

Course Syllabus

[Jump to Today](#)



MARIAN UNIVERSITY
Indianapolis

BIO 214 Microbiology 4 Credits

Semester and Year:

Online Instructor:

Office:

Office Phone:

Email:

Office Hours:

Required Textbook(s):

Access Card: Includes the Virtual Lab and E-book

Talaro, K. P., & Chess, B. Connect and LearnSmart Labs Access Card for Foundations in Microbiology. New York: McGraw-Hall, 2017. Talaro, Kathleen Park. (Includes e-book - Foundations in Microbiology, 10th Ed. New York: McGraw-Hall, 2017.)

ISBN 9781260196337 (Includes loose leaf book and connect access)

ISBN 9781259915949 (Includes e-book and connect access)

Students are required to purchase the items listed above prior to the start of the course. Look into all of your options - new, used, rental or e-books. If you choose a rental option, be sure to understand the policies and the due dates for the returns. While you have the option to obtain your course materials from any source, ordering from the MU Book Store can be a convenient option. Please note that you can also charge

bookstore purchases to your student account or use your MU financial aid if applicable. Visit www.bkstr.com/marianustore/home.

Textbook Resources Website:

Accessing McGraw-Hill Connect Labs

- 1) Click --> McGraw-Hill Connect (left navigation) of our course
- 2) Click --> Begin
- 3) Click --> Register
- 4) Insert your email address
- 5) Insert your registration code or purchase the access directly here for \$122.50 USD

Additional Resources:

The Mother Teresa Hacklemeier Memorial Library at Marian University provides various databases

<http://www.marian.edu/library/Pages/default.aspx> (<http://www.marian.edu/library/Pages/default.aspx>)

Course Description

This course provides the basic requirements for a working knowledge of viruses, bacteria, fungi, protozoa, algae, and helminths (parasitic worms), with emphasis on structure, metabolism, role in disease, role in the natural world, and the immune responses to infection.

Upon successful completion of this course, students will be able to:

Student Learning Objectives

Student Learning Outcomes

1. Demonstrate facility with the techniques necessary to safely handle specimens for microbiological analysis.
2. Clearly explain the appropriate techniques for disinfection, pasteurization and/or sterilization of equipment, food, and other potentially contaminated materials.
3. Demonstrate an understanding of the basic principles underlying isolation and identification of potentially pathogenic microorganisms.
4. Clearly identify the association between microorganisms, the disease process, and portals of entry and exit of disease organisms.
5. Demonstrate an understanding of the importance of normal microbiota to human health, and the circumstances that permit normal microbiota to cause diseases.

6. Describe the components and functions of the immune system, the role it plays in protecting the host, and methods that organisms use to evade or defeat the immune system.
7. Demonstrate the ability to control microorganisms in the environment.
8. Identify the global impact of microbes in human health.

Teaching Strategies

Audios, discussion, assigned readings, web-based activities, assignments

Assignments & Assessment Methods:

		GRADE PERCENTAGE
		A 94-100%
		A- 90-93.9%
Performance assessment:	Total Points	B+ 87-89.9%
4 lecture exams	400 points	B 83-86.9%
4 lecture quizzes	100 points	B- 80-82.9%
6 homework assignments	125 points	*C+ 77-79.9%
Discussion board	25 points	C 73-76.9%
Viral Presentation	50 points	C- 70-72.9%
<u>Lab Reports</u>	<u>120 points</u>	D+ 65-69.9%
Total	820 points	D 60-64%
		F <60%

Methods of Evaluation

The student is expected to demonstrate competence through class participation, written exams, homework assignments, laboratory exercises, and written and oral presentations.

Course Policies:

Student Handbook

Please refer to the Student Handbook for academic and school of nursing policies. The Student Handbook provides information regarding:

All Nursing students are responsible for reviewing and signing the School of Nursing Student Handbook each semester which holds you accountable for all information and addendums made throughout the semester.

NOTE: Students with disabilities who have proper documentation must contact the Director of Academic Support Services in the Learning and Counseling Center to set up a documentation review. If after the review, accommodations are deemed appropriate, an accommodation plan will be developed. As per the ADA (Americans with Disabilities Act) no accommodations can be provided until this process is complete. Contact Marj Batic, Director of Academic Support Services (mbatic@marian.edu; 317.955.6150; or stop by the office in Clare Hall).

Note: Students who may require assistance in emergency evacuations should contact the instructor as to most appropriate procedure to follow. If there are questions regarding such a procedure, contact the Dean of Student Affairs (Ruth Rodgers – rrodgers@marian.edu) or the Director of Academic Support Service for additional information.

****Any changes to this syllabi will be communicated to the student.**

Course Outline

Lecture and Exams:

Module 1

Chapter 1 Themes of Microbiology

Chapter 4 Prokaryotes and Biofilms

Chapter 5 Eukaryotic Infections

Chapter 18 Cocci of Medicinal Importance

Module 2

Chapter 7 Microbial Nutrition

Chapter 13 Human – Microbe Interactions

Chapter 19 Gram Positive Bacilli of Medicinal Importance

Chapter 21 Miscellaneous Bacterial Agents of Disease

Module 3

Chapter 14 Innate Immunity

Chapter 15 Adaptive Immunity

Chapter 20 Gram Negative Bacilli of Medicinal Importance

Module 4

Chapter 6 Introduction to Viruses

Chapter 24/25 or Student selected DNA or RNA Viruses

Chapter 11 Physical and Chemical Agents of Control

Chapter 12 Drugs, Microbes and Host

Laboratory:

Lab. 1: Lab Safety

Lab. 2: Metric Measurements

Lab. 3: Scientific Method

Lab. 4: Cell Anatomy

Lab. 5: How Enzymes Function

Lab. 6: Microscopy Microbiology

Lab. 7: Aseptic Technique

Lab. 8: Isolation Methods

Lab. 9: Staining

Lab. 10: Blood

Lab. 11: Microbial Growth

Lab. 12: Control of Microbial Growth

Lab. 13: Identification of Unknown Bacteria


















Lab. 14: Medical Microbiology





All lab reports are due before 11:59PM EST, as indicated in the calendar.

**If there is a technical issue regarding a lab assignment, McGraw-Hill Tech Support should be contacted: 1-800-331-5094 or visit <http://www.mheducation.com/contact.html>.

Schedule

Course Summary:

Date	Details
	 Exam 1 Microbiology (https://marian.instructure.com/courses/1971136/assignments/10343742)
	 Exam 1 Microbiology (new option) (https://marian.instructure.com/courses/1971136/assignments/10343747)
	 Design a Live-Attenuated Vaccine (https://marian.instructure.com/courses/1971136/assignments/10343750)
	 Design Your Own Viral Presentations (https://marian.instructure.com/courses/1971136/assignments/10343753)
	 Exam 2 Microbiology (https://marian.instructure.com/courses/1971136/assignments/10343745)
	 Exam 3 Microbiology (https://marian.instructure.com/courses/1971136/assignments/10343739)
	 Exam 4 Microbiology Exam (Chapters 6, 11, 12 and cumulative review [Chapters 4, 7 and 13]) (https://marian.instructure.com/courses/1971136/assignments/10343743)
	 Homework 1 (https://marian.instructure.com/courses/1971136/assignments/10343766)
	 Homework 1 Discussion (https://marian.instructure.com/courses/1971136/assignments/10343752)
	 Homework 2 (https://marian.instructure.com/courses/1971136/assignments/10343767)
	 Homework 3 (https://marian.instructure.com/courses/1971136/assignments/10343768)
	 Homework 4 (https://marian.instructure.com/courses/1971136/assignments/10343769)
	 Influenza Debate (https://marian.instructure.com/courses/1971136/assignments/10343749)
	 Influenza Viral Case Study Questions (https://marian.instructure.com/courses/1971136/assignments/10343770)
	 MRSA Case Study (https://marian.instructure.com/courses/1971136/assignments/10343772)
	 Quiz Module 1 (https://marian.instructure.com/courses/1971136/assignments/10343741)
	 Quiz Module 2 (https://marian.instructure.com/courses/1971136/assignments/10343744)

Date	Details
	 Quiz Module 3 (https://marian.instructure.com/courses/1971136/assignments/10343740)
	 Quiz Module 4 (https://marian.instructure.com/courses/1971136/assignments/10343746)
	 Research Fungal Diseases (https://marian.instructure.com/courses/1971136/assignments/10343751)
	 Thermal Death Problems (https://marian.instructure.com/courses/1971136/assignments/10343748)