

Washtenaw Community College Comprehensive Report

BIO 147 Hospital Microbiology Effective Term: Winter 2020

Course Cover

Division: Math, Science and Engineering Tech

Department: Life Sciences

Discipline: Biology

Course Number: 147

Org Number: 12110

Full Course Title: Hospital Microbiology

Transcript Title: Hospital Microbiology

Is Consultation with other department(s) required: No

Publish in the Following: College Catalog , Time Schedule , Web Page

Reason for Submission:

Change Information:

Consultation with all departments affected by this course is required.

Rationale: A three year review is due and the course Assessment was just filed. It is therefore appropriate to file a new Master Syllabus.

Proposed Start Semester: Fall 2021

Course Description: In this course, students are introduced to topics in microbiology involving human health and disease. Biological characteristics of bacteria and viruses are described and selected pathogens are discussed. The innate and adaptive defenses of the human body against microbial pathogens are described. The course also discusses appropriate use of antimicrobics. Public health efforts to control pathogens are also discussed, including vaccination and infection control.

Course Credit Hours

Variable hours: No

Credits: 1

Lecture Hours: Instructor: 15 **Student:** 15

Lab: Instructor: 0 **Student:** 0

Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 15 **Student:** 15

Repeatable for Credit: NO

Grading Methods: Letter Grades

Audit

Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

No Level Required

Requisites

General Education

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Identify major characteristics of diverse microbes.

Assessment 1

Assessment Tool: Item analysis of selected objective questions on unit and/or final exams or other evaluations, such as case studies.
Assessment Date: Fall 2021
Assessment Cycle: Every Three Years
Course section(s)/other population: All
Number students to be assessed: All
How the assessment will be scored: Departmentally-developed rubric
Standard of success to be used for this assessment: 70% or more of the students will correctly answer each question.
Who will score and analyze the data: Biology department faculty

2. Identify the major innate and adaptive defenses of the human body against microbial pathogens.

Assessment 1

Assessment Tool: Item analysis of selected objective questions on unit and/or final exams or other evaluations, such as case studies.
Assessment Date: Fall 2021
Assessment Cycle: Every Three Years
Course section(s)/other population: All
Number students to be assessed: All
How the assessment will be scored: Departmentally-developed rubric
Standard of success to be used for this assessment: 70% or more of the students will correctly answer each question.
Who will score and analyze the data: Biology department faculty

3. Identify the appropriate use of antimicrobics.

Assessment 1

Assessment Tool: Item analysis of selected objective questions on unit and/or final exams or other evaluations, such as case studies.
Assessment Date: Fall 2021
Assessment Cycle: Every Three Years
Course section(s)/other population: All
Number students to be assessed: All
How the assessment will be scored: Departmentally-developed rubric
Standard of success to be used for this assessment: 70% or more of the students will correctly answer each question.
Who will score and analyze the data: Biology department faculty

4. Identify various modes of disease transmission.

Assessment 1

Assessment Tool: Item analysis of selected objective questions on unit and/or final exams or other evaluations, such as case studies.
Assessment Date: Fall 2021
Assessment Cycle: Every Three Years
Course section(s)/other population: All
Number students to be assessed: All
How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: 70% or more of the students will correctly answer each question.

Who will score and analyze the data: Biology department faculty

5. Identify how people limit the spread of infectious agents.

Assessment 1

Assessment Tool: Item analysis of selected objective questions on unit and/or final exams or other evaluations, such as case studies.

Assessment Date: Fall 2021

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: 70% or more of the students will correctly answer each question.

Who will score and analyze the data: Biology department faculty

Course Objectives

1. Recognize major structural differences between prokaryotic and eukaryotic cells.
2. Recognize major structures in viruses.
3. Recognize the chemical make-up of prions.
4. Match important infectious diseases with their etiologic agents.
5. Recognize the skin and mucosa as critical first-line barriers against pathogens.
6. Recognize inflammation, fever, and phagocytes as key internal, innate defenses against pathogens.
7. Recognize antibodies as an adaptive defense against pathogens.
8. Recognize T-lymphocytes as an adaptive defense against pathogens.
9. Identify the appropriate target for antibiotics.
10. State that antibiotics do not affect viruses.
11. Identify ways that inappropriate use of antibiotics can lead to bacterial resistance against these drugs.
12. Identify definitions of contact, fomite, airborne, and food-borne transmission of pathogens.
13. Match the mode of transmission with selected pathogens.
14. Identify definitions of endemic, epidemic, and pandemic diseases.
15. Identify the individual and population benefits and risks of vaccination.
16. Identify the benefits of hand hygiene to health care workers and their patients.
17. Identify characteristics of patients, pathogens, and health care workers that contribute to nosocomial infections.
18. Identify methods of sterilization and disinfection.

New Resources for Course

Course Textbooks/Resources

Textbooks

Englekirk, Paul. *Burton's Microbiology*, 11th ed. Wolters Kluwer, 2018, ISBN: 9781496.

Manuals

Periodicals

Software

Equipment/Facilities

Level III classroom

Reviewer

Faculty Preparer:

Emily Thompson Ph.D.

Action

Faculty Preparer

Date

Jun 20, 2019

Department Chair/Area Director:

<i>Anne Heise</i>	<i>Recommend Approval</i>	<i>Jun 21, 2019</i>
Dean:		
<i>Kimberly Jones</i>	<i>Recommend Approval</i>	<i>Jul 02, 2019</i>
Curriculum Committee Chair:		
<i>Lisa Veasey</i>	<i>Recommend Approval</i>	<i>Aug 14, 2019</i>
Assessment Committee Chair:		
<i>Shawn Deron</i>	<i>Recommend Approval</i>	<i>Aug 29, 2019</i>
Vice President for Instruction:		
<i>Kimberly Hurns</i>	<i>Approve</i>	<i>Sep 04, 2019</i>