

Introduction to Microbiology Laboratory
MIBO 3510L
Summer 2010
Lab Lecture Room 404B Biological Sciences
Thursdays 2:15-4:30pm

Lecture Instructor: Dave Samuels
Room 255 Biological Sciences
Phone: (706) 583-0821
Email: djs79@uga.edu

Office hours: Thursdays after lecture (~4:30-5:30) or by appointment.

Lab Location: Biological Sciences, room 208

Lab Instructors:

Tye Boynton 226 Coverdell Bldg 542-7252 tye@uga.edu	Hsien-Tzer Tseng 3301 Plant Sciences Bldg 542-3993 carlos03@uga.edu
MW 8 – 10:15am MW 11:45am - 2pm	TR 8 - 10:15am TR 11:45am - 2pm

Textbook: Applications in General Microbiology: A Laboratory Manual (Revised 6th edition), Thomas J. Kerr and Barbara B. McHale

Supplemental Material: There are some lab exercises that are not in the lab manual. These will be provided on eLC—you are responsible for printing them and bringing them to class.

Academic Honesty Policy: Students are expected to be familiar with and abide by the University of Georgia's Academic Honesty Policy. The policy can be found at <http://www.uga.edu/ovpi/honesty/acadhon.htm>

Grading:

Midterm exam	practical in lab	60 pts
	written in lecture	40 pts
Final exam (comprehensive)	practical in lab	60 pts
	written in lecture	40 pts
In-class/Homework assessments and quizzes		50 pts
<u>Unknown laboratory report and flow chart</u>		<u>50 pts</u>
Total Points		300 pts

Letter Grade Scale:

A = (4.0) = 93.0 – 100%	C+ = (2.3) = 77.0 – 79.9%
A- = (3.7) = 90.0 – 92.9%	C = (2.0) = 73.0 – 76.9%
B+ = (3.3) = 87.0 – 89.9%	C- = (1.7) = 70.0 – 72.9%
B = (3.0) = 83.0 – 86.9%	D = (1.0) = 60.0 – 69.9%
B- = (2.7) = 80.0 – 82.9%	F = (0.0) = 59.9% or below

Attendance, Tardiness & Excuse Policy: Attendance in lab and lab lecture is **mandatory**. If you must miss a lab period, it is **your responsibility** to arrange to make up the class during another lab period the same week and to provide documentation of a valid excuse, otherwise the absence will be considered 'unexcused'. Please keep in mind that there may not be room in all of the lab sessions to accommodate extra people. Tardy arrivals (>10 min), in which a valid excuse has not been presented, will also count as an unexcused absence.

Any homework or in-class assessments cannot be made up if the absence is unexcused. Medical/professional school interviews will be counted as excused absences **only** if the TA and instructor are contacted **prior to** the absence. In order for an illness to be considered excusable, the student **must submit** a document from his/her physician indicating the student was to not to be attending class due to the illness – documents indicating the student simply visited the health center are **not** sufficient.

Preparation before lab period and in-class/homework assessments:

Students are expected to read the assigned lab exercises and powerpoint notes prior to attending lab lecture and lab each meeting. Up to 50 pts will be earned through the completion of either an assignment given during the lab period, or in the form of brief quizzes at the start of the lab period.

Laboratory Exams: If you feel your exam has a grading error, you must contact your TA or the TA who graded the question. You have **one week** from the time the exams are handed back to contest the grading in writing. After the one-week period, we will be glad to discuss the exam, but no changes to your grade will be made.

Make-up Exam Policy: Make-up exams for the lab midterm and lab final practical exams will only be given when a student **cannot** attend any of the lab sections to take the exam at the scheduled time **and** has a written excuse for this absence. The make-up exam will be different from the one given at the scheduled time and **may** be an oral or an essay exam and will include any material previous covered in class, without regard to particular study guides that may have been given by TAs. **Mr. Samuels must be contacted by the Friday following the scheduled exam to request a make-up lab practical. After this time, no make-up exams will be given and you will receive a zero for that exam.**

No make up Thursday lab lecture quizzes will be given. If you know you will miss a quiz due to an excusable absence, contact Mr. Samuels at least 24 hrs in advance to make an appointment to take the quiz early.

Laboratory Safety/Techniques: You will be given a list of lab safety rules that you are expected to read and follow. You will also be taught proper laboratory techniques that are to be used in the lab. If you fail to follow these rules and techniques during the semester, points will be deducted from your homework assessment score at a rate of 1 point per incidence. The initial incidence will result in a warning and reminder of proper procedures. After that, points will be deducted for each subsequent occurrence. You will be notified at the time of the occurrence.

Lab Attire: For safety reasons, long pants and closed-toed shoes are required in the lab. This policy will be strictly enforced by TA's. If you are wearing shorts and/or sandals, you will not be allowed into the lab.

Special note: You are expected to turn all cell phones off (or to silent) during lab. Ringing not only distracts the class, but also poses a safety hazard if a student is startled when working with an open flame or chemicals.

eLC:

The discussion component of eLC is dedicated to the students primarily for peer support and response. The instructor and TA's may occasionally read and respond to discussion posts, however, if you have a question for them, it is best to email them directly.

From time to time, course announcements will be posted on the main eLC page, so check it regularly.

Dave's lecture notes will be posted by 6pm on Wednesday, for the following Thursday afternoon's lecture.

Schedule: *The schedule and procedures in this course are subject to change in the event of extenuating circumstances- see eLC for announcements.*

*June 7/8 Due to summer semester beginning on Friday, the lab lecture topic will be covered in lab.

Date	Day	Lab Exercises (HO-Handout)	Lab Lecture Topic
*June 7/8	M/T		Safety, Microscopy, Morphology, Fungi, Aseptic Technique, Smear Preparation, Simple & Differential Staining
June 7/8	M/T	1: Introduction to microscopy 10: Higher microorganisms, Bacteria in the environment HO - Fungal tape mounts	
June 9/10	W/R	6, 7, 8: Simple staining, Differential and Special staining	
June 10	R		Culture Media, Motility, Isolation of Pure Cultures, Nutritional and Cultural Requirements: O ₂ , Temperature, Osmotic Condition, pH, Effects of UV light
June 14/15	M/T	9, 4, 11, 12: Bacterial motility, Isolation of pure cultures, Oxygen requirements & Nutritional requirements	
June 16/17	W/R	22, 23, 24: Effects of Temperature, Osmotic pressure and pH effects, UV light effects	
June 17	R		Dilutions & Enumeration, Selective & Differential Media, Enzymes, Carbohydrate Utilization
June 21/22	M/T	5, 13, 15: Dilutions, Bacterial enumeration, Selective & Differential Media	
June 23/24	W/R	16, 17, 18: Extracellular and intracellular enzymes, and Carbohydrate utilization (material tested on final exam)	
June 24	R		WRITTEN MIDTERM EXAM Midterm review Bacterial Unknowns (Flowcharts), IMViCs, Diagnostic Biochemistry and Rapid ID Methods
June 28/29	M/T	MIDTERM PRACTICAL EXAM	

Date	Day	Lab Exercises (HO-Handout)	Lab Lecture Topic
June 30/July 1	W/R	19, 20: IMViCs tests, Key Biochemical Diagnostic Reactions and Rapid ID Methods START UNKNOWNNS	
July 1	R		Disinfectants & Antibiotics; Water Microbiology
July 5/6	M/T	No Labs: Independence Day Holiday	
July 8/9	W/R	25, 27: Disinfectant & Antibiotic susceptibility HO- Examination of water UNKNOWNNS *Unknown Flowchart Due To TA*	
July 8	R		Induced Mutations & Replica Plating, Bacterial Transformation
July 12/13	M/T	54: Induced mutation and replica plating UNKNOWNNS	
July 14/15	W/R	HO - Bacterial transformation UNKNOWNNS	
July 15	R		Normal Flora of Skin/Nasal Passages/Intestines, Bacteriophage & Plaque assays
July 19/20	M/T	50, 51: Flora of skin, throat and nasal passages HO - Bacteriophage assay UNKNOWNNS	
July 21/22	W/R	Catch-up and final review UNKNOWNNS	
July 22	R		WRITTEN FINAL EXAM Final exam review
July 26/27	M/T	FINAL EXAM	
July 28	W	*Unknown Report Sheets Due to TA Mailbox (outside BioSci Rm 214) by 5 pm*	