COMMUNITY COLLEGE OF VERMONT

Web Schedules

Fall 2021
Summer 2021
Spring 2021

One Credit Courses

Fall 2021
Summer 2021
Spring 2021

Course Planning by Program

2021-22

Essential Objectives

Web Schedule Summer 2021

Revision Date: 13-May-21

BIO-2120-VO08Y - Elements of Microbiology

Accelerated Class

Accelerated courses provide the same content and the same number of credits as standard courses, but are delivered in a condensed time frame. Accelerated courses take place online and can range in length up to seven weeks.

Synonym: 205286
Location: Online - Meets Online
Credits: 4
Accelerated Section: This course has special meeting dates and times. See below or consult Self Service - **Search for Courses and Sections** for specific dates and times. If you have any questions call the site office offering the course.
Day/Times: Meets online
Semester Dates: 06-29-2021 to 08-16-2021
Last day to drop without a grade: 07-08-2021 - **Refund Policy**
Last day to withdraw (W grade): 07-27-2021 - **Refund Policy**
Faculty: Melanie Meyer | **View Faculty Credentials**
Materials/Lab Fees: $125.00
This section is waitlisted. Please contact your **nearest center** for availability..
This section meets the following General Education Requirement(s):

Scientific Method

Note

1. Many degree programs have specific general education recommendations. In order to avoid taking unnecessary classes, please consult with additional resources like your program evaluation, your academic program page, and your academic advisor.
2. Courses may only be used to meet one General Education Requirement.

Browse the **Canvas Site** for this class.

Course Description:

This course offers the student an opportunity to examine organisms that are too small to see with the naked eye and is a comprehensive study of the basic principles of microbiology. A brief survey of the history of the science is given. Emphasis is placed on understanding the variety and differences of microbes and their relationship to humans. Prior successful completion of BIO 2012 Human Anatomy and Physiology II is recommended.

Essential Objectives:

1. Compare the theoretical aspects of historical development in the field of microbiology to current concepts of microbiology.
2. Identify macroscopic and microscopic morphology of common microbial isolates.
3. Apply the theoretical and practical aspects of physical and chemical methods used to control microorganisms.
4. Explain the relationships that can exist between host and microorganism.
5. Discuss the disease process as it relates to common microbial pathologies.
6. Model and explain the theoretical and practical aspects of culturing and staining bacteria.
7. Demonstrate proficiency in understanding, interpreting, evaluating, and applying quantitative data and information.

Lab Objectives:
1. Apply knowledge of the scientific method to construct hypotheses, predictions, and lab reports and to design, analyze, and/or critique experiments found throughout peer-reviewed research and laboratory notebooks.
2. Utilize mathematical techniques necessary to properly collect and interpret data (i.e., unit conversions, standardization, and scaling necessary for data collection, graphing and charting).
3. Apply proper techniques in using common scientific tools to collect data and describe how they work (i.e., microscopes, spectrophotometers, UV sterilizers, etc.).
4. Identify and demonstrate lab safety techniques that are in line with CCV's Chemical Hygiene Plan, Lab Safety Agreements, and chemical Safety Data Sheets (SDS).

Additional Instructor Pre-Assignments/Notes/Comments:

Please note that the textbook ordered for this course is an e-book with an access code to a program called Mastering Microbiology which we will be using on a weekly basis. Students will be required to have the access code by the first week of class to complete weekly online assignments. An electronic textbook is included in the cost of the Mastering Microbiology access through Pearson.

Textbook info is included here:

Mastering Microbiology with Pearson eText (Standalone Access Card) for*Microbiology with Diseases by Body System* 5th Edition by Robert W. Bauman, PhD

ISBN for the access card with etext included: 9780134618470

(Please do not register for the text on the Pearson site. We will have a link on our Canvas page to the homework site and you'll register there directly. Instructions to assist you in this process will be posted to our Canvas page in Week 0.)

NOTE: For those that prefer having a physical copy of the text as well, feel free to buy a hard copy of the text in any edition but note that you will still need the access card and online access to our Mastering Microbiology page to complete weekly homework assignments. Pearson also offers the option of purchasing a paper copy of the text when you register for the Mastering Access with your code.

Quizzes will be posted weekly and taken on Canvas. They will be timed at 60 minutes. All quizzes will be due Monday night before 11:59pm.

Research projects will involve a detailed presentation,, which will be recorded on an application called VoiceThread. These present a wonderful opportunity to dive deeper into a topic that we'll be covering and share your expertise with your peers! We'll select projects early in the semester to give you plenty of time to complete the projects. Please use the vast library resources to help you complete a successful, academically sound paper.

Methods:

- Weekly (Optional) Lecture Videos
- Class Discussion Boards
- Online Micro Homework and Lab Assignments
- Quizzes
- Final
- Research Project with Online Presentation and Discussion

Evaluation Criteria:

20% Quizzes

20% Cumulative Final Exam

20% Homework & Lab Assignments on Mastering Microbiology

20% Discussion Boards

20% Research Project and Online Presentation

Grading Criteria:

A+= 97-100

A= 93-96

A- = 90-92

B+ = 87-89

B= 83-86

B-= 80-82

C+ = 77-79

C=73-76

C-= 70-72

D = 60-69

F = <60

Textbooks:

Summer 2021 textbook data will be available on April 5. On that date a link will be available below that will take you to eCampus, CCV's bookstore. The information provided there will be for this course only. Please see **this page** for more information regarding the purchase of textbooks.

BIO-2120-VO08Y Textbooks.

The last day to use a Financial Aid advance to purchase textbooks is the 3rd Tuesday of the semester. See your financial aid counselor at your academic center if you have any questions.

Contact Faculty:

Email: Melanie Meyer
Hiring Coordinator for this course: Catherine Garland

Attendance Policy:

Regular attendance and participation in classes are essential components of a student's success in college and are completion requirements for courses at CCV. Students will demonstrate attendance in the course each week through participation in weekly discussion boards.

Syllabus:

Module 1: 06/29/21

- Chapter 1 A Brief Hx of Microbiology
- Chapter 2 Cell Structure and Function
- Lab: Mastering Micro Lab 1

Module 2: 06/29/21

- Chapter 4 Microscopy, Staining, & Classification
- Chapter 6 Microbial Nutrition & Growth
- Chapter 7 Microbial Genetics
- Lab: Mastering Micro Lab 2

Module 3: 07/06/21

- Chapter 9 Controlling Microbial Growth in the Environment
- Chapter 10 Controlling Microbial Growth in the Body
- Lab: Mastering Micro Lab 3

Module 4: 07/06/21

- Chapter 11 Prokaryotes
- Chapter 12 Eukaryotes
- Lab: Mastering Micro Lab 4

Module 5: 07/13/21

- Chapter 13 Viruses
- Chapter 14 Epidemiology
- Lab: Mastering Micro Lab 5
- Highlight Discussion: The Epidemiology of COVID-19

Module 6: 07/13/21

- Chapter 15 Innate Immunity
- Chapter 16 Adaptive Immunity
- Lab: Mastering Micro Lab 6

Module 7: 07/20/21

- Chapter 17 Immunization and Immune Testing
- Chapter 18 AIDS and other Immune Disorders
- Lab: Mastering Micro Lab 7
- Documentary & Discussion on Vaccine Controversy

Module 8: 07/20/21

- Chapter 19 Diseases of Skin/Wounds
- Chapter 20 Diseases of Nervous System/Eyes
- Lab: Mastering Micro Lab 8

Module 9: 07/27/21

- Chapter 21 Diseases of Cardiovascular System and Systemic Inf.
- Chapter 22 Diseases of the Respiratory System
- Lab: Mastering Micro Lab 9
- Documentary and Discussion: TB--The Silent Killer

Module 10: 07/27/21

- Chapter 23 Diseases of Digestive System
- Chapter 24 Diseases of Urinary Tract and Reproductive Systems
- Lab: Mastering Micro Lab 10

Module 11: 08/03/21

- Monograph Student Research Presentations
- Review for final exam

Module 12: 08/09/21

- Final Exam

Accessibility Services for Students with Disabilities: *CCV strives to mitigate barriers to course access for students with documented disabilities. To request accommodations, please*

1. *Provide disability documentation to the Accessibility Coordinator at your academic center.* ***https://ccv.edu/discover-resources/students-with-disabilities/***
2. *Request an appointment to meet with accessibility coordinator to discuss your request and create an accommodation plan.*
3. *Once created, students will share the accommodation plan with faculty. Please note, faculty cannot make disability accommodations outside of this process.*

Academic Honesty: CCV has a commitment to honesty and excellence in academic work and expects the same from all students. Academic dishonesty, or cheating, can occur whenever you present -as your own work- something that you did not do. You can also be guilty of cheating if you help someone else cheat. Being unaware of what constitutes academic dishonesty (such as knowing what plagiarism is) does not absolve a student of the responsibility to be honest in his/her academic work. Academic dishonesty is taken very seriously and may lead to dismissal from the College.

Course description details subject to change. Please refer to this document frequently.

To check on space availability, choose Search for Classes.

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For support click on: **Vermont State Colleges Help Desk** and choose the Student and Visitor Login.
Complete the screen that follows as fully as you can.