Introductory Microbiology (Honors)
MIBO 3500H Spring 2022
Section #59048
MWF 9:10-10am BIOSCI 217

INSTRUCTOR:

Instructor	Dr. Francine Scott	**Phone**	(706) 542-0947
Office	327B Biological Sciences	**E-mail**	francine.scott@uga.edu
Email/Office Hours	Will respond to email within 24hrs Mon-Fri *office hours by appointment in person/Zoom	**Credit Hours**	3 HOURS

TEACHING ASSISTANT(GRADING):

Teaching Assistant-	Saisuki Putumbaka	**E-mail**	saisuki.putumbaka@uga.edu
Email Hours	Will respond to email within 24hrs Mon-Fri		

COURSE DESCRIPTION:
MIBO 3500H provides an introduction to microorganisms with a special emphasis on bacteria, their structure, function, diversity, and importance to man.
Pre or Corequisite: (CHEM 2211 or CHEM 2311H or CHEM 2411) and (CHEM 2211L or CHEM 2311L or CHEM 2411L) and BIOL 1107 or BIOL 1107E or BIOL 2107H and permission of honors.

This course is not open to students with credit in MIBO 3500 or MIBO 3500E.

TEXTBOOK (REQUIRED):
Microbiology An Evolving Science. 5th edition. 2017Slonczewski and Foster. W.W. Norton and Company. ISBN#9780393419962. *Older (4th edition ok), but chapter sections may not correspond exactly.*

TECHNOLOGY (REQUIRED):
Computer with functional camera and microphone required for Respondus monitor (see academic integrity).

METHODS OF INSTRUCTION:
Lectures are fully in-person. Lecture PowerPoints will be available on eLC at the beginning of every week (Sundays 12:01am). Any supplemental lecture material will be posted to eLC by the end of the week for students to review (Saturdays 11:30pm). This supplemental material may include notes, drawings, etc. Students are expected to review this supplemental material. *Course methods of instruction may change if necessary and approved by UGA (ie. for a COVID-19 related reason).*

EMAIL POLICY:
The course will have a TA grader (Saisuki). Students should address all grading questions first to Saisuki. However, concerns regarding disability accommodations or problems accessing quizzes and exams should first be directed to Dr. Scott. All emails will receive a response within 24 hours Mon-Fri.

ATTENDANCE POLICY/POLICY ON MISSED WORK: Students are expected to attend lectures as regularly as possible but attendance in lecture will ***not*** be required (with the exception of Discussion Activity & Exam days). There will be some in-class assignments due for a grade (Discussion Activities & Exams). All other course work will be completed online. All late work will be graded as a zero, unless F.Scott has approved makeup work. Students who have a legitimate reason for missing coursework should notify F.Scott immediately to discuss makeup work. Students who arrive to class late on an Exam Day (*after another student has seen/taken the exam and left the room*) will have their exam considered late (ie. grade of zero). (*Documentation of reason for absence will be requested for approval of makeup coursework).*

GRADING SCALE AND EVALUATION:

Quizzes:
There will be 5 quizzes each worth 10 points. Quizzes consist of 10 multiple choice/true-false questions worth 1 pt each. Quizzes are timed at 10 minutes. Each quiz may be attempted twice with the higher of the two scores being recorded in the gradebook. *Questions come from a question bank so exact combination of questions on a second attempt may not be the same as first attempt.* Quizzes will open no later than the beginning of each module and are due Saturday 11:30pm of the indicated week. All quizzes are closed note. *The lowest quiz score will be dropped. Quizzes require Respondus Monitor.*

Discussion Questions: On the indicated Discussion Activity day there will be group discussions on a relevant microbial topic. Topic may require students to complete reading/video lecture prior to class. Questions will be discussed as a group, with answers being due at the end of class. All group members will earn the same grade. There will be 5 of these assignments each worth 20 points. *These are the only course assignments that may be completed as a group. Lowest discussion activity score will be dropped.*

Research Highlights:
Students will read and answer questions on relevant literature. There will be 5 of these assignments each worth 40 points. *The lowest of these scores will be dropped.*

Packback Curiosity Questions:
Students will post curiosity questions and respond to at least two questions from their peers on the indicated weeks (with a due time of 11:30pm). There will be 10 of these assignments each worth 5 points. **Packback questions should be posted Sundays- Tuesdays and responses posted Wednesdays-Fridays (not earlier).** No Packback scores will be dropped. Material from questions/responses highlighted in the course may be included on quizzes and exams.

> *Students will start the course with full credit for Packback participation. Failure to upload a unique question and/or responses will result in that full assignment points being deducted. That is; if any portion of the assignment is incomplete or late the score for that entire assignment will be 0/5points. Restating another students question/response will also result in the full assignment points being deducted.*

Exams:
There will be 4 Module Exams and 1 Cumulative Final. Module Exams 1-4 will be given in-class Friday of the indicated week and will cover all material from that module. Cumulative Final will be **Wednesday May 11th 8-11 am** and cover all modules. The lowest of the exam scores will be dropped, Thus, if a student is satisfied with their grade prior to the final they may choose to not take the final exam.

Microbial Organism Paper: Each student will research a microbial organism of interest and write a 5-7 page research paper describing the organism's impact on humans, animals, or the planet. Details and grading rubric for this paper will be distributed on eLC.

Written Response Sentence Limit: In order to provide timely grade feedback, Exam and Research Highlight answers will be limited to **1 paragraph (4 sentences) or less per question**. Answers that do not fit this structural criteria will be evaluated at half credit. If indicated on assignment, some questions may have a limit of less than 4 sentences.

Points possible:

Highest 4 Exam scores at 100 pts. each	=	400 pts
Highest 4 Research Highlight scores at 40 pts each	=	160 pts
Highest 4 Discussion Activity scores at 20 pts. each	=	80 pts
Microbial Organism Paper	=	50 pts
Packback Participation Activities; 10 at 5 pts each	=	50 pts
Highest 4 quiz scores at 10 pts. each	=	40 pts
TOTAL POSSIBLE		780 pts

Letter Grades:

A = 93.0 - 100%	A- = 90.0 -92.9%	B+ = 87.0-89.9%	
B = 83.0-86.9%	B- = 80.0-82.9%	C+ = 77.0-79.9%	
C = 73.0-76.9%	C- = 70.0-72.9%	D = 50.01-69.9%	F = ≤ 50%

*Grades will not be rounded

Description of Letter Grades: http://www.reg.uga.edu/grades

Grade	Points	Description
A	4.0	Excellent
A-	3.7	Excellent
B+	3.3	Good
B	3.0	Good
B-	2.7	Good
C+	2.3	Satisfactory
C	2.0	Satisfactory
C-	1.7	Satisfactory C- will not satisfy requirements that require a C (2.0) or better
D	1.0	Passing
F	0.0	Failure

LETTERS OF RECOMMENDATION:
Strong letters of recommendation come from referring students who the instructor knows well. Students who are considering requesting letters of recommendation should have discussions with instructor regularly throughout the entire semester or in the several months preceding a letter request. Decisions on letters of recommendation take into consideration a student's overall course grade, how well the instructor knows the student, and number of students requesting letters.

MENTAL HEALTH AND WELLNESS RESOURCES:
If you or someone you know needs assistance, you are encouraged to contact Student Care and Outreach in the Division of Student Affairs at 706-542-7774 or visit https://sco.uga.edu. They will help you navigate any difficult circumstances you may be facing by connecting you with the appropriate resources or services.

UGA has several resources for a student seeking mental health services (https://www.uhs.uga.edu/bewelluga/bewelluga) or crisis support (https://www.uhs.uga.edu/info/emergencies).

If you need help managing stress anxiety, relationships, etc., please visit BeWellUGA (https://www.uhs.uga.edu/bewelluga/bewelluga) for a list of FREE workshops, classes, mentoring, and health coaching led by licensed clinicians and health educators in the University Health Center.

Additional resources can be accessed through the UGA App.

ACADEMIC INTEGRITY:
Excerpt from A Culture of Honesty: "No student shall perform, attempt to perform, or assist another in performing any act of dishonesty on academic work to be submitted for academic credit or advancement. A student does not have to intend to violate the honesty policy to be found in violation. For example, plagiarism, intended or unintended, is a violation of this policy" Additionally, students must agree that " I will be academically honest in all of my academic work and will not tolerate the dishonest of others."

A complete description of academic dishonesty may be found at http://www.uga.edu/honesty and in the student honor code. If a student is found in violation of the academic integrity policy the University's policy and procedures for handling cases of suspected dishonesty can be found at http://www.uga.edu/ovpi

Respondus Monitor will be required for all Quizzes. Respondus monitor requires a functional webcam and microphone. Information about respondus monitor can be found at the following link:

https://help.elc.uga.edu/students/respondus_monitor/

**Academic Honesty Agreement is required in Module 0*

ASSIGNMENT VIEWING AND GRADING FEEDBACK:
Feedback for items submitted online will be provided on eLC. Graded Exams can be viewed during office hours to be determined by F.Scott. Students may **not** copy, distribute, post online, or take quiz and exam materials off eLC or outside of classroom for any reason without permission from F.Scott.

CORONAVIRUS:
Students are expected to follow UGA's Coronavirus policies. As these policies may change, the most up-to-date policy details can be found on eLC and announced to students via campus email.

FINAL EXAMINATION:
Cumulative final exam is scheduled for Friday December 10th 12-3pm.

***This syllabus is intended as an outline for the course. Some deviations in course delivery format or content may occur (for example for UGA approved COVID-19 policies, etc.). If any changes occur students will be notified immediately.*

SCHEDULE

- **Quizzes:** Due Saturday 11:30pm of the indicated week
- **Exams:** In-class Friday of the indicated week
- **Discussion Activity:** Completed in groups during class the indicated day
- **Research Highlights:** Due Saturday 11:30pm of the indicated week
- **Packback**: 1 question due Sunday-Tuesday 11:30pm and 2 responses due Wednesday- Friday 11:30pm (not earlier)

Module 0: Course Introduction			
Calendar Week	**Readings**	**Lectures**	**Assignments Due**
Jan 9-15	Syllabus and Packback 1.1-1.4 2.1-2.6	(Mon) Course Introduction (Wed)History of Microbiology (Fri) Microscopic Observation	Academic Honesty Signature Packback practice
Module 1: Bacterial Structure and Growth			
Jan 16-22 Jan 17 MLK Jr. Day	3.1, 3.2, 3.4 3.3	(Wed) Bacterial Structure (Fri) Bacterial Cell Walls-Discussion Activity 1	Quiz 1 Packback 1 (Fri) Discussion Activity 1
Jan 23-29	4.1, 4.3 4.4 4.5 Research Highlight 1	(Mon) Bacterial Culture (Wed) Bacterial Growth (Fri) Biofilms	Research Highlight 1 Packback 2
Jan 30- Feb 5	5.2-5.5 5.6	(Mon) Environmental Influences (Wed) Control of Growth	(Fri) Module 1 Exam

Module 2: Energetics and Genetics			
Calendar Week	**Readings**	**Lectures/Videos**	**Assignments Due**
Feb 6-12	13.3 13.5-13.6 14.4-14.6	(Mon) Catabolism and Anabolism (Wed) Catabolism of Glucose (Fri) Electron Flow-Discussion Activity 2	Quiz 2 Packback 3 (Fri) Discussion Activity 2
Feb 13-19	7.1-7.3 7.4, 9.3 10.1, 10.4 Research Highlight 2	(Mon) Genomes and Chromosomes (Wed) Plasmids and Horizontal Gene Transfer (Fri) Molecular Regulation	Research Highlight 2 Packback 4
Feb 20-26	9.1-9.2 7.6	(Mon) Gene Mutation and Repair (Wed) Metagenomics	(Fri) Module 2 Exam
Module 3: Diversity of Microorganisms			
Feb 27-Mar 5	18.1-18.2 18.3 27.1-27.2	(Mon) Bacterial Diversity -Gram Negative (Wed) Bacterial Diversity -Gram Positive (Fri) Antibacterial Therapy-Discussion Activity 3	Quiz 3 Packback 5 (Fri) Discussion Activity 3
Mar 6-12		SPRING BREAK	
Mar 13-19	19.1 20.1, 20.2, 20.4 6.2 Research Highlight 3	(Mon) Archaeal Diversity (Wed) Eukaryotic Diversity (Fri) Virus Structure	Research Highlight 3 Packback 6
Mar 20-26	6.4 6.5 27.4	(Mon) Viral Diversity (Prokaryotic) (Wed) Viral Diversity (Eukaryotic) (Wed) Antiviral Therapy	(Fri) Module 3 Exam

Module 4: Microbial Ecology and Immunology			
Calendar Week	**Readings**	**Lectures/Videos**	**Assignments Due**
Mar 27-Apr 2	21.3 21.5 16.4	(Mon) Microbial Ecology and Symbiosis (Wed) Microbial Ecology in Marine Ecosystems (Fri) Foodborne Illness – Discussion Activity 4	Quiz 4 Packback 7 (Fri) Discussion Activity 4
Apr 3-9	16.3 23.1-23.5 24.1, 24.3 Research Highlight 4	(Mon) Food and Industrial Usage of Microbes (Fri) Innate Immunity (Fri) Adaptive Immunity	Research Highlight 4 Packback 8
Apr 10-16	25.2 25.1	(Mon) Microbial Invasion (Wed) Infectivity and Virulence	(Fri) Module 4 Exam
Module 5: Microbial Diseases			
Apr 17-23	26.2 26.6 11.2	(Mon) Bacterial Diseases (Respiratory) (Wed) Bacterial Diseases (Nervous) (Fri) Viral Diseases (Respiratory)-Discussion Activity 5	Quiz 5 Packback 9 Microbial Organism Paper Due (Fri) Discussion Activity 5
Apr 24-30	N/A 26.1-26.2	(Mon) Viral Diseases (Nervous) (Wed) Fungal Diseases (Skin) (Fri) Fungal Diseases (Respiratory)	Research Highlight 5 Packback 10
May 1-7	26.3, 6.5	(Mon) Microbes and Cancer	
May 8-14	Cumulative		Cumulative Final Exam Wednesday May 11 8-11am