WAYLAND MISSION STATEMENT: Wayland Baptist University exists to educate students in an academically challenging, learning-focused, and distinctively Christian environment for professional success, and service to God and humankind.

BIOL 3410-VC01 MICROBIOLOGY, FALL 1 VC01 2023

INSTRUCTOR: Dr. D. Sophia Pereira

Email Address: sophia.pereira@wayland.wbu.edu
Office & Office Hours: Collaborate Meeting On-Line by Appointment

CLASS MEETING TIME AND LOCATION: On-Line

CATALOG DESCRIPTION: Identification, growth, nutrition, metabolism, and infectious nature of microorganisms; consideration is also given to fungi, protozoa, bacteria, and viruses. Lecture three hours, laboratory three hours. **PREREQUISITE:** BIOL 1401 or BIOL 2408 or BIOL 3408 or school approval.

REQUIRED TEXTBOOK AND RESOURCES MATERIALS: Mastering Microbiology through BlackBoard Access (*Microbiology with Diseases by Body System*, Robert W. Bauman - 5th Ed. – Benjamin Cummings) and Laboratory Manual (Microbiology – Laboratory Theory & Application – ESSENTIALS, Michael J. Leboffe & Burton E. Pierce – 1st Ed. – Morton [ISBN-10: 1640430326])

COURSE OUTCOME COMPETENCIES: The student will be able to:

I. Students will become competent in content material in the following areas:
   1. A brief history of microbiology
   2. The chemistry of microbiology
   3. Cell structure and function
   4. Microscopy, staining, and classification
   5. Microbial metabolism
   6. Microbial nutrition and growth
   7. Microbial genetics
   8. Recombinant DNA technology
   9. Controlling microbial growth in the environment
   10. Controlling microbial growth in the body: antimicrobial drugs
   11. Characterizing and classifying viruses, viroids, and prions
   12. Innate and adaptive immunity
   13. Immunization and immune testing

II. Students will become competent using online tools to:
   1. Understand microscopy and its importance to the study of microorganisms
   2. Describe the morphological, structural, and physiological characteristics of some common microorganisms.
   3. Understand the procedures for the proper identification and classification of microorganisms.
   4. Understand aseptic technique(s)

III. Students will become competent in understanding human infectious disease and immunity relative to human health.

ATTENDANCE REQUIREMENTS: *"The University expects students to make class attendance a priority."* As stated in the Wayland Catalog, students enrolled at one of the University's external campuses should make every effort to attend all class meetings – login on VidGrid and watch the entire content of video lecture when it is available/answer embedded questions and be participant of assignments in general. All absences must be explained to the instructor, who will then determine whether the omitted work may be made up later. When a student reaches that number of absences considered by the instructor to be excessive, the instructor will so advise the student and file an unsatisfactory progress report with the campus executive director. Any student who misses 25% or more of the regularly scheduled class meetings may receive a grade of F in the course. Additional attendance policies for each course, as defined by the instructor in the course syllabus, are considered a part of the University's attendance policy. **Attendance will be recorded and counted as the student answer video lecture embedded question and complete assignments.**

STATEMENT ON PLAGIARISM AND ACADEMIC DISHONESTY: *Wayland Baptist University observes a zero tolerance policy regarding academic dishonesty. Per university policy as described in the academic catalog, all cases of academic dishonesty will be reported and second offenses will result in suspension from the university.*

DISABILITY STATEMENT: *"In compliance with the Americans with Disabilities Act of 1990 (ADA), it is the policy of Wayland Baptist University that no otherwise qualified person with a disability be excluded from participation in, be denied the benefits of, or be subject to discrimination under any educational program or activity in the university. The Coordinator of Counseling Services serves as the coordinator of students with a disability and should be contacted concerning accommodation requests at (806) 291-3765. Documentation of a disability must accompany any request for accommodations."*

COURSE REQUIREMENT AND GRADING CRITERIA: *Students shall have protection through orderly procedures against prejudices or capricious academic evaluation. A student who believes that he or she has not been held to realistic academic standards, just evaluation procedures, or appropriate grading, may appeal the final grade given in the course by using the student grade appeal process described in the Academic Catalog. Appeals may not be made for advanced placement examinations or course bypass examinations. Appeals are limited to the final course grade, which may be upheld, raised, or lowered at any stage of the appeal process. Any recommendation to lower a course grade must be submitted through the Executive Vice President/Provost to the Faculty Assembly Grade Appeals Committee for review and approval. The Faculty Assembly Grade Appeals Committee may instruct that the course grade be upheld, raised, or lowered to a more proper evaluation.*

1. Students are expected to read the textbook assignments and compile a complete set of notes from the text and lecture. Students will also be required to access the virtual campus blackboard system.

2. Course material is introduced using a combination of readings from the book, PowerPoint slides, video and audio clips, laboratory activities, discussion boards, and projects. Students are expected to ask questions and be active participants in the discussions of the material presented.

3. There will be a quiz on each chapter of the course covered that will be open online for 72 hours. Notice the quizzes open and close at 6 AM central time zone (observing daylight savings time). The chapter quizzes will not be reopened once they close. These quizzes are a valuable learning tool and students may attempt the quizzes two times over the 72 hours the quiz is open and an average from both attempts will be the final grade. The quiz is closed book and do not navigate away from the page while taking the quiz.

4. There will also be proctored midterm and final exams. These exams will each be closed book exams (without any sort of consultation) and may only be attempted one time through Remote Proctoring by PROCTORIO.

5. Discussions and participation. There will be a series of discussion topics throughout the course. These topics will be discussed typically using the blog/discussion board tool. Your participation in the discussions as well as depth of thought and engagement will be graded.

The final grade in the course will be derived as follows:

Activities	Percentage (%)
Quizzes/Mastering (HW & Reading Questions)	20
Proctored Exams (Midterm & Final)	30
Mastering (Dynamic Study Modules - DSM) & "Surprise" DB	Extra Credit (XC)
Lab Activities	30
Participation/Roundup Discussion Boards (DB)	20
Total	100%

University grading system

A 90-100; B 80-89; C 70-79; D 60-69; F below 60; I incomplete*; W withdrawal

*A grade of incomplete is changed if the deficiency is made up by midterm of the next regular semester; otherwise, it becomes "F". This grade is given only if circumstances beyond the student's control prevented completion of work during the semester enrolled and attendance requirements have been met.

Other descriptive information about BIOL3410: This is an online course and you are expected to have reliable access to the Internet and possess computer competencies to email assignments as attachments and download and upload large files. The best way to fend off problems here is to get assignments done early, so that if issues arise, you can effectively deal with them before the deadlines. For some reason, it seems that computer problems tend to hit people trying to get an assignment done in the last minute. This course requires homework, laboratory activities, quizzes, and discussions on a weekly basis. The course is not designed as a self-paced course, and it will be very difficult if the student falls behind. No excuses because of other classes or commitments will be accepted for your failure to comply with these requirements. All email correspondence regarding this course should have BIOL3410 in the subject line of the email, and all assignments turned in must be in either rich text, Microsoft Word, or PDF format and the actual document name should be your last name followed by the title of the assignment (for example, YourName_GramStainingReport.doc). Answers to questions should be in RED FONT to facilitate grading and differentiation from remaining document. Unless I change the schedule for an assignment in this course, due dates and times published on the tentative schedule will be followed.

Expected time commitment: If this course is taken during an in a traditional classroom setting, this course would meet for about 60 hours. A good rule of thumb is that students should reserve at least as many hours outside of class as they spend in-class to review material and complete assignments. While WBU virtual campus students have the benefit of flexibility in scheduling when they will review lecture and project materials, the content of this course is NOT reduced from the traditional format and will

require AT LEAST the same level of effort as the in-class version of the course! Therefore, to succeed in this course, students should be prepared to invest a MINIMUM of 10 hours per week, with additional effort required to study for assignments or to prepare for chapter quizzes and proctored exams.

Late work policy: Materials accepted by the instructor after the due date will be deducted 5 points per day (24-hour period) late. The time and date used to determine when an item was turned in will be the time that the document was logged as uploaded through the assignment portal, or in the case of the discussions, the time posted on your discussion entry. Note that the discussion blogs will be set to close at a predetermined time. After the discussion closes, it is not appropriate (and you will not get credit) to post your discussion somewhere else in the content (like as a comment to someone else's blog entry for this course). Exams and quizzes will not be reopened.

"Tips to THRIVE and SUCCEED in BIOL 3410 - Microbiology"

1. Read textbook and study key terms BEFORE the material is presented in class.
2. If after reading it and you don't understand it… Listen carefully to the lecture, if you still don't understand it… Ask about it! Schedule collaborate meeting with the professor!!
3. Make yourself "flash-cards" of new or difficult words… Carry them with you for quick review.
4. Study diagrams and illustrations carefully.
5. Highlight key ideas while reading.
6. Summarize what you have read.
7. Study questions at the end of the chapters.
8. Take Good Notes!
9. Review CONSTANTLY!
10. Study smarter… Not harder!
11. Science builds on itself… Bigger ideas are composed of many smaller ideas… Do NOT get behind!

ATTENDANCE + ATTENTION + ATTITUDE = ACHIEVEMENT

"Success is the sum of small efforts, repeated day in and day out" – Robert Collier

COURSE WEBSITE: A course website has been established on WBU's Blackboard server. Each student is REQUIRED to establish an active account for this website and to log on to BB regularly for posted lecture notes, messages, assignments, handouts, and quizzes.

COURSE COMMUNICATION POLICY: Wayland's email address is the official method of communication between instructors and students taking courses through Wayland Baptist University. Students are REQUIRED to establish and activate their Wayland email account. Instructors reserve the right to deny email from other sources.

TENTATIVE SCHEDULE: The following schedule is subject to modification by the instructor. Topic or schedule changes will be announced and posted on BlackBoard.

	Weekdays	Date	LECTURE	LAB ACTIVITIES & EXAMS & DISCUSSION BOARDS
Week 1	Mon	7-Aug	A Brief History of Microbiology - Chapter 1	Disease Roundup 1: EBOLA - Hemorragic Fevers & Lab Activities WEEK 1
	Tue	8-Aug		
	Wed	9-Aug		
	Thu	10-Aug		Syllabus/Email Quiz due @ midnight
	Fri	11-Aug	Attendance Submitted	Lab Activities WEEK 1 due @ midnight
	Sat	12-Aug	Quiz 1 (Chapter 1) opens @ 6 am	EBOLA Discussion Board & ALL ABOUT ME Blog open @ 6 am
Week 2	Sun	13-Aug	Characterizing and Classifying Viruses, Viroids, and Prions - Chapter 13	
	Mon	14-Aug	The Chemistry of Microbiology - Chapter 2 (OVERVIEW) - Census Date!!!	Disease Roundup 2: INFLUENZA/COVID-19 & Lab Activities WEEK 2
	Tue	15-Aug	Quiz 1 close @ midnight	EBOLA Discussion Board & ALL ABOUT ME Blog close @ midnight
	Wed	16-Aug		
	Thu	17-Aug		
	Fri	18-Aug		Lab Activities WEEK 2 due @ midnight
	Sat	19-Aug	Quiz 2 and 13 open @ 6 am	INFLUENZA/COVID-19 Discussion Board open @ 6 am
Week 3	Sun	20-Aug	Cell Structure and Function - Chapter 3	
	Mon	21-Aug	Microscopy, Staining, and Classification - Chapter 4	Disease Roundup 3: MALARIA & Lab Activities WEEK 3
	Tue	22-Aug	Quiz 2 and 13 close @ 6 midnight & "NO SHOW" REPORT @ noon	INFLUENZA/COVID-19 Discussion Board closes @ midnight
	Wed	23-Aug		
	Thu	24-Aug		
	Fri	25-Aug		Lab Activities WEEK 3 due @ midnight
	Sat	26-Aug	Quiz 3 & 4 open @ 6 am	MALARIA Discussion Board open @ 6 am
Week 4	Sun	27-Aug	Microbial Metabolism - Chapter 5 (OVERVIEW)	
	Mon	28-Aug	Microbial Nutrition and Growth - Chapter 6	Disease Roundup 4: RMSF & Lab Activities WEEK 4
	Tue	29-Aug	Quiz 3 and 4 close @ 6 midnight	MALARIA Discussion Board closes @ midnight
	Wed	30-Aug		
	Thu	31-Aug		
	Fri	1-Sep		Lab Activities WEEK 4 due @ midnight
	Sat	2-Sep	Quiz 5 & 6 open @ 6 am	RMSF Discussion Board open @ 6 am
Week 5	Sun	3-Sep	Microbial Genetics - Chapter 7	Proctored Midterm Exam opens @ 6 am (Chapters 1, 3, 4, 6, and 7)
	Mon	4-Sep	Recombinant DNA Technology - Chapter 8	Proctored Midterm Exam
	Tue	5-Sep	Quiz 5 & 6 close @ 6 midnight	Proctored Midterm Exam & RMSF Discussion Board closes @ midnight
	Wed	6-Sep		Proctored Midterm Exam
	Thu	7-Sep		Proctored Midterm Exam
	Fri	8-Sep	Last day to drop with "W"	Proctored Midterm Exam
	Sat	9-Sep	Quiz 7 & 8 open @ 6 am	Proctored Midterm Exam closes @ midnight

Week	Weekdays	Date	LECTURE	LAB ACTIVITIES & EXAMS & DISCUSSION BOARDS
	Sun	10-Sep	Controlling Microbial Growth in the Environment - Chapter 9	
	Mon	11-Sep	Controlling Microbial Growth in the Body: Antimicrobial Drugs - Chapter 10	Disease Roundup 5: TUBERCULOSIS & Lab Activities WEEK 6
	Tue	12-Sep	Quiz 7 & 8 close @ 6 midnight	
Week 6	Wed	13-Sep		
	Thu	14-Sep		
	Fri	15-Sep		Lab Activities WEEK 6 due @ midnight
	Sat	16-Sep	Quiz 9 and 10 open @ 6 am	TUBERCULOSIS Discussion Board open @ 6 am
	Sun	17-Sep	Innate and Adaptive Immunity - Chapters 15 and 16	
	Mon	18-Sep		Disease Roundup 6: WARTS/HSV & Lab Activities WEEK 7
	Tue	19-Sep	Quiz 9 and 10 close @ 6 midnight	TUBERCULOSIS Discussion Board closes @ midnight
Week 7	Wed	20-Sep		
	Thu	21-Sep		
	Fri	22-Sep	Last day to drop with "WF/WP"	Lab Activities WEEK 7 due @ midnight
	Sat	23-Sep	Quiz 15 & 16 open @ 6 am	WARTS & HSV Discussion Board open @ 6 am
	Sun	24-Sep	Immunization & Immune Testing - Chapter 17 (OVERVIEW)	Proctored Final Exam opens @ 6 am (Chapters 8, 9, 10, 15, and 16)
	Mon	25-Sep		Proctored Final Exam
	Tue	26-Sep	Quiz 15 and 16 close @ 6 midnight	Proctored Final Exam & WARTS & HSV Discussion Board closes @ midnight
Week 8	Wed	27-Sep		Proctored Final Exam
	Thu	28-Sep		Proctored Final Exam
	Fri	29-Sep		Proctored Final Exam closes @ midnight
	Sat	30-Sep	WBU On-Line Term Ends!!!	