
Biology Department, College of Arts & Sciences, Valdosta State University

SPRING 2012---COURSE SYLLABUS*

BIOL 2900, Sections A & B. Microbiology in Health and Disease (CRN 21370 & 21371) 4 credit hours

Class: TR 8:00-9:15 am, 2022 Bailey Science Center
Laboratory: TR Section A 10:00-11:25 am, 2068 Bailey Science Center
TR Section B 2:00-3:25 pm, 2068 Bailey Science Center

Instructor: Dr. Jenifer Turco
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Office Hours: Tues. 4:30-5:30 pm & Thurs. 12:30-1:30 pm; or by appointment.

Course Description:

BIOL 2900 Microbiology in Health and Disease 3-3-4 (4 credit hours)

Corequisite: CHEM 1152K. An introductory microbiology course with emphasis upon the role played by microorganisms in health and disease. Open to students who plan to enter the health or allied health fields without a major in biology. Two 1.5 hour laboratory periods per week.

Textbook: **MICROBIOLOGY, A HUMAN PERSPECTIVE, Sixth Edition**
by Eugene W. Nester, Denise G. Anderson, C. Evans Roberts Jr., and Martha T. Nester. McGraw-Hill 2009 (The very recently published 7th edition of this book may also be used.)

Laboratory Manual: **IN GENERAL MICROBIOLOGY (short version), Twelfth Edition**
by Alfred E. Brown. McGraw-Hill, Inc. 2012

BIOLOGY 2900 Microbiology in Health and Disease - Class and Lab Schedule

Date	Topics/Lab Exercises	Related material in text (6th ed)
	(Additional notes for lab exercises)	

Tues. Jan. 10	General course information	
	Introduction to microbiology	Chap. 1
	<u>Assigned Reading: Textbook, Chapter 2</u> --(Review Chapter 2 on your own)	

Tues. Jan. 10L	>LAB WILL NOT MEET ON THIS DAY.	
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Thurs. Jan. 12	38 Tm 1	92.184	673.66	Tm[(------)]	TJ 92.184	673.66	Tm[(------)]	TJ 92.184	673.60	1 158.42	6
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Date

Date	Topics/Lab Exercises	Related material in text (6th ed)
Tues. Feb. 7L	>EX. 14, GRAM STAINING	(Prepare smears from nutrient agar slant cultures as described on

Date	Topics/Lab Exercises	Related material in text (6th ed)
Tues. Feb. 14L		

Date	Topics/Lab Exercises	Related material in text (6th ed)
Thurs. Feb. 23L	>FINISH SUPPL. EX., VARIOUS MEDIA (Complete table with exercise & answer questions.)	Record results for unknown on unknown record sheet & on p. 235.

Date	Topics/Lab Exercises	Related material in text (6th ed)
SPRING BREAK		
Tues. Mar. 20	Antimicrobial medications	Chap. 21 (required reading)
Tues. Mar. 20L	>VIDEO SEGMENTS ABOUT ANTIBIOTIC RESISTANCE >SUPPL. EX., PLAQUE ASSAY OF A PHAGE SUSPENSION >EX. 32, EVALUATION OF ANTISEPTICS (This exercise will be slightly modified.) >EX. 31, KIRBY-BAUER METHOD >WORK DILUTION PROBLEMS <u>HAND IN LAB REPORT ON GENERAL UNKNOWN</u>	
Thurs. Mar. 22	Antimicrobial medications Innate immunity	Chap. 21 (required reading) Chap. 15
Thurs. Mar. 22L	>VIDEO SEGMENTS ABOUT ANTIBIOTIC RESISTANCE (additional) >FINISH SUPPL. EX., PLAQUE ASSAY OF A PHAGE SUSPENSION (Complete results on board & on your copy of exercise.) >WORK DILUTION PROBLEMS. >FINISH EX. 32, ANTISEPTICS (Record results on board & in lab manual on p. 219. Answer questions on p. 219-220.) >FINISH EX. 31, KIRBY-BAUER METHOD (Record results on board & on p.213; answer questions on p. 214.)	
Tues. Mar. 27	Adaptive immunity	

Date	Topics/Lab Exercises	Related material in text (6th ed)
Thurs. Apr. 19L	>FINISH SUPPL. EX., BACTERIOLOGICAL ANALYSIS OF URINE & EX. 41, ENTEROTUBE II (Record results on board & complete pages in course pack.) >SUPPL. EX., PROTOZOA AND ANIMAL PARASITES STUDENT ORAL PRESENTATIONS	
Tues. Apr. 24	HIV disease Genitourinary infections Nervous system infections	Chap. 29 (required reading) Chap. 26 (required reading) Chap. 27 (required reading)
Tues. Apr. 24L	>FINISH SUPPL. EX., PROTOZOA AND ANIMAL PARASITES STUDENT ORAL PRESENTATIONS	
Thurs. Apr. 26	Nervous system infections Blood and Lymphatic infections	Chap. 27 (required reading) Chap. 28 (required reading) Chap. 12, section 12.5 (required reading)
Thurs. Apr. 26L	STUDENT ORAL PRESENTATIONS	
Wed. May 2	COMPREHENSIVE FINAL EXAM (10:15 am -12:15 pm)	

ADDITIONAL INFORMATION

Course content:

4. Each student is expected to record the results of the lab exercises and to answer the related questions, as noted in the syllabus. In some cases, **lab reports** are to be handed in as indicated in the course schedule. If a student misses a portion of the lab work relating to a required lab report, the student's report will be worth a maximum of 85% of the points allotted for the report. **For the drawings (Jan. 26) each student must turn in his or her own report. For the general unknown, students may prepare their reports individually, or they may work with their lab group or partners and turn in joint reports.**

5. **Oral presentations:** During the laboratory portion of the course, each student will be required to give an 8- to 9-minute **oral report** on a scientific article selected from a list provided by the instructor. Two additional minutes will be allotted for answering questions from the audience. Students will draw numbers to indicate the order in which they will select articles and give their presentations. Once a topic article is chosen it may not be changed. Students should search electronic databases to find related, supporting, formal, peer-reviewed articles in the scientific literature. Some peer-reviewed, scientific and medical journals are available in the Odum library in print and/or online. Supporting articles may be obtained through interlibrary loan; however, this process takes time. **The major focus of the presentation should be the original article chosen. However, at least two supporting, formal articles (in addition to the original article chosen)** from PEER-REVIEWED, PROFESSIONAL JOURNALS must be used to prepare the presentation. Only one of these two supporting articles may be a review article; the remaining article must be a primary source or case study. Articles must list references at the end, and these references must be cited within the article. Informal articles, Web sites, Internet articles or fact sheets, newspaper articles, magazine articles, book reviews, and letters to the editor are NOT acceptable. Students should make every effort to ensure the accuracy of the information in their reports. Should a report contain inaccurate information, the presenter should expect to be questioned about it as well as about the source of the information.

For their presentations, students are encouraged to use PowerPoint software. Students using PowerPoint must use a version that is compatible with the version available in the microbiology lab. If you are in doubt, please bring your PowerPoint presentation to the lab at least one week before the day of your presentation to verify that it will run. If you do not check your presentation ahead of time, you are responsible for having a backup method for showing your illustrations. Full-size print-outs of your PowerPoint slides are useful as backups, since they may be shown using the ELMO projector. Students electing not to use PowerPoint should use other illustrations. Illustrations may be placed on a large poster or they may be shown on the ELMO projector. Transparencies and handouts may also be used.

PLEASE NOTE: There will be no makeups for the oral presentations. ON THE DAY OF THE PRESENTATION, THE STUDENT MUST TURN IN A COPY OF HIS/HER POWERPOINT PRESENTATION, ILLUSTRATIONS, AND ANY NOTES USED DURING THE PRESENTATION. IN ADDITION THE STUDENT MUST HAND IN COMPLETE COPIES OF THE ORIGINAL ARTICLE CHOSEN PLUS THE TWO ADDITIONAL ARTICLES USED TO PREPARE THE PRESENTATION. THE COPIES OF THE THREE ARTICLES MUST INCLUDE READABLE VERSIONS OF THE FIGURES AND TABLES.

ADDITIONAL NOTE: IF YOU WANT A GOOD SCORE ON ()-3(W)19(AETBT8)-3(ep)-79371 402[(I)] TJET(I)] TJETBT1 0 0 1 556.92 424.15 Tm -0.3R S

up exam will not be given. Make-up examinations may consist entirely of questions of the short answer and essay formats. Make-up examinations for exams 1, 2, 3, and 4 will be worth 85% of the points allotted for the regularly scheduled exam.

2. STUDENTS ARE REQUIRED TO BRING TWO #2 PENCILS AND ERASERS TO ALL EXAMINATIONS. THE INSTRUCTOR WILL NOT PROVIDE PENCILS.

Late assignments & failure to turn in assignments:

Please make a calendar noting when assignments and reports are due. As stated on page 11, the student must submit complete copies of the following immediately after giving his or her lab oral presentation (**Please note that if these items are submitted late, little or no credit will be given for them:**

- (1) Complete copies of the three formal, peer-reviewed scientific articles, including readable versions of tables and figures
- (2) A printout of the PowerPoint presentation (6 slides per page is fine)
- (3) A copy of any notes used during the presentation

For all other assignments and reports, the following late policy applies. Turning in an assignment/report 1-4 days late will result in a deduction of 20% of the points for that assignment. Turning in an assignment 5-9 days late will result in a deduction of 50% of the points for that assignment. **No points will be awarded for an assignment that is late by more than 9 days.**

Students will not be notified by the instructor for failing to turn in course assignments. Late assignments must be given DIRECTLY to the instructor. They may NOT be placed in the instructor's mailbox. It is also NOT ACCEPTABLE to slide late assignments under the instructor's office door.

Grading: Points for the course are allocated as follows:

<u>EXAM 1 (Jan. 26)</u>	140	POINTS
<u>EXAM 2 (Feb. 16)</u>	140	POINTS
<u>EXAM 3 (Mar. 8)</u>	140	POINTS
<u>EXAM 4 (Apr. 12)</u>	140	POINTS
<u>EXAM 5 (FINAL EXAM-May 2)</u>	180	POINTS
<u>INFORMAL CLASS PRESENTATIONS</u> (see schedule) (course objectives 16-17)....	30	POINTS
<u>PARTICIPATION</u> (responses to questions in class; lab work & discussions)		
(course objectives 1-14).....	60	POINTS
<u>LAB REPORT</u> (Drawings, Jan. 26) (course objective 9).....	15	POINTS
<u>LAB REPORT ON GENERAL UNKNOWN (Mar. 20)</u> (course objectives 8-12; 14)...	5	