

University of North Texas at Dallas

Spring 2016

SYLLABUS

BIOL 2041 – 001: Microbiology : 3Hrs	
Department of	Life and Health Sciences
School of	Liberal Arts and Sciences
Instructor Name:	Dr. Aubrey Frantz
Office Location:	Room 251, Building 2
Office Phone:	972-338-1523
Email Address:	aubrey.frantz@untdallas.edu
Office Hours:	Monday and Thursday 1:00-3:00 pm Tuesday and Thursday 10:30-11:30 am (If you need another time, please contact me)
Classroom Location:	Founders Hall 242
Class Meeting Days & Times:	MW 11:30 – 12:50pm
Course Catalog Description:	BIOL 2041D – Microbiology. 3 hours. Survey of the microbial world; classification, ecology, morphology and physiology of eukaryotic and prokaryotic microorganisms.
Prerequisites:	BIOL 1710/1730 and credit for or concurrent enrollment in BIOL 2042 and CHEM 1420
Co-requisites:	BIOL 2042 Microbiology Lab
Required Text:	<u>Foundations in Microbiology</u>, 9th Ed. Talaro and Chess. McGraw Hill. 2015. ISBN: 978-0-07-352260
Lab Manual	<u>Benson's Microbiological Application</u> . 13 th Ed. (Short Version). Brown and Smith. McGraw Hill. 2015. ISBN: 978-0-07-340241-3
Access to Learning Resources:	UNT Dallas Library: phone: (972) 780-3625; web: http://www.unt.edu/unt-dallas/library.htm UNT Dallas Bookstore: phone: (972) 780-3652; e-mail: 1012mgr@fheg.follett.com
Course Goals or Overview:	
	The goal of this course is to provide the student with a broad understanding of the microbial world.
Learning Objectives/Outcomes: At the end of this course, the student will be able to	
1	Explain the basic concepts of classification, evolution, growth and metabolism of microorganisms
2	Identify the gross morphology and microscopic features associated with different classes of microorganism
3	Describe host-microbe interactions and their relationship to infection, disease and epidemiology
4	Understand mechanisms by which the human immune system defends against microorganisms

Course Outline

This schedule is subject to change by the instructor. Any changes to this schedule will be communicated by the instructor in class.

TOPICS	TIMELINE
Course Introduction	1/20
Main Themes in Microbiology (Chapter 1)	
Main Themes in Microbiology (Chapter 1)	1/25
Prokaryotic Cells and Microorganisms (Chapter 4)	1/27
Prokaryotic Cells and Microorganisms (Chapter 4)	2/1
Eukaryotic Cells and Microorganisms (Chapter 5)	
Eukaryotic Cells and Microorganisms (Chapter 5)	2/3
Introduction to Viruses (Chapter 6)	2/8
Introduction to Viruses (Chapter 6)	2/10
EXAM I (chapters 1, 4-6)	2/15
Microbial Nutrition, Ecology and Growth (Chapter 7)	2/17
Microbial Nutrition, Ecology and Growth (Chapter 7)	2/22
Microbial Metabolism (Chapter 8)	2/24
Microbial Metabolism (Chapter 8)	2/29
Microbial Genetics (Chapter 9)	3/2
Microbial Genetics (Chapter 9)	3/7
EXAM II (chapters 7-9)	3/9
SPRING BREAK	3/14-3/20
Genetic Engineering (Chapter 10)	3/21
Genetic Engineering (Chapter 10)	3/23
Drugs, Microbes and the Host (Chapter 12)	3/28
Drugs, Microbes and the Host (Chapter 12)	3/30
Microbe-Human Interactions: Infection, Disease and Epidemiology (Chapter 13)	4/4
Microbe-Human Interactions: Infection, Disease and Epidemiology (Chapter 13)	4/6
Microbe-Human Interactions: Infection, Disease and Epidemiology (Chapter 13)	4/11
EXAM III (Chapters 10, 12 and 13)	4/13
An Introduction to Host Defense (Chapter 14)	4/18
Host Defense – Inflammation (Chapter 14)	4/20
<i>Student Presentations</i> - Microbes of Medical Importance	4/25
<i>Student Presentations</i> - Microbes of Medical Importance	4/27
Review of Microbes of Medical Importance	5/2
Review for Final	5/4
EXAM IV (Chapter 14 + Microbes of Medical Importance)	5/9 @ 11:00am

Course Evaluation Methods

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course.

Exams – written tests designed to measure knowledge of presented course material – You will be given four in-class exams. Each exam is worth 100 points). The exams will consist of a combination of multiple choice, labeling and short answer questions. Attendance is required for all exams. Any student found cheating on any exam will receive a zero for that exam and may face disciplinary action(s).

Reading Quizzes – short, 5 point, quizzes will be given at the beginning of class. Quizzes will cover the text book material assigned for that class session and/or previous class material. You will have approximately 10 minutes to complete the quiz. There is no make-up quiz if you are late to class.

Student Presentations – You will be required to give a 15 minute presentation on a specific class of microbes that are medically important (disease-causing). Your presentation will include general characteristics of the microbe, disease pathology, host defenses, identification and treatment/control. Additional instructions and guidelines will be given in class.

“Stopwatch Science” - extra credit opportunity. You may choose a recent (2015) scientific journal article and spend one minute in front of the class discussing the significance of the article and one additional minute discussing how the article relates to the current course material. You will need to turn in a copy (hard or electronic) of the article to the instructor prior to the discussion. This assignment is worth up to 5 extra credit points.

Grading Matrix:

Instrument	Value (points)
Exam 1	100
Exam 2	100
Exam 3	100
Exam 4	100
Reading Quizzes	50
Presentation	50
Total:	500

Grade Determination:

- A = 90% or better
- B = 80 – 89 %
- C = 70 – 79 %
- D = 60 – 69 %
- F = less than 60%

University Policies and Procedures

Students with Disabilities (ADA Compliance): *The University of North Texas Dallas faculty is committed to complying with the Americans with Disabilities Act (ADA). Students' with documented disabilities are responsible for informing faculty of their needs for reasonable accommodations and providing written authorized documentation. Grades assigned before an accommodation is provided will not be changed as accommodations are not retroactive. For more information, you may visit the Student Life Office, Suite 200, Building 2 or call Cynthia Suarez at 972-780-3632.*

Student Evaluation of Teaching Effectiveness Policy: *The Student Evaluation of Teaching Effectiveness (SETE) is a requirement for all organized classes at UNT. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider the SETE to be an important part of your participation in this class.*

Exam Policy: *Exams should be taken as scheduled. No makeup examinations will be allowed except for documented emergencies (See Student Handbook).*

Academic Integrity: *Academic integrity is a hallmark of higher education. You are expected to abide by the University's code of Academic Integrity policy. Any person suspected of academic dishonesty (i.e., cheating or plagiarism) will be handled in accordance with the University's policies and procedures. Refer to the Student Code of Academic Integrity at http://www.unt.edu/unt-dallas/policies/Chapter%2007%20Student%20Affairs,%20Education,%20and%20Funding/7.002%20Code%20of%20Academic_Integrity.pdf for complete provisions of this code.*

Attendance and Participation Policy:

The University attendance policy is in effect for this course. Class attendance and participation is expected because the class is designed as a shared learning experience and because essential information not in the textbook will be discussed in class. The dynamic and intensive nature of this course makes it impossible for students to make-up or to receive credit for missed classes. Attendance and participation in all class meetings is essential to the integration of course material and your ability to demonstrate proficiency. Students are responsible to notify the instructor if they are missing class and for what reason. Students are also responsible to make up any work covered in class.