MCB2610

UCONN
UNIVERSITY OF CONNECTICUT

Fundamentals of Microbiology
Dept of Molecular and Cell Biology

Syllabus – Fall 2020

Excluding materials for purchase, syllabus information may be subject to change. The most up-to-date syllabus is located within the course in HuskyCT.

Course and Instructor Information

Course Title: MCB2610, Fundamentals of Microbiology
Credits: # 4 credits
Format: Lecture: Distance Learning; Laboratory: May be taken either In-Person or Distance Learning
Prerequisites: Organic Chemistry, Introductory Biology
Professor: Dr. Kathleen A. Feldman

Email: Kathleen.feldman@uconn.edu
Telephone: 860-486-4337
Office Hours/Availability: Beach Hall Room 201B - In-person Office hours will be available by appointment only. You may request an appointment by sending Dr. Feldman an email.

Microbiology Laboratory Supervisor: Dr. Gino Intrieri
Telephone: 860-486-4253
Office: Torrey Life Science Room 209
Email: gino.intrieri@uconn.edu

Laboratory Teaching Assistants:
TBD

Course Materials

All course information will be posted on the UCONN Blackboard website which is accessible with your net ID at http://lms.uconn.edu

Required course materials should be obtained before the first day of class.

Required textbooks are available for purchase through the UConn Bookstore (or use the Purchase Textbooks tool in HuskyCT). Textbooks can be shipped (fees apply).

Lecture Text*: This semester we will be using a totally on-line textbook and learning assessment tool called "WileyPlus". You may purchase the access code directly from John Wiley & Sons publishers ($69) at www.wileyplus.com.* ***All students MUST purchase the access code to view the on-line text book and access the on-line assignments****. A hard copy text book is also available but is* ***NOT*** *necessary for this course since you will already have access to the online text book through WileyPlus. Note: Wiley offers a 14 day free trial if you are not ready to purchase.*

Access to WileyPlus: Go to www.wileyplus.com
Use class code: TBD
(We are using the Legacy WileyPlus platform)
click "Create Account"
Check "user agreement" then "continue"

Laboratory Manual: Available for purchase through the UConn Bookstore – Fall 2020 Version

Additional course readings and media are available within HuskyCT, through either an Internet link or Library Resources

Course Description

This course is designed to provide students with an introduction to the field of microbiology. Students will learn the fundamentals of microbiology, survey the world of microorganisms, and study the interaction between microbes, their hosts, and their effects on the environment. There will also be laboratory exercises each week that will teach the basics of handling, culturing, and identifying microorganisms.

Course Objectives

Specific Learning Outcomes:
By the conclusion of this course students will be:

- Acquainted with the harmful and beneficial effects of microbes on their hosts and the environment.
- Familiar with the ecology, genetics, life cycle, and biological processes found in microorganisms.
- Knowledgeable of the classification of microorganisms and the tools used to study them

Course Requirements and Grading

Summary of Course Grading:

Course Components	Weight
Exam 1	15%
Exam 2	15%
Exam 3	15%
Exam 4 (Final Exam)	15%
Wileyplus Assignments	15%
Laboratory	25%

Lecture Exam format, content, and point value: Students will all take the lecture exams at the same time, i.e., synchronously (see time/dates below). Exams will consist of 50 multiple-choice questions and will be taken on-line using Respondus Lockdown Browser and Respondus Webcam monitor. You must download these programs before taking the exams. You must also have a computer with a Web-cam. Exam study outlines will be posted on HuskyCT. **Grades for each exam are not scaled.**

Lecture Exam 1 (60 minutes)
Tuesday, Sept 22nd at 8am to 9am
Chapter 1 and Appendix B (Microscopy)
See Exam 1 Study Outline on HuskyCT for additional exam information

Lecture Exam 2 (60 minutes)
Tuesday, Oct 20th at 8am to 9am
Chapter 6A and Chapter 6B
See Exam 2 Study Outline on HuskyCT for additional exam information

Lecture Exam 3 (60 minutes)
Tuesday, Nov 10th at 8am to 9am
Chapter 2, 4 and 13
See Exam 3 Study Outline on HuskyCT for additional exam information

Lecture Exam 4 (Final Exam) 60 minutes, non-cumulative
Time and date to be determined by the Registrar's Office
Chapter 7 and Chapter 9
See Exam 4 (Final Exam) Study Outline on HuskyCT for additional exam information

Wiley plus
You are required to complete 15 on-line WileyPlus assignments (available at www.wileyplus.com), which will be worth 15% of your final lecture grade. **Wiley Plus assignment #1 (a tutorial) must be completed by Sept 13th at 11:45pm. All other assignments will be due by 11:45 pm on December 13th. NO EXCEPTIONS!**

Guest Speakers – I have scheduled several speakers to speak about current research topics in Microbiology. These lectures will be pre-recorded and posted on HuskyCT. Each exam will include 4 questions from these special presentations.

Primary Research Articles - I will post a short research article to accompany each of the guest speaker presentations. Each exam will include 4 questions from these articles.

Microbe Minutes: I will post Microbe Minute slides which are 4-5 slides on an interesting microorganism. There will be 5 new Microbe Minutes per exam, a total of 20 per semester. There will be 4 questions on each exam on this material.

Lecture Asynchronous Video Presentations: Lectures will be pre-recorded and posted on HuskyCT. They may be viewed at anytime based on the student's individual schedules. Students are expected to spend approx. 3 hrs per week viewing lecture videos.

Extra credit opportunities:
Option #1: Primary Research Article Summary and Critique (4 points will be added to one exam) – An extra-credit scientific paper will be posted on Husky CT which you should read and provide a thoughtful summary and critique (2 pages, 12 pt double spaced). The paper should be submitted via email to Dr. Feldman by Thursday, December 3rd at 11:45pm. No late submissions will be accepted.

Option #2: Syllabus Quiz (1 point will be added to one exam) **–** Answer the 10 question Syllabus Quiz on Husky CT. You will have until Tuesday September at 11:45pm to answer this and you must get a score of 100% (Note: You can take it multiple times).

Lecture exam make-ups - No make-up exams will be given unless necessitated by medical or family EMERGENCY. The instructor may require proof of such emergency. **The student must contact the instructor within 24 hours of the examination to discuss possible arrangements.** Any make-up examination allowed by the instructor is usually in essay format and must be completed within seven days of the original examination date.

Laboratory

Students will have the option of choosing either an In-Person (Live, Face to Face) or an Online (Synchronous Attendance, Distance Learning) modality for the laboratory.
Online lab sessions will be accessed via Blackboard Collaborate Ultra. Instructions to access the sessions will be provided on HuskyCT.

Lab supplies (in-person lab only): If you are taking an in-person lab section you will need a disposable lab coat that can stay in the lab all semester. You can purchase the recommended lab coat at the UCONN Bookstore ($8.95 - disposable, long version blue or purple). Protective eyewear and disposable gloves will be provided.

See Lab manual for Laboratory grading policies

Final Course Grading Scale:

Grade	Letter Grade	GPA
93-100	A	4.0
90-92	A-	3.7
87-89	B+	3.3
83-86	B	3.0
80-82	B-	2.7
77-79	C+	2.3

Grade	Letter Grade	GPA
73-76	C	2.0
70-72	C-	1.7
67-69	D+	1.3
63-66	D	1.0
60-62	D-	0.7
<60	F	0.0

Due Dates and Late Policy

All course due dates are identified in the Course Outline/Calendar on the last page of this document. Deadlines are based on Eastern Time; if you are in a different time zone, please adjust your submittal times accordingly. *The instructor reserves the right to change dates accordingly as the semester progresses. All changes will be communicated in an appropriate manner.*

Feedback and Grades

I will make every effort to provide feedback and grades within 2 days of submission. To keep track of your performance in the course, refer to My Grades in HuskyCT.

Weekly Time Commitment

You should expect to dedicate approx. **12** hours a week to this course (including both lab and lecture). This expectation is based on the various course activities, assignments, and assessments and the University of Connecticut's policy regarding credit hours. More information related to hours per week per credit can be accessed at the Online Student website.

Student Authentication and Verification

The University of Connecticut is required to verify the identity of students who participate in online courses and to establish that students who register in an online course are the same students who participate in, complete the course activities and assessments, and receive academic credit. Verification and authentication of student identity in this course will include:

1. Secure access to the learning management system using your unique UConn NetID and password.
2. Online exams with webcam verification with ID check

Assessment Monitoring

Exams will be given on-line using Respondus Lockdown Browser and Respondus Webcam Monitor which can be downloaded for free from the class HuskyCT website. Note: Respondus Webcam Monitor requires either a built-in or add-on webcam to take the lecture exams.

Student Responsibilities and Resources

As a member of the University of Connecticut student community, you are held to certain standards and academic policies. In addition, there are numerous resources available to help you succeed in your academic work. Review these important standards, policies and resources, which include:

- The Student Code
  - Academic Integrity
  - Resources on Avoiding Cheating and Plagiarism
- Copyrighted Materials
- Credit Hours and Workload
- Netiquette and Communication
- Adding or Dropping a Course

- Academic Calendar
- Policy Against Discrimination, Harassment and Inappropriate Romantic Relationships
- Sexual Assault Reporting Policy

Students with Disabilities

The University of Connecticut is committed to protecting the rights of individuals with disabilities and assuring that the learning environment is accessible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please let me know immediately so that we can discuss options. Students who require accommodations should contact the Center for Students with Disabilities, Wilbur Cross Building Room 204, (860) 486-2020 or http://csd.uconn.edu/.

Blackboard measures and evaluates accessibility using two sets of standards: the WCAG 2.0 standards issued by the World Wide Web Consortium (W3C) and Section 508 of the Rehabilitation Act issued in the United States federal government." (Retrieved March 24, 2013 from Blackboard's website)

Software/Technical Requirements (with Accessibility and Privacy Information)

The software/technical requirements for this course include:

- HuskyCT/Blackboard (HuskyCT/ Blackboard Accessibility Statement, HuskyCT/ Blackboard Privacy Policy)
- Adobe Acrobat Reader (Adobe Reader Accessibility Statement, Adobe Reader Privacy Policy)
- Microsoft Office (free to UConn students through uconn.onthehub.com) (Microsoft Accessibility Statement, Microsoft Privacy Statement)
- Dedicated access to high-speed internet with a minimum speed of 1.5 Mbps (4 Mbps or higher is recommended).
- WebCam

For information on managing your privacy at the University of Connecticut, visit the University's Privacy page.

NOTE: This course has NOT been designed for use with mobile devices.

Help

Technical and Academic Help provides a guide to technical and academic assistance.

This course is completely facilitated online using the learning management platform, HuskyCT. If you have difficulty accessing HuskyCT, you have access to the in person/live person support options available during regular business hours through the Help Center. You also have 24x7 Course Support including access to live chat, phone, and support documents.

Minimum Technical Skills

To be successful in this course, you will need the following technical skills:

- Use electronic mail with attachments.
- Save files in commonly used word processing program formats.
- Copy and paste text, graphics or hyperlinks.
- Work within two or more browser windows simultaneously.
- Open and access PDF files.

University students are expected to demonstrate competency in Computer Technology. Explore the Computer Technology Competencies page for more information.

Evaluation of the Course

Students will be provided an opportunity to evaluate instruction in this course using the University's standard procedures, which are administered by the Office of Institutional Research and Effectiveness (OIRE).

Additional informal formative surveys may also be administered within the course as an optional evaluation tool.

Course Outline/Calendar

MCB2610 Lecture – Fall, 2020

Approx Date you should view the recorded lectures	Lecture Topic Chapter in Wessner Texbook	Video Recording	Wiley Plus Assignment*
TUES SEPT 1	Overview of Microbiology and Evolution Chapter 1	Intro to Microbiology Chapter 1. Overview of Microbiology A Microbe Minute #1	1 **(due 9/13/20 at 11:45pm)**
THURS SEPT 3	Microbiology History Chapter 1	Chapter 1. Overview of Microbiology B Microbe Minute #2	2
TUES SEPT 8	Microscopy and Staining Appendix B	Appendix B. Microscopy A Microbe Minute #3	3
THURS SEPT 10	Microscopy and Staining Appendix B	Appendix B. Microscopy B Microbe Minute #4	
TUES SEPT 15	Microscopy and Staining Appendix B	Appendix B. Microscopy C Microbe Minute #5	4
THURS SEPT 17	Guest Lecture: Dr. Klassen Read Research Article #1	"Fungus Farming Ants"	
TUES SEPT 22	**Lecture Exam I 8am to 9am**	**See study outline Exam #1**	
THURS SEPT 24	Microbial Growth Chapter 6	Chapter 6A Microbial Growth A Microbe Minute #6	5
TUES SEPT 29	Microbial Growth Chapter 6	Microbe Minute #7	6
THURS OCT 1	Microbial Growth Chapter 6	Chapter 6A Microbial Growth B Microbe Minute #8	
TUES OCT 6	Microbial Growth Chapter 6	Chapter 6A Microbial Growth C Microbe Minute #9	7
THURS OCT 8	Guest Lecture: Dr. Graf Read Research Article #2	"Leech Gut Beneficial Microbes"	
TUES OCT 13	Eliminating Microbes Chapter 6	Chapter 6B. Eliminating Microbes	8
THURS OCT 15	Eliminating Microbes Chapter 6	Microbe Minute #10	
TUES OCT 20	**Lecture Exam 2 8am to 9am**	**See study outline Exam #2**	
THURS OCT 22	Bacterial and Archael Cell Structure Chapters 2 and 4	Chapter 2 and 4 Cell Structure A Chapter 2 and 4 Cell Structure B Chapter 2 and 4 Cell Structure C Microbe Minute #11	9
TUES OCT 27	Bacterial and Archael Cell Structure Chapters 2 and 4 Enzymes Chapter 13	Chapter 2 and 4 Cell Structure D Chapter 2 and 4 Cell Structure E Chapter 13 Enzymes A Microbe Minute #12	10

THURS OCT 29	Enzymes Catabolism and Anabolism Chapter 13	Chapter 13 Enzymes B Chapter 13 Enzymes C Chapter 13 Catabolism and Anabolism A Microbe Minute #13	
TUES NOV 3	Guest Speaker: Dr. Amalaradjou Read Research Article #3	"Food Safety" Microbe Minute #14	11
THURS NOV 5	Catabolism and Anabolism Chapter 13	Chapter 13 Catabolism and Anabolism B Chapter 13 Catabolism and Anabolism C Chapter 13 Catabolism and Anabolism D Microbe Minute #15	
TUES NOV 10	**Lecture Exam 3 8am to 9am**	**See study outline Exam #3**	
THURS NOV 12	DNA Replication and Gene Expression Chapter 7	Chapter 7. DNA Replication A Chapter 7. DNA Replication B Microbe Minute #16	12
TUES NOV 17	DNA Replication and Gene Expression Chapter 7	Chapter 7. DNA Replication C Chapter 7. DNA Replication D Microbe Minute #17	13
THURS NOV 19	DNA Replication and Gene Expression Chapter 7 Bacterial Genetic Analysis Chapter 9	Chapter 7.5 Genetic Variation Chapter 9. Bacterial Genetic Analysis A Microbe Minute #18	
TUES NOV 24	**Thanksgiving Recess**		
THURS NOV 26	**Thanksgiving Recess**		
TUES DEC 1	Bacterial Genetic Analysis Chapter 9	Chapter 9. Bacterial Genetic Analysis B Chapter 9. Bacterial Genetic Analysis C Microbe Minute #19	14 and15
THURS DEC 3	Guest Speaker:TBD Read Research Article #4	Guest Lecture: TBD Microbe Minute #20	**Extra Credit Paper Due**
			All Wiley Assigns due 12/13/20 at 11:45pm
Finals Week 12/14 to 12/20	**Final Lecture Exam (60 minutes) Date & Time to be determined by Registrar's Office**	**See study outline Exam #4 (Final Exam)**	

Lecture Text: "Microbiology", Wessner, Dupont, & Charles, 2017 (2nd Ed) John Wiley & Sons. Available through an on-line access code at www.wileyplus.com*

WileyPlus Homework Assignments - Assignment #1 is a tutorial and is due by September 13, 2020 by 11:45 pm. All other assignments are due by December 13, 2020 at 11:45 pm. You must complete all 15-posted assignments; however, the lowest assignment grade will be dropped.