

MIBO 3500 Introduction to Microbiology, Spring 2013 Sections
Tues/Thurs 8:00 – 9:15 am, Miller Learning Center (MLC), Rm 101
or Tues/Thurs 2:00 – 3:15 pm, Forestry Resources 2, Rm 100

Instructor: Dr. Wendy Dustman, Room 204 BioSci, 706 542-2622

Course Assistants: Angela Pack, Lisa Kuhns and Brandon Satinsky

Course Email: mibo3500@gmail.com

Dr. Dustman's Office Hours: M/W 9:00 -10:00 am in BioSci Rm 204 or by appointment

Course Assistant's Office Hours: by appointment

Course Format: THIS IS A HYBRID COURSE! During drop/add week, course lectures will be delivered traditionally during assigned class meeting times on **BOTH** Tuesday and Thursday. After drop/add week, students will be expected to spend the assigned 2 hrs and 30 min of class meeting time as follows: 1) approximately 1 hr 15 min per week will be spent watching lecture podcasts (posted on eLC) outside of the classroom at times the student deems will be most beneficial, 2) the other 1 hr 15 min will be spent in the classroom participating in group learning activities which complement the podcast lectures and assigned readings.

Students will be assigned randomly to groups and required to attend class on **EITHER** Tuesday **OR** Thursday to participate in quizzes and in-class group activities. Your quiz performance and active participation in the group activities require to complete the assigned materials or risk poor scores. Attendance days/ group assignments will be determined by Dr. Dustman, and posted to the course eLC by noon on Monday January 14th. Be prepared to begin your group activities beginning Tuesday Jan 15th; you will work in these groups throughout the term.

Textbook: Prescott's Microbiology, 8th edition by Willey, Sherwood and Woolverton (McGraw Hill College Publishing). Used books are fine, but beware, the 8th edition has a different chapter organization and the chapters/sections designated in syllabus and eLC refer only to the 8th edition. We will **NOT** be using the Connect program for any graded work. You may also consider renting the text at places like Chegg.com, sharing with a classmate or getting the e-book directly from the publisher.

Student Response System: We will be using a "clicker-less" response system called Top Hat Monocle for course quizzes and daily discussions in the classroom. Purchase a subscription (<https://www.tophatmonocle.com/register/student>) and enroll in the MIBO3500 TopHat Monocle course – see the Top Hat Monocle Instructions and Quick Start Guides on our eLC course page. Once you have obtained a license, you can enroll in the class using this link: www.tophatmonocle.com/e267051. If you are unable to obtain a subscription by this date, or encounter other issues which would impede your participation in quizzes and activities, please consult with Dr. Dustman to make alternate arrangements.

Course Slides, Podcasts & Learning Materials: Powerpoints used in the lecture podcasts will be available to you via eLC in addition to the podcasts. "Learning goals" and "section responsibilities" are available for each chapter to assist you in studying. The slides and podcasts are **NOT** a substitute for participating in class activities or reading the assigned text. Many students find that printing the slides and adding additional notes to them while listening to the podcasts is helpful since additional explanations and examples are given verbally.

Course Communication: Check the course eLC for announcements and updates (at least twice per week!) The discussion area of eLC is a great tool for peer assistance, so use it to your benefit, but the TAs and Dr. Dustman are not guaranteed to respond there. Instead, if you have a question which you would like one of us to answer, please email mibo3500@gmail.com – you will be answered as quickly as possible by one of the course assistants or Dr. Dustman. **ALL COURSE CORRESPONDENCE SHOULD GO THROUGH THIS ACCOUNT –emails sent to Dr. Dustman's personal email account may not be answered for several days since the course email box gets priority attention!**

Attendance: Students are expected to attend all assigned class meetings and are responsible for all content and instructions given during class time as well as announcements made on eLC. In-class assignments and activities cannot be made up without an excused absence – absentees must provide written documentation to the course email address **WITHIN 48 hrs** of absence. All excuses are subject to approval by Dr. Dustman, or the course assistants, before make-up work (quizzes and activities) is made available. Make-up work must be completed **BEFORE** the next Tuesday's class meeting; make up quizzes may be entirely different than the one given in class. If you know you have a schedule conflict, consult with Dr. Dustman or the course assistants in advance.

MIBO7500/Honors Option: No Honors Option will be offered during Spring 2013. MIBO7500 students will be expected to complete an additional assignment worth 100 pts – speak with Dr. Dustman for details.

Quizzes: Quiz-taking will be done using the Top Hat Monocle response system at the beginning of the class period, so be on time to class. If you arrive late and have missed questions, then you've missed the opportunity to answer those questions. Each quiz will consist of 5 questions worth 1 point each. There will be 11 quizzes given over the semester, and your lowest score will be dropped. See "Attendance" above for policies on making up missed quizzes.

In-Class Group Activities: Over the semester, students will work in groups of ~4 during class time to complete 10 different assignments. Groups will be formed by the instructor during the first week of classes and a finalized list will be posted on eLC by noon on Monday January 14th. You should sit in your assigned group's seats every day – see the classroom seating chart documents posted to eLC. Each in class group assignment will be worth a maximum of 2 points. Activity readings will be posted on eLC far in advance of activity days - it is expected that you will have read the scenario(s) **BEFORE** class activity time. Questions for discussion will be displayed via Top Hat Monocle in the classroom. Each student should bring the activity scenario(s) to class – electronically or printed – for reference during discussion. See "Attendance" above for policies on making up missed group activities.

On in-class group assignment days, you and your groupmates will:

- a) Complete the assignment through group discussion. One member of the group will be responsible for posting discussion question answers via the Top Hat Monocle response system during class. These postings will be displayed on screen as anonymous responses.
- b) Once all groups have completed the activity in the classroom, Dr. Dustman will lead a review of the groups' answers and the rational(es) which was/were used by the groups to answer the problems. Any erroneous answers or misconceptions noted during the anonymous answer period will also be discussed during this time. Answers and answer rationale will also be made available on eLC after class. These are usually good review tools for course exams.

Peer Performance Evaluation: At the end of the semester, each group member will review the effort put into group activities by each of their other group members. Keep this in mind as the semester continues. Non-contributors to the group discussions should not expect to earn full participation points, so come to class prepared with the background from podcasts and assigned readings, or expect the point deductions from your peers. Each student can earn up to a maximum of 20 points based on their group members' peer evaluation of their performance. See the instructions/rubric document posted the eLC.

Exams: Tests will focus on material covered in podcast lectures, in-class activities, and the assigned readings. You are responsible for learning the corresponding textbook material on the topics covered in class. There will be four tests. Each exam, including the one given during final exams week, will be recorded as a percentage and will have equal weight. Exams will be a mixture of 20 multiple choice and ~ 6-8 short answer questions, totaling 35 pts possible per exam. Scores will be converted to percentage, then recorded in eLC.

There are NO make-up tests for missed exams during the semester. If for some reason you must miss an exam (1, 2, 3, or 4), your score will be recorded as a zero and this exam will serve as your dropped test. If you take all of these exams, your lowest score from among them will be used as your dropped exam score.

All questions about exam grading must be submitted **in writing within one week of the return** of the exam – anything later than that can be discussed, but no points back will be awarded. You can anticipate exams will be returned **approximately one week** after the exam is taken. Exams will be available **prior to class** start and those not picked up during the return day(s) can be retrieved from Dr. Dustman, or the course assistants, during their office hours.

Reflective Blogs (XC Opportunities!): IF the student has participated in the week’s group activity, then the student is eligible to complete a reflective blog post for that week worth 1 extra credit point. These weekly assignments will be made available via the eLC assignments tab and will open and close at specific times during the week:

Reflective Blog Assignments open on Tuesday each activity week at 8:00 am and close the following Monday at 10:00 pm --- **NO EXCEPTIONS!**

Each student can submit a private reflective blog by answering questions about their learning experience and group work experience for each activity. The same questions are repeated each week -- see the Reflective Blog Instructions document in the eLC. **ALL QUESTIONS MUST BE ANSWERED CONSTRUCTIVELY TO RECEIVE CREDIT – simple YES and NO answers are not acceptable!** The information in these posts will remain confidential to Dr. Dustman and the course assistants and will not be reviewed (except to ensure completion of the work) until after final grades have been submitted.

Additional Extra Credit Opportunities: Dr. Dustman reserves the right to offer additional extra credit opportunities via the course eLC page at her discretion. These opportunities may or may not be announced verbally during class time.

Letter (Course) Grades: Grades will be updated weekly and posted in the eLC. The total number of points available for MIBO3500 is 390. (Students enrolled in MIBO7500 will be graded out of 490 points, which includes the additional 100 pts point assignment.) Extra credit points earned through the term will be added to that value.

YES, you can earn over 390 (over 490 for Honors) points by doing the scheduled extra credit activities offered throughout the term! Due to the inclusion of participation points and extra credit, the will be **NO CURVE** at the end of the semester.

Highest 10 quiz scores (5 pts each)	50 pts
10 in class group activity participations (2 pts each)	20 pts
Peer evaluation at end of term (average score from peers)	20 pts
<u>Highest three exams scores</u>	<u>300 pts</u>
Total Points	390 pts

Final course percentage grades will be calculated as follows: $\frac{\text{Total points} + \text{XC points}}{390 \text{ total pts possible}} \times 100 = \% \text{ Course grade}$

Letter grade assignments will be made according to the following scale:

A = (4.0) = 92.45-100%	C+ = (2.3) = 76.45 – 79.44%
A- = (3.7) = 89.45 – 92.44%	C = (2.0) = 72.45– 76.44%
B+ = (3.3) = 86.45– 89.44%	C- = (1.7) = 69.45 – 72.44%
B = (3.0) = 82.45 – 86.44%	D = (1.0) = 59.45 – 69.44%
B- = (2.7) = 79.45 – 82.44%	F = (0.0) = 59.44% or below

Course Withdrawal Policy: Any student who chooses to withdraw prior to the midpoint withdrawal deadline (Thursday March 21st) will be recorded with a WP. Any student wishing to pursue a withdrawal after this deadline must do so through UGA’s Student Support Services Office (http://studentsupport.uga.edu/services/hardship_withdrawal.htm). No student withdrawal will be initiated by the instructor for any reason.

Academic Honesty: All students are responsible for knowing the University’s policy on academic honesty. All academic work submitted in this course must be your own unless you have received my permission to collaborate and have properly acknowledged receiving assistance. It is my responsibility to uphold the University’s academic honesty policy and report my belief of dishonesty to the Office of the Vice President for Instruction. To review the UGA Academic Honesty Policy, please see <http://www.uga.edu/honesty/>

MIBO 3500 SPRING SEMESTER 2013 (subject to change as necessary; see eLC for updates, chapter section responsibilities, and key terms & learning goals for each chapter.)

DATE	TEXTBOOK CHAPTERS & LECTURE/PODCAST TOPICS	CLASSROOM ACTIVITY	QUIZ MATERIAL	WHO ATTENDS?
T 1/8	Ch. 1 Evolution of Microorganisms & Microbiology; Ch 17 Microbial Taxonomy & Evolution of Diversity <i>TRADITIONAL LECTURE</i>	Ch 1 & 17 Lecture	-----	ALL
R 1/9	Ch. 2 Study of Microbial Structure: Microscopy & Specimen Preparation <i>TRADITIONAL LECTURE</i>	Ch 2 Lecture	-----	ALL
T 1/15	Ch. 3 Bacteria and Archaea <i>PODCASTS</i>	Critical Thinking & Reasoning Skills; In-Class Activity 1	Quiz 1: Syllabus, Ch 1, 2 & 17	TUES GRPS
R 1/17		Critical Thinking & Reasoning Skills; In-Class Activity 1	Quiz 1: Syllabus, Ch 1, 2 & 17	THURS GRPS
T 1/22	Ch. 6 Microbial Nutrition <i>PODCASTS</i> ; Ch. 7 Microbial Growth: Factors Affecting Microbial Growth <i>PODCAST</i>	In-Class Activity 2	Quiz 2: Ch 3, 6 & 7 (Factors)	TUES GRPS
R 1/24		In-Class Activity 2	Quiz 2: Ch 3,6 & 7 (Factors)	THURS GRPS
T 1/29	Remaining Ch. 7 Microbial Growth <i>PODCASTS</i> ; Ch. 8 Control of Microorganisms in the Environment <i>PODCASTS</i>	In-Class Activity 3	Quiz 3: Ch 7 (Rest) & 8	TUES GRPS
R 1/31		In-Class Activity 3	Quiz 3: Ch 7 (Rest) & 8	THURS GRPS
T 2/5	Ch. 10 Catabolism: Energy Release and Conservation <i>PODCASTS</i> ; Ch. 11 Anabolism: The Use of Energy in Biosynthesis <i>PODCAST (NOTE: REVIEW CH. 9 as needed) &</i>	EXAM REVIEW	-----	ALL
R 2/7		EXAM 1: Covers Ch. 1-3, 6, 7, & 17	-----	ALL
T 2/12	Ch. 12 Part A: Genes: Structure, Replication & Expression <i>PODCASTS</i> ; Ch. 12 Part B: Protein Secretion <i>PODCAST</i>	In-Class Activity 4	Quiz 4: Ch 10, 11 & 12 A	TUES GRPS
R 2/14		In-Class Activity 4	Quiz 4: Ch 10, 11 & 12 A	THURS GRPS
T 2/19	Remaining Ch. 12 Part B: Genes: Structure, Replication & Expression <i>PODCASTS</i> ; Ch. 13 Microbial Genetics: Regulation of Gene Expression <i>PODCASTS</i>	In-Class Activity 5	Quiz 5: Ch 12 B & 13	TUES GRPS

DATE	TEXTBOOK CHAPTERS & LECTURE/PODCAST TOPICS	CLASSROOM ACTIVITY	QUIZ MATERIAL	WHO ATTENDS?
R 2/21		In-Class Activity 5	Quiz 5: Ch 12 B & 13	R 2/21
T 2/26	Ch. 14: Microbial Genetics: Mechanisms of Genetic Variation: Mutation, Mutation Repair, & Acquisition of New Genes <i>PODCASTS</i>	EXAM REVIEW	-----	ALL
R 2/28		EXAM 2: Covers Ch. 8, 10-13	-----	ALL
T 3/5	Ch. 14: Microbial Genetics: Mechanisms of Genetic Variation: Conjugation, Transduction, Transformation, & Transposition <i>PODCASTS</i>	VIDEO	Quiz 6: Ch 14	TUES GRPS
R 3/7		VIDEO	Quiz 6: Ch 14	THURS GRPS
T 3/12	NO CLASS – SPRING BREAK	-----	-----	-----
R 3/14	NO CLASS – SPRING BREAK	-----	-----	-----
T 3/19	Ch. 5 Viruses and Other Acellular Infectious Agents: History, Generalized Replication Scheme, Viral Replication Mechanisms, Outcomes Eukarya, Outcomes Bacteria/Archaea, Virus-Like Agent <i>PODCASTS</i>	In-Class Activity 6	Quiz 7: Ch 5 (No Cult.)	TUES GRPS
R 3/21		In-Class Activity 6	Quiz 7: Ch 5 (No Cult.)	THURS GRPS
T 3/26	Ch. 5 Viruses and Other Acellular Infectious Agents: Cultivation & Enumeration <i>PODCAST</i> ; Ch. 25 The Viruses & Ch. 37: Human Disease Caused by Viruses and Prions (combined) <i>PODCASTS</i>	In-Class Activity 7	Quiz 8: Ch 5 (Cult.), 25 & 37	TUES GRPS
R 3/28		In-Class Activity 7	Quiz 8: Ch 5 (Cult.), 25 & 37	THURS GRPS
T 4/2	Ch. 34 Antimicrobial Chemotherapy & Ch. 30 Microbial Interactions <i>PODCAST</i>	EXAM REVIEW	-----	ALL
R 4/4		EXAM 3: Covers Ch. 5, 14, 25, & 37	-----	ALL
T 4/9	Ch. 32: Non-Specific (Innate) Host Resistance <i>PODCAST</i>	In-Class Activity 8	Quiz 9: Ch 34, 30, 32	TUES GRPS
R 4/11		In-Class Activity 8	Quiz 9: Ch 34, 30 & 32	THURS GRPS
T 4/16	Ch. 33 Specific (Adaptive) Immunity <i>PODCAST</i>	In-Class Activity 9	Quiz 10: Ch 33	TUES GRPS
R 4/18		In-Class Activity 9	Quiz 10: Ch 33	THURS GRPS

T 4/23	Ch. 31 Infection & Pathogenicity & Ch. 36 Epidemiology of Infectious Disease (combined) <i>PODCASTS</i> ; Ch. 38: Human Diseases Caused by Bacteria <i>PODCASTS</i>	In-Class Activity 10	Quiz 11: Ch 31, 36, & 38	ALL
R 4/25		EXAM REVIEW	-----	ALL
R 5/2	<p>ASSIGNED FINAL EXAM PERIOD: <i>Final exams are scheduled for 3 hrs, but this exam is the same points/length as a regular exam and will be given the same amount of time as a regular exam: 1 hr. 15 min.</i></p> <p>EXAM 4 TIME (8:00 AM CLASS): 9:30 – 10:45 AM</p> <p>EXAM 4 TIME (2:00 PM CLASS): 3:30 – 4:45 PM</p>	EXAM 4: Covers Ch. 30-34, 36, & 38	-----	ALL