be graded for participation, not based on correct answers. Points will be scaled according to participation. You will be allowed to miss 20% of the clicker questions and still get full credit.

Section participation: Attendance in review sections will be worth 5% of your grade. Starting in the second week, IAs will run discussion sections that will highlight and expand upon pertinent material from that week. IAs will assess attendance through confirming attendance. Therefore, everyone must attend at least three sections to earn maximal points.

Report: A report on any virus that you choose. This report will be 10% of your grade. More information will be provided during the start of the course.

COVID-19 and SARS-CoV-2: To encourage you to apply your newfound virology knowledge to the ongoing pandemic you can earn up to 5% extra credit on your final exam grade at any point in the quarter by identifying an article from a credible popular news source about COVID-19 and SARS-CoV-2 or any other emerging viruses and emailing me a brief (2-3 pages or 1000-2000 words) summary of the article, its relevance to the course, and why you found it interesting/newsworthy. Please include either the link to the article or the full article in your summary, and email this to me as a PDF including 'BIMM 114 – COVID in the News' in the subject line of the email. The article should be from sometime in 2019 or 2020. Judging of merit in these cases is entirely subjective and will be primarily used to help decide grades on the borderline. Examples of credible popular news sources include (but are certainly not limited to): NPR, NY Times, National Geographic, and BBC, but does not include Buzzfeed, People magazine, or some random thing you heard someone say.

Grading policy:

I understand this is a challenging time and that you may have challenges with accessing the course material, adapting to online-only learning, and taking online quizzes and exams. My goals are to teach you the course material, fairly test your knowledge of this material, and grade you accordingly, while keeping these challenges in mind.

Assessment	

Quiz I	
Quiz II	
Quiz III	
Quiz IV	
Synchronous lecture participation	
Discussion participation	
Report	
Final Exam	
Total	

Regrading policy:

To submit a request for a regrade, you must:

1. Write a cover letter specifying which specific problem should be looked at and fully describe why you think the problem was wrongly graded. I will consider no more than three "potential" errors per exam.
2. Include your email address in your cover letter so that I can contact you regarding the decision on the regrade.
3. Email the cover letter Dr. Ita. The regrade request must be delivered within 1 week after the graded exams are returned. If you submit an exam for a regrade, I may choose to regrade the entire exam. If I think the grading was too generous, for the sake of accuracy I reserve the right to *lower* your score.

Academic integrity:

Students are expected to do their own work, as outlined in the UCSD Policy on Academic Integrity. **Academic misconduct** is broadly defined as any prohibited and dishonest means to receive course credit, a higher grade, or avoid a lower grade. Academic misconduct misrepresents your knowledge and abilities, which undermines the instructor's ability to determine how well you're doing in the course. Students suspected of AI violations on quizzes or the final exam will be invited to Zoom follow-up meetings where they will be asked to (in real time, on video) justify their answers (before the graded exams or solutions are released). If I, as the instructor, am not convinced during the meeting, or the student refuses to participate, they're submitted for AI violations

Please review UCSD's Policy on Academic Integrity:

http://senate.ucsd.edu/Operating-Procedures/Senate-Manual/Appendices/2Links to an external site.

Accommodations:

Students requesting accommodations and services due to a disability for this course need to provide a current Authorization for Accommodation (AFA) letter issued by the Office for Students with Disabilities (OSD), prior to eligibility for requests. Receipt of AFAs in advance is necessary for appropriate planning for the provision of reasonable accommodations. Please note that instructors are unable to provide accommodations unless they are first authorized by OSD. For more information, contact the OSD at (858) 534-4382 (voice), **osd@ucsd.edu**, or visit **osd.ucsd.edu**Links to an external site.."

Class Schedule:

Date	Session	Topic	Relevant reading
Jun 29	1	Introduction and history	Ch 1: 2-9; Ch 26: pg. 312-313
Jun 30	2	Methods	Ch. 1: pg. 9-11
Jul 1	3	Structure	Ch. 1: pg. 18-27
Jul 2	4	Genomes & Classification	Ch. 1: pg. 31-40
Jul 3	**5**	**Quiz I**	
Jul 6	6	Replication Cycle I	Ch. 1: 11-17, 26-30; Ch. 4
Jul 7	7	Replication Cycle II	Ch. 1: 11-17, 26-30; Ch. 4
Jul 8	8	Host defense	Chapter 33 and 34
Jul 9	9	Evolution	Ch. 1: pg. 40-44
Jul 10	**10**	**Quiz II**	
Jul 13	11	Picornaviruses (+ss RNA)	Chapter 11

Jul 14	12	Flaviviruses (+ss RNA)	Chapter 12
Jul 15	13	Coronaviruses (+ss RNA)	Chapter 14
Jul 16	14	COVID-19 pandemic	*outside reading
Jul 17	15	**Quiz III**	
Jul 20	16	Filoviruses (-ss RNA)	Chapter 16
Jul 21	17	Orthomyxoviruses (-ssRNA)	Chapter 18
Jul 22	18	Papillomavirus	Chapter 22
July 23	19	Herpesviruses	Chapter 24
July 24	**20**	**Quiz IV**	
July 27	21	Retroviruses	Chapter 28 and 29
July 28	22	Emerging Viruses	Outside reading*
July 29	23	Antivirals	Chapter 35
July 30	24	Vaccines	Chapter 36
Aug 1		**Final Exam (8:00 - 10:59 AM)**	