



**Plainview Campus
School of Mathematics & Sciences**

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, SUMMER 2020

INSTRUCTOR: Dr. D. Sophia Pereira
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Office: Moody Science Building (MSB), Room # 220
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)

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 – watch 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.

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. The one lowest grade scored on the non-proctored chapter quizzes will be dropped (including a zero). These quizzes are a valuable learning tool and students may

attempt the quizzes two times over the 72 hours the quiz is open and may use their book and notes to help answer the questions on the quizzes.

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	Points
Quizzes	20%
Proctored Exams (Midterm & Final)	35%
Lab Activities	30%
Participation/Discussion Boards	15%
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). 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.

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

Week 7	Sun	5-Jul		Proctored Midterm Exam
	Mon	6-Jul	Recombinant DNA Technology - Chapter 8	Proctored Midterm Exam
	Tue	7-Jul	Quiz 7 closes @ 6 midnight	Proctored Midterm Exam
	Wed	8-Jul		Proctored Midterm Exam
	Thu	9-Jul		Proctored Midterm Exam
	Fri	10-Jul		Proctored Midterm Exam
	Sat	11-Jul	Quiz 8 opens @ 6 am	Proctored Midterm Exam
Week 8	Sun	12-Jul		Proctored Midterm Exam closes @ midnight
	Mon	13-Jul	Controlling Microbial Growth in the Environment - Chapter 9	Disease Roundup 5: WARTS/HSV & Lab Activities 7
	Tue	14-Jul	Quiz 8 closes @ 6 midnight	
	Wed	15-Jul		
	Thu	16-Jul		
	Fri	17-Jul		Lab Activities 7 due @ midnight
Sat	18-Jul	Quiz 9 opens @ 6 am	WARTS/HSV Discussion Board open @ 6 am	
Week 9	Sun	19-Jul		
	Mon	20-Jul	Controlling Microbial Growth in the Body: Antimicrobial Drugs - Chapter 10	Disease Roundup 6: UTIs & Lab Activities 8
	Tue	21-Jul	Quiz 9 closes @ 6 midnight	WARTS/HSV Discussion Board closes @ midnight
	Wed	22-Jul		
	Thu	23-Jul		
	Fri	24-Jul	LAST DAY TO DROP WITH "W"	Lab Activities 8 due @ midnight
Sat	25-Jul	Quiz 10 opens @ 6 am	UTIs Discussion Board open @ 6 am	
Week 10	Sun	26-Jul	Innate and Adaptive Immunity - Chapters 15 and 16	
	Mon	27-Jul	Immunization & Immune Testing - Chapter 17 (OVERVIEW)	Lab Activities 9
	Tue	28-Jul	Quiz 10 closes @ 6 midnight	UTIs Discussion Board closes @ midnight
	Wed	29-Jul		
	Thu	30-Jul		
	Fri	31-Jul	LAST DAY TO DROP WITH "WP/WF"	Proctored Final Exam opens @ 6 am (Chapters 8, 9, 10, 15, and 16)
Sat	1-Aug	Quiz 15 and 16 open @ 6 am	Lab Activities 9 due @ midnight	
Week 11	Sun	2-Aug		Proctored Final Exam
	Mon	3-Aug		Proctored Final Exam
	Tue	4-Aug	Quiz 15 and 16 close @ 6 midnight	Proctored Final Exam
	Wed	5-Aug		Proctored Final Exam
	Thu	6-Aug		Proctored Final Exam
	Fri	7-Aug		Proctored Final Exam closes @ midnight
	Sat	8-Aug		WBU On-Line Term Ends!!!