COLLEGE OF THE REDWOODS

Syllabus for BIOL-2-V0238

Course Information

Semester & Year:	Spring 2021
Course ID & Section #:	BIOL-2-V0238
Instructors' names:	Julie Kelly and Christopher Callahan
Course units:	4

Instructor Contact Information

Julie Kelly is the instructor of record and will lead the course. All inquiries should be addressed to Professor Kelly.

Christopher Callahan will join the course after Spring Break to assist with the Carolina Lab Activities.

Online Study Sessions (optional) – Where:	Online via ConferZoom
Online Study Sessions (optional) - When:	Wednesday and Sunday evenings at 7:30 - 8:30 pm Tuesday and Friday mornings at 10:00 – 11:00 am
Office hours:	One-on-one meeting by arrangement
Email address:	julie-kelly@redwoods.edu christopher-callahan@redwoods.edu

Catalog Description

A study of microorganisms including anatomy, physiology, genetics, and ecological importance. Emphasis will be on the role of microorganisms in disease and the mechanisms of microbe/host interactions. Laboratory work emphasizes the importance of aseptic techniques, methods of microbial control, and procedures for isolating, culturing microbes, and identifying microorganisms.

Course Student Learning Outcomes *(from course outline of record)*

1. Describe the anatomy, physiology and biochemistry of microorganisms and the consequential effects of various environmental factors upon them.
2. Know the causative organism of the more common human diseases and the physiological effect of the drugs most commonly used in the fight against these diseases.
3. Describe the principles and applications of genetic engineering and the role that microorganisms are playing in this process.

Prerequisites/co-requisites/ recommended preparation

Prerequisite: BIOL-1 or BIOL-3 with a minimum grade of "C".
Co-requisite: Concurrent enrollment in (or completion of) either CHEM-1A or CHEM-2.

Accessibility

College of the Redwoods is committed to making reasonable accommodations for qualified students with disabilities. If you have a disability or believe you might benefit from disability-related services and accommodations, please contact your instructor or Disability Services and Programs for Students (DSPS). Students may make requests for alternative media by contacting DSPS based on their campus location:

- Eureka: 707-476-4280, student services building, 1st floor
- Del Norte: 707-465-2324, main building near library
- Klamath-Trinity: 530-625-4821 Ext 103

During COVID19—DSPS will email approved accommodations for distance education classes to your instructor. In the case of face-to-face instruction, please present your written accommodation request to your instructor at least one week before the needed accommodation so that necessary arrangements can be made. Last minute arrangements or post-test adjustments usually cannot be accommodated.

Student Support

Good information and clear communication about your needs will help you be successful. Please let your instructor know about any specific challenges or technology limitations that might affect your participation in class. College of the Redwoods wants every student to be successful.

Evaluation & Grading Policy

This is a grade only course. Your final grade in this course will be based on tests and assignments in lecture and lab.

There will be 3 lecture exams, and a *cumulative* final exam. (35%)
Regular lecture exams are not cumulative *per se* but material will sometimes build on previously presented information. The final lecture exam will include information from the entire semester.

Lecture discussions for every lecture. (5%)

There will also be 3 lab exams. (20%)
You will be tested on lab information and techniques.

Laboratory Exercise Reports (22%)

Pre-lab reading assignments. (5%)

Unknown Bacteria Report. (13%)

Letter Grades

I will use the following scale to determine the letter grade you earn in my class.

100 – 93% = A	89.9 – 87% = B+	79.9 – 77% = C+	69.9 – 60% = D
92.9 – 90% = A-	86.9 – 83% = B	76.9 – 70% = C	< 59.9% = F
	82.9 – 80% = B-		

Admissions deadlines & enrollment policies

Spring 2021 Dates

- *Classes begin: 1/16/21*
- *MLK Jr. Birthday (all campuses closed): 1/18/21*
- *Last day to add a class: 1/22/21*
- *Last day to drop without a W and receive a refund: 1/29/21*
- *Census date: 2/01/21 or 20% into class duration*
- *Last day to petition to file P/NP option: 2/12/21*
- *Lincoln's Birthday (all campuses closed): 2/12/21*
- *President's Day (all campuses closed): 2/15/21*
- *Last day to petition to graduate or apply for certificate: 3/04/21*
- *Spring Break (no classes): 3/15/21 – 3/20/21*
- *Last day for student-initiated W (no refund): 4/02/21*
- *Last day for faculty-initiated W (no refund): 4/02/21*
- *Final examinations: 5/08/21 – 5/14/21*
- *Semester ends: 5/14/21*
- *Grades available for transcript release: approximately 5/31/21*

Academic dishonesty

In the academic community, the high value placed on truth implies a corresponding intolerance of scholastic dishonesty. In cases involving academic dishonesty, determination of the grade and of the student's status in the course is left primarily to the discretion of the faculty member. In such cases, where the instructor determines that a student has demonstrated academic dishonesty, the student may receive a failing grade for the assignment and/or exam and may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct (AP 5500) is available on the College of the Redwoods website. Additional information about the rights and responsibilities of students, Board policies, and administrative procedures is located in the College Catalog and on the College of the Redwoods website.

Disruptive behavior

Student behavior or speech that disrupts the instructional setting will not be tolerated. Disruptive conduct may include, but is not limited to: unwarranted interruptions; failure to adhere to instructor's directions; vulgar or obscene language; slurs or other forms of intimidation; and physically or verbally abusive behavior. In such cases where the instructor determines that a student has disrupted the educational process, a disruptive student may be temporarily removed from class. In addition, the student may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct (AP 5500) is available on the College of the Redwoods website. Additional information about the rights and responsibilities of students, Board policies, and administrative procedures is located in the College Catalog and on the College of the Redwoods website.

Inclusive Language in the Classroom

College of the Redwoods aspires to create a learning environment in which all people feel comfortable in contributing their perspectives to classroom discussions. It therefore encourages instructors and students to use language that is inclusive and respectful.

Setting Your Preferred Name in Canvas

Students have the ability to have an alternate first name and pronouns to appear in Canvas. Contact Admissions & Records to request a change to your preferred first name and pronoun. Your Preferred Name will only be listed in Canvas. This does not change your legal name in our records. See the Student Information Update form.

Canvas Information

If using Canvas, include navigation instructions, tech support information, what Canvas is used for, and your expectation for how regularly students should check Canvas for your class.
Log into Canvas at https://redwoods.instructure.com
Password is your 8 digit birth date
For tech help, email its@redwoods.edu or call 707-476-4160
Canvas Help for students: https://www.redwoods.edu/online/Help-Student
Canvas online orientation workshop: https://www.redwoods.edu/online/Home/Student-Resources/Canvas-Resources

Community College Student Health and Wellness

Resources, tools, and trainings regarding health, mental health, wellness, basic needs and more designed for California community college students, faculty and staff are available on the California Community Colleges Health & Wellness website.

Wellness Central is a free online health and wellness resource that is available 24/7 in your space at your pace.

Students seeking to request a counseling appointment for academic advising or general counseling can email counseling@redwoods.edu.

Emergency procedures / Everbridge

College of the Redwoods has implemented an emergency alert system called Everbridge. In the event of an emergency on campus you will receive an alert through your personal email and/or phones. Registration is not necessary in order to receive emergency alerts. Check to make sure your contact information is up-to-date by logging into WebAdvisor https://webadvisor.redwoods.edu and selecting 'Students' then 'Academic Profile' then 'Current Information Update.'

Please contact Public Safety at 707-476-4112 or security@redwoods.edu if you have any questions. For more information see the Redwoods Public Safety Page.

In an emergency that requires an evacuation of the building anywhere in the District:

- Be aware of all marked exits from your area and building

- Once outside, move to the nearest evacuation point outside your building
- Keep streets and walkways clear for emergency vehicles and personnel

Do not leave campus, unless it has been deemed safe by the campus authorities.

Del Norte Campus Emergency Procedures

Please review the Crescent City campus emergency map for campus evacuation sites, including the closest site to this classroom (posted by the exit of each room). For more information, see the Redwoods Public Safety Page.

Eureka Campus Emergency Procedures

Please review the campus emergency map for evacuation sites, including the closest site to this classroom (posted by the exit of each room). For more information on Public Safety go to the Redwoods Public Safety Page It is the responsibility of College of the Redwoods to protect life and property from the effects of emergencies within its own jurisdiction.

In the event of an emergency:

1. Evaluate the impact the emergency has on your activity/operation and take appropriate action.
2. Dial 911, to notify local agency support such as law enforcement or fire services.
3. Notify Public Safety 707-476-4111 and inform them of the situation, with as much relevant information as possible.
4. Public Safety shall relay threat information, warnings, and alerts through the Everbridge emergency alert system, Public address system, and when possible, updates on the college website, to ensure the school community is notified.
5. Follow established procedures for the specific emergency as outlined in the College of the Redwoods Emergency Procedure Booklet, (evacuation to a safe zone, shelter in place, lockdown, assist others if possible, cooperate with First Responders, etc.).
6. If safe to do so, notify key administrators, departments, and personnel.
7. Do not leave campus, unless it is necessary to preserve life and/or has been deemed safe by the person in command.

Klamath Trinity Campus Emergency Procedures

Please review the responsibilities of, and procedures used by, the College of the Redwoods, Klamath-Trinity Instructional Site (KTIS) to communicate to faculty, staff, students and the general public during an emergency. It is the responsibility of College of the Redwoods, Klamath-Trinity Instructional Site (KTIS) to protect life and property from the effects of emergency situations within its own jurisdiction.

1. In the event of an emergency, communication shall be the responsibility of the district employees on scene.
    a. Dial 911, to notify local agency support such as law enforcement or fire services.
    b. If safe to do so, notify key administrators, departments, and personnel.
    c. If safe to do so, personnel shall relay threat information, warnings, to ensure the school community is notified.
    d. Contact Jolene Gates 530-625-4821 to notify of situation.
    e. Contact Hoopa Tribal Education Administration office 530-625-4413
    f. Notify Public Safety 707-476-4111.
2. In the event of an emergency, the responsible district employee on scene will:

a. Follow established procedures for the specific emergency as outlined in the College of the Redwoods Emergency Procedure Booklet.
b. Lock all doors and turn off lights if in lockdown due to an active shooter or similar emergency.
c. Close all window curtains.
d. Get all inside to safe location Kitchen area is best internal location.
e. If a police officer or higher official arrives, they will assume command.
f. Wait until notice of all is clear before unlocking doors.
g. If safe to do so, move to the nearest evacuation point outside building (Pooky's Park), directly behind the Hoopa Tribal Education Building.
h. Do not leave site, unless it has been deemed safe by the person in command. Student Support Services (required for online classes)

Student Support Services

Food pantry

The following online resources are available to support your success as a student:

- CR-Online (Comprehensive information for online students)
- Library Articles & Databases
- Canvas help and tutorials
- Online Student Handbook

Counseling offers assistance to students in need of professional counseling services such as crisis counseling.

Learning Resource Center includes the following resources for students

- Academic Support Center for instructional support, tutoring, learning resources, and proctored exams. Includes the Math Lab & Drop-in Writing Center
- Library Services to promote information literacy and provide organized information resources.
    - CR's Laptop Lending Library
- Multicultural & Diversity Center

Special programs are also available for eligible students include

- Disability Services and Programs for Students (DSPS)
- Extended Opportunity Programs & Services (EOPS) provides services to eligible income disadvantaged students including: textbook award, career academic and personal counseling, school supplies, transportation assistance, tutoring, laptop, calculator and textbook loans, priority registration, graduation cap and gown, workshops, and more!
- The TRiO Student Success Program provides eligible students with a variety of services including trips to 4-year universities, career assessments, and peer mentoring. Students can apply for the program in Eureka or in Del Norte
- The Veteran's Resource Center supports and facilitates academic success for Active Duty Military, Veterans and Dependents attending CR through relational advising, mentorship, transitional assistance, and coordination of military and Veteran-specific resources.
- Klamath-Trinity students can contact the CR KT Office for specific information about student support services at 530-625-4821

Policies for this Class

Our contract
This syllabus is a contract between us.

My assumptions about you
- You are here to learn, and you are motivated to truly master the content.
- You understand that you are responsible for your own learning. The degree to which you LEARN the content is entirely up to YOU and the time you are willing and able to put into the class.
- You will regularly check email, Canvas Announcements, Canvas Discussions for communications about this class.

Your assumptions about me
- I am fully committed to helping you learn about microbiology.
- I will offer prompt and valuable feedback to guide your progress.
- I will provide engaging, relevant, and creative activities to help you master the course content.
- I will provide regular communication about this class through email, Canvas Announcements, and Canvas Discussions.

Exams, Unknown report, and Lab Reports:

Online exams will be timed. Students will get 2 attempts to take each exam and the highest exam score will be kept. The questions are randomized so that each attempt will have different questions.

Exams will include (not limited to) multiple choice, matching, true/false, and short answer questions. Each student will also be assigned a thought question ahead of time. The thought question should be researched and written out ahead of time. The Thought Question can then be pasted onto the exam.

The final exam in this course is cumulative as it will include material covered throughout the semester.

One of the 4 lecture exams will be dropped and will not be considered in the total calculation of the final grade.

Unknown Report. During the course of this semester, you will watch videos and view photographs of various morphological and biochemical tests to determine physiological characteristics of a pure culture of an unknown microbe with the purpose of identifying it. All data collected about the "unknown bacteria" will be recorded on an Unknown Descriptive Chart.

By comparing the characteristics of your Unknown bacteria with the published characteristics of known bacteria, you will be able to confidently identify your bacteria! You will write a term paper emphasizing the logical "process of elimination" used to eliminate 11 of 12 possible candidates, leaving just one possible candidate. Included in the report will be a flowchart indicating how you made your conclusion about the identification of the bacteria and a comparison of your unknown's results to the published results in the Bergey's manual. ***All components must be typed. The final paper must be saved as a PDF file or Word document and submitted through Canvas. Turnitin -antiplagiarism analysis tool will be used.***

Lab Reports. Each student will complete lab reports for each test done with their Unknown bacteria. The lab report will include recorded data and answers to questions. Your written lab report must be your own original work.
It is considered cheating for any 2 or more people to have exactly the same answers for

Lab Exercise Grading Rubric				
Criteria	Ratings			Pts
All data recorded and questions answered in full	Full **2 points**	Some data missing or parts of some questions unanswered **1 pts**	2 or more questions left blank **0 pts**	2
Points based on accuracy	No more than 1 minor error **2 pts**	No more than 3 minor errors **1 pts**	4 or more errors **0 pts**	2
				4

any portion of a lab report. If an answer comes directly from the lab manual or other text, then you **must** cite the title, author, and page number of the source of your answer. If the answers on lab reports for two students are the same, both students will get a **zero** on their reports.

Late Assignments: Lab reports will be docked 1/2 points per day (including weekends).

One lab assignment will be dropped and will not be considered in the total calculation of the final grade.

Class participation and Attendance policy

All of us in the class, you, me, your peers, have a responsibility to create an environment in which we can all learn from each other. I expect everyone to participate in class so that we can all benefit from the insights and experiences that each person brings.

Viewing the lecture videos is not mandatory. However, the videos will deliver the content that you are responsible for in this class and will be crucial in maintaining a high grade in this class because this class moves rather quickly and covers a lot of material.

You can also use online sources to review the material covered in lecture and lab. However, you are responsible for the detail covered in this class. Students will not get credit for answers to exam questions that were cut and pasted from online sources. You may also read the textbook to gain the content in this class. However, the textbook covers many topics in much more detail than we have time for in this class.

All video lectures are posted in the weekly MODULES in Canvas and in the 3C Media tab. You can also find a link in the weekly modules to download all videos to your electronic device so that you can watch these videos without internet.

You should watch every video and do the assigned discussions and lab exercise questions, but extenuating circumstances arise that can make this difficult. If you cannot finish an assignment, please let me know. If circumstances make you miss more than 3 lab assignments (two weeks' worth of labs) during the semester, you may be overextended. I ask that you contact me to discuss your options.

I will consider your participation in lecture discussions and activities (i.e. good attendance) for borderline grades.

Two lecture discussions will be dropped and will not be considered in the total calculation of the final grade.

MAKE-UP EXAMS ARE ONLY OFFERED WITH A WRITTEN MEDICAL EXCUSE and must be taken within one week of the scheduled exam. Make-up exams will be entirely essay questions that are not the same as the ones on the regularly scheduled exam.

Communication Guidelines

I welcome you to contact me.

- CR email - The best way to reach me is through Canvas email in the Canvas Help tab. I will check email every day.
- Canvas Course Chat - If you have a quick question that you think other students might have, you may ask your question on the Canvas "Course Chat." I will check the Course Chat every morning.
- Canvas General Discussion - If you have a question about the Microbiology content that you think other students might have, you may ask your question on the Canvas "General Discussion." I will check the Canvas General Discussion every morning.

There will be optional zoom study sessions twice a week. I encourage all students to attend these study sessions. These study sessions are a time for students to ask specific questions. I will also have specific activities that we will work on together to help learn the material.

I will send out information about assignments though the **Announcements Tab** on Canvas. I would recommend that you set up your Canvas site to inform you of new announcements on a regular basis. If I need to get information to the whole class quickly, I will put the information in an announcement. If you have a question about an assignment you can post a response to an announcement.

Students have the legal rights that prevent information from being disclosed to anyone (including parents/guardians) without the student's prior written consent.

Student feedback policy

This class involves instructor-prepared video lectures and notes, experiments presented in pictures, wet lab (kitchen) Carolina distance learning experiments, and virtual online experiments. You will be required to participate in multiple threaded discussion forums. You will also be required to submit lab reports, essays, online lecture and lab exams, and a Final Unknown Bacteria report.

You will be able to find feedback
1. directly on the files submitted in Canvas,
2. in the provided rubric, and
3. in the comments box.

I tend to add a great deal of constructive comments. My goal is to help students learn the content as well as provide examples of answers to scientific questions to show the amount of detail needed to meet and exceed expectations.

All grades are entered into Canvas. You can also expect assignments to be graded within 2 weeks of being submitted.

CANVAS

All content is available to you in Canvas, the official Learning Management System (LMS) of College of the Redwoods.

1. To log into Canvas, you will need to go to https://redwoods.instructure.com.
    a. Your login is the same as your webadvisor login.
    b. Unless you have changed it, your password is your 8 digit birth date.
    c. For tech help, email its@redwoods.edu or call 476-4160.
2. Because this is an online class, you should plan on logging into Canvas ALMOST EVERY DAY. You can access an incredible number of resources through Canvas.
3. All content is organized in WEEKLY MODULES. Each module has the same structure and is set up by DUE DATE.
4. If there is content you are looking for but can't find, PLEASE email me ASAP. There are probably other folks looking for the same thing.
5. New modules will show up at the BOTTOM of your module list. All new modules will be published the weekend before. All old modules will remain available for you throughout the course.

Necessary Computer Skills

Online courses require adequate computer skills. You must be able to:

- navigate the course Learning Management System (Canvas)
- receive and respond to your CR email (This means you need to CHECK your CR email!)
- download and upload files to Canvas
- use a phone or digital camera to upload "selfies" and videos to Canvas
- use a word processor program (such as Microsoft Word or Google Docs)

It is your responsibility to meet the technological demands of the course, which may often include troubleshooting technological adventures.

Required Materials

1. The lecture textbook for this class is ***Microbiology,*** a free and open text, built by OpenStax College textbooks. You can access this text through the OpenStax website, https://openstax.org. If you would prefer, you can purchase a paper version through the website or the CR bookstore. The lecture material for this class will closely follow this textbook.

2. The lab manual for this class is will be provided free by the **American Society for Microbiology** and Carolina Distance Learning.

3. Virtual lab website – Labster

4. A method for taking notes.

5. Students in this course will need to purchase a kit of laboratory materials. Cost is $152 with a reimbursement of $135.58 by the 12th week of class. A letter from the Interim Dean, Math and Science will be provided to explain the procedure for reimbursement. The link needed to order the Carolina lab kits will be provided one month prior to performing the first distance learning Carolina lab.
6. Refrigerator for storage of some lab kit supplies
7. Table that can be disinfected and used to perform distance learning Carolina lab exercises
8. Surface disinfectant (10% bleach solution)
9. 70% isopropyl alcohol
10. Paper towels
11. Small plastic container for use as disposal jar (for lab use only)
12. Large plastic container for disinfecting cultures (for lab use only)
13. Matches or lighter
14. Timer or stopwatch

Technology Requirements (computer, other hardware, and software)

1. To access Virtual lab simulations, you will need **laptop or desktop-based** computers, which meet the following requirements:
   - **Processor:** Dual-core 2 GHz or higher
   - **Memory:** 4 GB or more
   - **Graphics card:** Intel HD 3000 / GeForce 6800 GT / Radeon X700 or higher
   - **OS:** Latest version of Windows (64-bit) or Mac OS or ChromeOS
   - **Supported browsers:** Latest version of Firefox and Chrome
   - A **stable** internet Connection

CR's Laptop Lending Library

2. You will need to be able to document distance learning lab work through digital "selfies" and videos, then upload those images to Canvas.

Computer and Hardware Requirements:

- **Computers:** You should plan on doing the majority of your work (especially exams and assignments) from a reasonably recent model notebook or desktop computer (Mac or PC). *Do NOT plan to participate in this class solely from a portable device.*

- **Portable Devices:** You can use recent model portable devices (such as Android or iOS phones & tablets) for ***some*** things in this class. If you do decide to use your portable device for ***some*** of your class work, use the free Canvas app (called "Canvas by Instructure") available in iTunes (for iOS) and the Google Play Store (for Android).
    - **Do not** try to connect to Canvas using a web browser on a portable device. Your experience with Canvas will be a lot better using the app.

- **Smartphone camera or other digital camera**: You will need to be able to document your lab work through digital "selfies" and video, then upload those images to Canvas.

- **High-speed internet:** You should have high-speed internet (such as broadband) service from cable, DSL, or satellite providers as there are video lectures as part of this course, and they require this speed. You need to have reliable access to the internet at least two times a week for 16 weeks. Anticipate problems with your computer and internet access (including power outages) by not waiting until the last minute to submit assignments. It is your responsibility to meet the class deadlines.

Software Requirements: It is important that you set yourself up for success by making sure that you have the necessary software in order to participate fully in the course. Please make sure that you have the following set up by the first week of class:

- **Browsers** - You will need to use the most recent version of one of the following browsers in order to best access the course and activities; Mozilla Firefox (10 or higher), Chrome (54.0.2840.99 m or higher), or Safari (1.2 or higher). Do not use Internet Explorer as it does not work properly with Canvas.

- **Word Processing Software** - You may need Microsoft Word or a compatible software program in order to create Word or Word compatible documents.
    - All students at CR have access to Office 365 (Word, PowerPoint, Excel, and OneNote) free with a valid
    - @mycr.redwoods.edu or @redwoods.edu email account. Go to https://office.com/getoffice365 to get started.
    - There are free options such as Google docs (this requires a gmail account) or OfficeLibre.

- **Acrobat Reader –** Adobe Acrobat Reader DC is a free program that will allow you to read and download pdf files.

Confirm your presence in the online classroom

To ensure you keep your spot in the online classroom, log in to the course in Canvas and complete the first two tasks in the first Module: the first Lecture activity (Syllabus) and the first Lab activity (Exploration of Canvas). Doing so will confirm your enrollment in the course and prevent you from being dropped as a "no show." You can and will be dropped from the class if you do not login and begin participating in course activities. A student from the wait list will then be added to the course in your place.
If you have any issues with this at all, send me an email and let me know, so we can work something out.

Technology Support

You are welcome to email the instructor to ask for technology support. But keep in mind her primary job is to help you learn MICROBIOLOGY. Be ready to troubleshoot technological adventures- and utilize all resources available to you. Here are some:

> Before contacting Technical Support please visit the Online Support Page. For password issues with Canvas, Web Advisor or your mycr.redwoods.edu email, contact Technical Support or call 707-476-4160 or 800-641-0400 ext. 4160 between 8:00 A.M. and 4:00 P.M., Monday through Friday.

Online Course Expectations

This online course will require at least as much time as you would dedicate to a traditional class (probably MORE). This four credit hour class will require at least 16 hours per week just to gain content and then time to study the material on top of that. One hour of studying for every in class is 32 hours per week if you want to succeed. You will need to watch video lectures and take good notes; carefully read textbook chapters when something is unclear; interpret data and results from video and photographs; write lab reports; identify an Unknown bacteria and write a final report; participate in online discussions about lecture and lab content; complete daily online quizzes; and take 4 lecture exams and 3 lab exams. Conscientiousness, attention to details, and skills in reading and writing are critical for success.
You can do it!

Spring 2021 Bio 2 Online Tentative Lecture Schedule (Subject to change.)			
Week		*Lecture Topic*	*Readings*
1	1/18/21 - 1/22/21	**Holiday - Martin Luther King, Jr's Birthday**	
		Course Intro	Chapter 1
2	1/24/21 - 1/29/21	History of Microbiology	Chapter 1
		The Cell - Modern Cell Theory	Chapter 3
3	2/1/21 - 2/5/21	The Cell - Prokaryotic Unique Characteristics	Chapter 3
		The Cell - Prokaryotic - Cell Wall Structure	Chapter 3
4	2/8/21 - 2/12/21	The Cell - Prokaryotic glycocalyces and flagella; Eukaryotic Endo and Exocytosis, lysosomes	Chapter 3
		Acellular Pathogens	Chapter 6
5	2/15/21 - 2/19/21	**Holiday - President's Day**	
		Microbial Biochemistry	Chapter 7
6	2/22/21 - 2/26/21	Microbial Biochemistry	Chapter 7
		LECTURE EXAM 1: Opens on Thursday at 2pm; Closes on Monday at 8am	
7	3/1/21 - 3/5/21	Microbial Metabolism	Chapter 8
		Microbial Metabolism	Chapter 8
8	3/8/21 - 3/12/21	Biochemistry of the Genome	Chapter 10
		Mechanisms of Microbial genetics	Chapter 11
Spring Break			
9	3/22/21 - 3/26/21	Mechanisms of Microbial genetics	Chapter 11
		Modern Applications of Microbial Genetics	Chapter 12
10	3/29/21 - 4/2/21	Modern Applications of Microbial Genetics	Chapter 12
		LECTURE EXAM 2: Opens on Thursday at 2pm; Closes on Monday at 8am	
11	4/5/21 - 4/9/21	Control of Microbial Growth	Chapter 13
		Antimicrobial Drugs	Chapter 14
12	4/12/21 - 4/16/21	Antibiotic Resistance	Chapter 14
		Microbial Mechanisms of Pathogenicity	Chapter 15
13	4/19/21 - 4/23/21	Disease and Epidemiology	Chapter 16
		Innate immunity	Chapter 17
14	4/26/21 - 4/30/21	Adaptive Immunity	Chapter 18
		Adaptive Immunity	Chapter 18
15	5/3/21 - 5/7/21	Diseases of the Immune System	Chapter 19
		LECTURE EXAM 3: Opens on Thursday at 2pm; Closes on Monday at 8am	
16	5/10/21 - 5/13/21	**FINAL EXAM** Comprehensive	

Spring 2021 Bio 2 Online Tantative Lab Schedule (Subject to change.)			
Week	***Date***	***Results and Assignments on Canvas***	***Virtual lab***
1	1/18/21 - 1/22/21	**Holiday - Martin Luther King, Jr's Birthday**	
		Get to know Canvas; Media 1-3; Aseptic Technique 1-4	
2	1/24/21 - 1/29/21	Colony Isolation 1-5	Virtual lab - Bacteria Isolation
		Growth on slants 2-3; Growth in broth 2-4	
3	2/1/21 - 2/5/21	Microscope 3-1; Basic Stains 3-4;	Virtual Microscope
		Gram Stains 3-6; Students receive photographs of Unknown bacteria Gram stain; Capsule stain 3-8; Endospore stain 3-9	Virtual lab - The Gram stain
4	2/8/21 - 2/12/21	Fluid Thioglycolate Broth 2-6; Anaerobe jar 2-7; Temperature 2-8; pH 2-9; Students receive photographs of Unknown bacteria Growth on Slant	
		PEA 4-1; MSA 4-3; MAC 4-4; EMB 4-5	
5	2/15/21 - 2/19/21	Phenol Red Broth 5-2, MR/VP 5-3;	Virtual - ID of bacteria
		Catalase 5-4; Oxidase 5-5; Nitrate reduction 5-6	
6	2/22/21 - 2/26/21	Decarboxylation 5-8; Phenylalanine Deaminase 5-9;	
		Amylase 5-10; DNAse 5-11; Lipase 5-12, Casease 5-13	
7	3/1/21 - 3/5/21	Gelatinase 5-14; urease 5-15	
		Lab Exam I: Opens on Thursday at 2pm; Closes on Monday at 8am	
8	3/8/21 - 3/12/21	Bile esculin 5-16; SIM 5-18	
		Hemolysins 5-21; Coagulase 5-23; Motility 5-24	
Spring Break			
9	3/22/21 - 3/26/21	Overview of Dichotomous keys to determine hypothesis of Identity of Unknown bacteria species. Overview of Bergey's manual to confirm identity of Unknown bacteria species.	Virtual - Genetic transfer in Bacteria
		Wet Lab 1: Lab Saftey Plan.	
10	3/29/21 - 4/2/21	**Wet Lab 2**: Aseptic Technique and Use of Media (**Reactivation of *S. marcescens*** - Incubate for 72 hours); Turn in Discriptive Chart	
		Wet Lab 2: Aseptic Technique and Use of Media - **Inoculate** - Incubate for 72 hours)	
11	4/5/21 - 4/9/21	**Wet Lab 3**: Isolation Streak Plate Technique; (**Reactivation of M. luteus** - Incubate for 72 hours	
		Wet Lab 3: Isolation Streak Plate Technique - **Inoculate** - Incubate for 72 hours; **Wet Lab 4**: Selective and Differential Media (**Reactivation of E. coli and S. epidermidis** - Incubate for 72 hours) **Lab Exam 2**: Opens on Thursday at 2pm; Closes on Monday at 8am	
12	4/12/21 - 4/16/21	**Wet Lab 4**: Selective and Differential Media - **Inoculate** - Incubate for 96 hours	
		Wet Lab 5: Biochemical Tests in Microbiology - **Inoculate** - Incubate for 48 hours	
13	4/19/21 - 4/23/21	**Wet Lab 6**: Kirby-Bauer Method; **Inoculate**; Incubate for 48 hours; Turn in 1st (may be very rough) draft of Unknown Bacteria Report	
		Epidemiology (Exercise 7-4)	
14	4/26/21 - 4/30/21	Work on Unknown Bacteria Report	
		Lab Exam 3: Opens on Thursday at 2pm; Closes on Monday at 8am	
15	5/3/21 - 5/7/21	Work on Unknown Bacteria Report	
		Work on Unknown Bacteria Report	
16	5/10/21 - 5/13/21	**Finals Week - Lab does not meet**	