MLAB 1231HYB

Parasitology / Mycology

SPRING 2021

Please Note: Due to extenuating circumstances, including public health issues, course and testing delivery methods, instructional schedules, housing contracts, campus procedures and/or operating hours may be altered, interrupted and/or ceased for a limited or extended period of time. Such changes will be posted on the College website.

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Course Information

MLAB 1231HYB – Parasitology / Mycology
Placement: Spring semester of the freshman year (1st 8-weeks of 1st program year)

Professor Contact Information

Instructor Name: Aimee Flynn (903) 463-8684
Email: flynna@grayson.edu Office Location: STC 204

On-Campus Office Hours:

Tuesdays: 1030am – 1200pm
Fridays: 800am – 1200pm

Course Pre-requisites

1. Acceptance into the MLT-AAS Program
2. Current enrollment or previous completion of MLAB 1201 and MLAB 1335, or consent of the MLT Program Director

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Course Description

MLAB 1231. A study of the taxonomy, morphology, and pathogenesis of human parasites and fungi, including the practical application of laboratory procedures, quality control, quality assurance, and safety.

Course Outcomes

Demonstrate an understanding of all aspects of the coagulation mechanism; describe disease states associated with abnormal coagulation values; perform basic laboratory coagulation analysis. Evaluate laboratory test outcomes and correlate test results with patient condition(s); and evaluate the suitability of clinical specimens.

Course Goals

Upon completion of this course the graduate should be prepared to function as a member of the health care team with the following duties and/or responsibilities:

1. Describe collection and preservation techniques of feces for examination for parasites
2. Describe gross and microscopic examination techniques for detection of parasites in feces, blood, and other sources
3. Memorize the life cycle of malarial parasites
4. Recognize parasites from specimens and projected slides
5. Use direct examination methods to examine clinical specimens for fungi
6. Classify pathogenic fungi according to their cultural characteristics, location of infection, and morphology on wet preparations
7. Recognize common fungi from projected slides
9. Follow safety rules

Course Objectives

Terminal Performance Objectives (TPO):

Upon completion of the assignments and participation in class discussion, the student should be able to answer at least 80% of the questions on multiple choice examinations on the topics covered in MLAB 1231.

* Specific Objectives

Specific objectives are found in the beginning of each chapter in the text.

INTEGRATION OF SCANS COMPETENCIES
WITH COURSE GOALS, OBJECTIVES, AND ACTIVITIES

SCANS COMPETENCIES AND FOUNDATION SKILLS CIP: 51.1004	MLAB 1201	MLAB 1291	MLAB 1335	MLAB 2331	MLAB 1315	MLAB 1127	MLAB 1311	MLAB 1231	MLAB 2434	MLAB 2401	MLAB 2238	MLAB 2660/1	PLAB 1223	PLAB 1160/1
Resources														
Allocates Time	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Allocates Money	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Allocates Material and Facility Resources	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Allocates Human Resources	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Information														
Acquires & Evaluates Information	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Organizes & Maintains Information	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Interprets & Communicates Information	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Uses Computers to Process Information	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Interpersonal														
Participates as a Member of a Team	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Teaches Others	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Serves Clients/Customers	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Exercises Leadership	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Negotiates to Arrive at Decision	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Works with Cultural Diversity	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Systems														
Understands Systems	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Monitors & Corrects Performance	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Improves & Designs Systems	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Technology														
Selects Technology	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Applies Technology to Task	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Maintains & Troubleshoots Technology	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Basic Skills														
Reading	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Writing	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Arithmetic	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Mathematics	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Listening	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Speaking	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Thinking Skills														
Creative Thinking	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Decision Making	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Problem Solving	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Seeing Things in The Mind's Eye	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Knowing How to Learn	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Reasoning	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Personal Qualities														
Responsibility	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Self-Esteem	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sociability	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Self-Management	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Integrity/Honesty	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Course Outline

Parasitology Portion

Ch 1. Introduction
Ch 2. Specimen Collection and Processing
Ch 3. The Amebas
Ch 4 The Flagellates
Ch 5. The Hemoflagellates
Ch 6. Select Sporozoa: Plasmodium and Babesia
Ch 7. Miscellaneous Protozoa
Ch 8. The Nematodes
Ch 9. The Filariae
Ch 10. The Cestodes
Ch 11. The Trematodes

Mycology Portion

Mycology Chapter

Required Textbook

Required:

1. Zeibig, E.A. (2013) Clinical Parasitology; A Practical Approach, St. Louis, Missouri: Elsevier - ISBN: 9781416060444 (Hard Cover)
2. Mahon, C.R., Lehman, D.C. (2019) Textbook of Diagnostic Microbiology, Sixth Edition, St. Louis, Missouri: Elsevier – ISBN: 9780323482189 (Hard Cover)

Recommended: Numerous additional texts covering this topic are available in the MLT library or from the Instructor.

Course Assignments

Will be assigned by the instructor as necessary.

Campus Lab

TPOs

Upon completion of the assignments and practice in Campus Lab the student should:

AFFECTIVE

1. Demonstrate a willingness to prepare for the role of MLT by

    a. arriving for campus lab sessions at the assigned time
    b. observing safety rules and regulations
    c. keeping records
        1) legibly recording results
        2) recording results exactly as determined
        3) keeping all class records current including checklists and progress reports
    d. cooperating with the instructor and fellow students to maintain the campus lab and equipment in good condition

PSYCHOMOTOR

2. Demonstrate the ability to perform laboratory tests by

    a. following written and verbal instructions
    b. demonstrating increasing dexterity in the performance of manual procedures
    c. demonstrating progressive accuracy, precision and speed
    d. obtaining results within the limits set for each test

COGNITIVE

3. Demonstrate knowledge of theoretical concepts involved in the tests performed in campus lab by

    a. recognizing results which do not correlate and reporting them to the instructor
    b. associating unusual test results with the condition or disease which might be indicated

	Date	Text Material	Assigned Reading	Exams/Lab Exercises
1	Jan 11	Review Syllabus Ch. 1 Ch. 2 **Zoom Meeting: Review of Syllabus and First Week Assignments**	 Ch. 1 Ch. 2	"Parasites Eating Us Alive" YouTube Video
2	Jan 13	Ch. 3	Ch. 3 – Select Organisms	Online **Lab – Ch. 3 Organisms** **Online Lab – Ch. 4 Organisms**
3	Jan 18	No School – Happy MLK Day		
***4**	Jan 20	Ch. 4 ***Review for Exam 1 – Recorded Via Swivl***	Ch. 4 – Select Organisms	**Open Lab – Ch. 3 and Ch. 4 Organisms**
5	Jan 25	Ch. 5	Ch. 5 – Select Organisms	**Exam 1 – Ch. 1-4 @ 8:30 am** ***Lockdown Browser with Webcam*** **Online Lab – Ch. 5 Organisms** **Online Lab – Ch. 6 Organisms**

***6**	Jan 27	Ch. 6 ***Review for Exam 2 – Recorded Via Swivl***	Ch. 6 – Select Organisms	**Open Lab – Ch. 3, Ch. 4, Ch. 5, and Ch. 6 Organisms**
7	Feb 1			**Exam 2 – Ch. 4-5** ***Open Book***
***8**	*Feb 3	Ch. 6 Continued Ch. 7 ***Review for Exam 3***	Ch. 6 - Select Organisms Ch. 7 – Select Organisms	**Lab Practical - #1**
9	Feb 8	Ch. 8 Ch. 9		**Exam 3– Chapter 6 and 7** ***Lockdown Browser with Webcam*** **Online Lab – Ch. 8 – Ch. 11 Organisms**
***10**	*Feb 10	Ch. 10 Ch. 11 *Review for Exam 4*		**Exam 4 – Chapters 8 – 11** ***Open Book*** **Open Lab – Ch. 8 - Ch. 11**
11	Feb 15	Mycology -	Textbook reading assignment: Pages 316 – 322 Crossword puzzle – Due Feb 24	**Online Lab - Mycology**

***12**	*Feb 17	*Review for Exam 5*		**Open Lab – Ch. 8 - Ch. 11** **Germ Tube Lab**
13	Feb 22			**Exam 5 – Mycology and Select Questions of Chapters 8 – 11** ***Lockdown Browser with Webcam***
***14**	*Feb 24			**Online Comprehensive Review Exam 6** **Open Lab (Optional)**
***15**	*March 1	*Comprehensive Review*		**Practical Slide 2 Final Exam 7**
***16**	*March 3			**Final Comprehensive Exam 8** **8:00 am – 9:50 am**

*** denotes required attendance**

Final Examinations will be administered in the classroom according to the schedule provided in the Grayson College Schedule of Classes and is subject to change with fair notice. Any changes to the Final Exam schedule will be posted as an Announcement in Canvas and given verbally in class.

In the case of inclement weather, emergency closings, or other unforeseen disruptions to scheduled classes, students must log onto Canvas Announcements for directions on where or how to continue their coursework.

Methods of Evaluation

LECTURE: Evaluation may be by written quizzes and examinations. In addition, there will be a final examination in the course.

Attendance will be calculated from the required class attendance days as noted on the semester schedule above.

CAMPUS LAB: Evaluation of these objectives may be by practical or written examination. All other tests will be evaluated by formative means. Campus Lab Report forms will be utilized to determine satisfactory performance in Campus Lab.

Grading

Category	*Number*	*% of Total Grade*
Exams	8	85%
Quizzes/Slide Practical	4	15%

Laboratory Portion: Must earn a 70% (C average) to earn a Pass (does not count toward point total).
As stated in the MLT Student Handbook: If a student doesn't earn the required 70% exam average, the final grade will default to the low exam average.

Numerical grade values will be equivalent to the following scale:

A = ≥89.5
B = 79.5 - 89.4
C = 69.5 – 79.4
D = 59.5 – 69.4
F = ≤ 59.4

The final grades for the course can be accessed through the Grayson College student portal – they will not be available from the instructor

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Methods of Instruction

Lecture/discussion and Campus Laboratory will be correlated so that the total laboratory and lecture hours will be utilized to the best advantage.

Visual aids will be available online to reinforce the presented material. Individualized instruction, lab experience, demonstrations and textbooks, and periodicals will be utilized.

Course Requirements

In order to achieve a passing grade, the following requirements must be met.

1. Cumulative exam average (a grade of 70% or better).
2. Regular attendance for Campus Lab is required. Responsibility for work missed is placed upon the student.
3. A grade of "C" or better is required for graduation.

Course & Instructor Policies

Hybrid Course Information

Communication from the instructor pertaining to ***all*** students will be provided through Canvas Announcements. Individual communications to the instructor should be made through Grayson email. Students shall communicate with each other via personal email.

Online participation will be noted through the submission of assigned video write-ups.

Special Note: Though there are no required discussion boards for this course, should an online discussion environment among students emerge, diversity has many manifestations including diversity of thought, opinion and values. I encourage all students to be respectful of that diversity and to refrain from inappropriate commentary. Should such inappropriate comments occur, I will intervene and disable student ability to utilize the discussion area. In some cases there may be academic disciplinary action. Students should be guided by common sense and basic etiquette. Never post, transmit, promote, or distribute content that is known to be illegal.

Avoid overtly harassing, threatening, or embarrassing fellow students. Also refrain from transmitting or distributing content that is harmful, abusive, racially or ethnically offensive, vulgar, sexually explicit, or otherwise. Class/section norms of conduct may vary, but there is no place where hate speech is tolerated. Never post harassing, racist, threatening, or embarrassing comments. In summary - Be polite!

Grades for the course will be available through Canvas Grade Center.

Students must have reliable access to a personal computer with internet connection that can access Microsoft Office and Canvas. Students must be able to competently navigate these programs and the internet in order to be successful in this course. Other sources of internet connections should be explored as a fallback.

Please see the section “Instructor Policies” regarding the policy for Late Work.

Online Exams

Online exams will be taken through Canvas. Students are expected to use the honor system and only utilize class-related resources, not other students' work.

The lowest test grade of all exams (except the final) may be replaced by the final exam grade (calculated out of the regular exam value of 100%) if it is higher than the original exam grade. If it is lower, the original exam grade will stay. This is to accommodate unforeseeable absences (ie. illness, car trouble, etc.)

A minimum overall exam average of 70% must be obtained for completion of the course.

Assignments

Additional assignments may be given throughout the semester to aid in further understanding of the material.

Laboratory Exercises

At the conclusion of lecture, the students will be allowed a ten minute break. At the end of the designated break, the students must be in the lab ready to begin. Students arriving after the break will not be allowed to stay. Extenuating circumstances will be considered by the professor.

Each laboratory exercise will have an accompanying pre-lab that is due upon arrival to the lab. It will be handed in complete before the student is allowed to proceed with the lab exercise.

Lab report forms will be filled out for each exercise. No late lab reports will be accepted. Missed labs cannot be made up due to the sensitive nature of the specimens.

Dress Code Adherence

Students are expected to adhere to the program dress code for all scheduled class days. Students not following the dress code, as determined by the instructor and program policy, will be dismissed from class for the day. This will apply to laboratory and all exam days as well. Extenuating circumstances will be considered and determined by the instructor.

Electronic Devices

Cell phones must be placed on silent for all lectures and tests. If a student must leave the room to answer a call, they should leave and return as quietly as possible with minimum distraction to instructor and fellow students. If cell phone usage becomes excessive, further disciplinary action will be taken by the instructor.

Laptop computers and iPads may be brought to class to type lecture notes. They are to be used for this purpose only and the student may be removed from class if the policy is abused. Any non-class websites may be accessed during class breaks only.

Computer/Internet Problems

Students **must** have contingency plans for computer and Internet problems. Some suggestions include becoming familiar with Internet/free PC usage within your community, or seeking out friends, family, and even coworkers who have Internet services. It is your responsibility to have a backup plan for PC and Internet failure.

*PC and Internet failure is ****not**** *an excuse to turn in late assignments or for not accessing the week's PowerPoint.*

Late Work

Late assignments will be accepted through the next Monday with a 25%pt deduction off the grade. After this time has passed, the assignment will not be accepted. Notify the instructor if an extenuating circumstance arises before the assignment is due so that other arrangements can be made. Notifying the instructor afterwards is unacceptable.

Study Strategies for Students

Each unit of instruction follows a set of learning objectives found within the syllabus. Students, who demonstrate a thorough knowledge of the learning objectives, should score well on exams.

Students should not wait until the night before an exam to study. Studies have shown that students who study a certain amount each day are more likely to be successful. It is recommended that students read lecture material before a lecture is given, define unknown terms and prepare questions to ask the instructor during the lecture. Immediately after a lecture, the student should reread the lecture material and answer learning objectives as if they were study questions.

Tutoring is available to all students for lectures and labs in a course. It is the student's responsibility to file a request for a tutor in the Testing Center, and an appropriate tutor will be located. It is imperative that students request tutoring as soon as the need develops. Do not wait until the last minute to begin needed work. Tutoring for lecture or lab will be scheduled outside of regular class meetings.

Class Attendance and Participation

Academic success is closely associated with regular classroom attendance and course participation.
All successful students, whether on campus or online, are expected to be highly self-motivated.
All students are required to participate in courses regularly and are obliged to participate in class activities and complete and submit assignments following their professors' instructions. Students taking courses during compressed semester time frames such as mini-mester, summer sessions, and mid-semester should plan to spend significantly more time per week on the course. Responsibility for work missed because of illness or school business is placed upon the student. More than two (2) absences are considered to be excessive. In addition, students' eligibility to receive financial aid or live in a College dormitory can be affected by withdrawal from courses. When withdrawal occurs, any tuition refund would be made in accordance with state regulations

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Student Conduct

Students are expected to maintain classroom decorum that includes respect for other students and the instructor, prompt and regular attendance and an attitude that seeks to take full advantage of the educational opportunity.

Campus Lab

Terminal Performance Objectives:

Upon completion of the assignments and practice in Campus Lab the student should:

1. Demonstrate a willingness to prepare for the role of MLT by:
    a. arriving for campus lab sessions at the assigned time
    b. observing safety rules and regulations
    c. keeping records
        1). legibly recording results
        2). recording results exactly as determined
        3). keeping all class records current including check lists and progress reports
    d. cooperating with the instructor and fellow students to maintain the campus lab and equipment in good condition
2. Demonstrate the ability to perform laboratory tests by
    a. following written and verbal instructions
    b. demonstrating increasing dexterity in the performance of manual procedures
    c. demonstrating progressive accuracy, precision and speed
    d. obtaining results within the limits set for each test

3. Demonstrate a knowledge of theoretical concepts involved in the tests performed in campus lab by:
    a. recognizing results which do not correlate and reporting them to the instructor
    b. associating unusual test results with the condition or disease which might be indicated

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INFECTION CONTROL PROCEDURES FOR GRAYSON COLLEGE MLT PROGRAM CAMPUS LAB

* **OBJECTIVE**: After a review of the following material and the Infection Control Procedures for Grayson College MLT Program Campus Lab, the student will practice established safety rules in Campus Lab.

Each laboratory will vary somewhat in established routines, but for the most part all have the same goal. It is essential that all procedures be conducted in a reliable manner.

Personal safety is of the utmost importance. Because many of the clinical specimens may contain highly pathogenic microorganisms, especially viruses, the laboratory can be a hazard to health unless certain rules of conduct are observed. Strict observance of safety rules is mandatory and will minimize exposure to blood-borne pathogens.

1. Hand-to-mouth exposure cannot be overemphasized. If hands are contaminated with blood or reagents, serious illness can be the result. The best rule to follow is never to allow the hands to come in contact with the mouth, face or eyes while conducting procedures.

    a. Smoking is strictly prohibited in the laboratory.

    b. Foods and beverages are not allowed in the laboratory area during labs.

    c. Hands should be thoroughly washed with a disinfectant soap immediately after the completion of any laboratory work.

    d. Mouth pipetting is not allowed.

    e. Closed-toe shoes are mandatory in all laboratory exercises as they also reduce the risk of exposure.

    f. Occasionally a container of blood or serum may be spilled or broken. Disinfectant procedures should be accomplished immediately and the incident reported to the instructor.

        1) Cover the spill with paper towels.

2) Soak the paper towels with disinfectant and allow to stand for 20-30 minutes.

3) Wipe up the spill and clean the area with disinfectant.

4) If broken glass is involved, be care full not to cut your hands.

2. Face shields or safety shields may be used to avoid aerosols.

3. Protective clothing such as buttoned laboratory coats or aprons are essential. The items should be removed when leaving the laboratory for any reason. Gloves should be disposed of in biohazard bags after they have been used.

4. Contaminated materials and samples of blood should be placed in an appropriate container and discarded into a 3CI Box for disposal.

5. Care of all work space and equipment and the maintenance of cleanliness is essential to avoid contaminating laboratory personnel. Bench spaces should be cleaned at the end of each lab session with a suitable disinfectant.

Proper laboratory conduct is really common sense, but its importance cannot be over-emphasized. Many laboratory workers have become seriously infected because the few simple rules of good conduct in the laboratory have not been followed.

TITLE IX:

GC policy prohibits discrimination on the basis of age, ancestry, color, disability, gender identity, genetic information, national origin, race, religion, retaliation, serious medical condition, sex, sexual orientation, spousal affiliation and protected veterans status.

Furthermore, Title IX prohibits sex discrimination to include sexual misconduct: sexual violence (sexual assault, rape), sexual harassment and retaliation.

For more information on Title IX, please contact:

- Dr. Molly M. Harris, Title IX Coordinator (903)463-8714
- Ms. Logan Maxwell, Title IX Deputy Coordinator - South Campus (903) 415-2646
- Mr. Mike McBrayer, Title IX Deputy Coordinator - Main Campus (903) 463-8753
- Website: http://www.grayson.edu/campus-life/campus-police/title-ix-policies.html
- GC Police Department: (903) 463-8777- Main Campus) (903-415-2501 - South Campus)
- GC Counseling Center: (903) 463-8730
- For Any On-campus Emergencies: 911

Revised By: **Aimee Flynn**
Last Revision: *December 16, 2020*