

BIOL 4355 METHODS IN FORENSIC BIOLOGY SPRING 2008
ALIECE WATTS, MS – INSTRUCTOR OFFICE LS 465 PHONE 817-614-9474
Lecture Tu 12:30 – 1:20 Life Science Building Room 121
Lab TuTh 2:00 – 4:50 Life Science Building Room 334

OFFICE HOURS Monday 10:00 to 12:00 Tuesday, Thursday 10:00 to 11:00
Other times by appointment
e-mail: awatts01@uta.edu

Disclaimer: This syllabus is provided for student convenience and is based on the most recent information available. There is no guarantee that the information is 100% accurate. If you have special concerns about course information, you are advised to contact the instructor.

STUDENT LEARNING OUTCOMES: To provide a comprehensive review of biological principles as applied to forensic science and forensic DNA testing.

By the end of this class the student will be able to:

- Perform several techniques in DNA extraction
- Determine the quantity of DNA in a sample
- Prepare DNA samples for PCR amplification
- Analyze amplified DNA samples on the ABI 3130 XL Genetic Analyzer
- Interpret DNA data and prepare reports
- Participate in a mock trial to defend their conclusions

ATTENDANCE: Attendance is highly recommended at each lecture and **required** at each lab.

Course Description: Analysis of typical biological evidentiary samples including extraction of DNA, quantitation, amplification and electrophoresis of samples. Instrumentation utilized includes thermal cyclers and ABI 3130 XL genetic analyzer. **Prerequisite:** BIOL 4352 or permission of the instructor.

EXAMS: There will be 10 quizzes at the beginning of each lab **and a comprehensive final**. Tests will begin promptly. No additional time to finish a test will be allowed for those tardy. Quiz dates will be announced in laboratory. Quizzes will be essay and short answer. One quiz grade will be dropped. The final will be essay. You will need a BLUE BOOK for the final exam.

MAKE-UP EXAMS: There will be NO make-up exams. You may substitute your final exam grade for one quiz only for **excused absences**. Excused absences are normally those caused by the following: death in the immediate family, illness or accident requiring medical attention, automobile accident on the way to class, court appearance. Documentation of the cause of the absence must be presented in writing within one week in order for it to be considered excused. If events do not warrant a make-up exam, a grade of 0 will be recorded for that exam. **ONLY ONE QUIZ MAY BE MADE UP.**

GRADING PROCEDURE: There will be 9 quizzes; each will count for 6% of the final grade. The mock trial will count for 6%. The final exam WILL be comprehensive and will count 25% of the final grade. **Lab notebooks will count 10% of the final grade.** The Forensic Unknowns will count for 5%.

OTHER INFORMATION: It is highly recommended that you read the chapters prior to attending the lecture. Do not hesitate to ask questions during class or during office hours. I will work with you if you have any problems, but you must ask for help. Be on time for each lecture and exam. Be courteous and do not converse with others during lecture. Silence all pagers and cell phones. **Your test grades cannot be e-mailed to you due to privacy concerns. I will post the grades on WEB CT.**

Dropping a Course: If you decide to drop this course (or any other, for that matter) you must obtain a drop slip from the departmental undergraduate advisors office (for Biology, the advisor is Ms. Jane Pugh, Room 346 Life Science or you may go to the main office in the Biology Department 337 Life Science). Please fill it out, have the instructor of the course you wish to drop sign the slip and return it to the advisor's office or the Biology Office.

Important University Policies:

Americans With Disabilities Act:

The University of Texas at Arlington is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 92-112 - The Rehabilitation Act of 1973 as amended. With the passage of federal legislation entitled *Americans with Disabilities Act (ADA)*, pursuant to section 504 of the Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens.

As a faculty member, I am required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing faculty of their need for accommodation and in providing authorized documentation through designated administrative channels. Information regarding specific diagnostic criteria and policies for obtaining academic accommodations can be found at www.uta.edu/disability. Also, you may visit the Office for Students with Disabilities in room 102 of University Hall or call them at (817) 272-3364.

Academic Integrity:

It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University.

"Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts." (Regents' Rules and Regulations, Series 50101, Section 2.2)

Student Support Services Available:

The University of Texas at Arlington supports a variety of student success programs to help you connect with the University and achieve academic success. These programs include learning assistance, developmental education, advising and mentoring, admission and transition, and federally funded programs. Students requiring assistance academically, personally, or socially should contact the Office of Student Success Programs at 817-272-6107 for more information and appropriate referrals.

It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons

involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University.

"Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts."

Final Review Week:

A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week unless specified in the class syllabi. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. Classes are held as scheduled during this week and lectures and presentations may be given.

Drop for non-payment of tuition: Payment must be received by the term due date of January 9, 2008 or your registration will be cancelled. If your registration is cancelled for non-payment, you may reregister for classes but only if seats are available.

Bomb Threats: If anyone is tempted to call in a bomb threat, be aware that UTA will attempt to trace the phone call and prosecute all responsible parties. Every effort will be made to avoid cancellation of presentations/tests caused by bomb threats. Unannounced alternate sites will be available for these classes. Your instructor will make you aware of alternate class sites in the event that your classroom is not available.

The University of Texas at Arlington has adopted the University email address as an official means of communication with students. Through the use of email, UT-Arlington is able to provide students with relevant and timely information, designed to facilitate student success. In particular, important information concerning registration, financial aid, payment of bills, and graduation may be sent to students through email.

After Hours Safety Escort

The Sam Mav Escort service provides a service to assist students, faculty, staff and campus visitors to reach their destinations after regular business hours. The hours of service are 7:00 p.m. to 1:00 a.m., Sunday through Saturday. 817-272-3381

MavMail:

All students are assigned an email account and information about activating and using it is available at www.uta.edu/email. New students (first semester at UTA) are able to activate their email account 24 hours after registering for courses. There is no additional charge to students for using this account, and it remains active as long as a student is enrolled at UT-Arlington. Students are responsible for checking their email regularly.

BIOL 4355 METHODS IN FORENSIC BIOLOGY SPRING 2008

January 15	INTRODUCTION & SAFETY
January 17	QUALITY CONTROL & REAGENTS
January 22	REAGENTS CONTINUED
January 24	EVIDENCE COLLECTION (QUIZ 1 QC & R)
January 29	PRESUMPTIVE & CONFIRMATORY TESTS
January 31	CHELEX EXTRACTION (QUIZ 2 EC & P&C TESTS)
February 5	
February 7	ORGANIC EXTRACTION (QUIZ 3 CHELEX)
February 12	
February 14	GUEST SPEAKER (QUIZ 4 ORG)
February 19	CHELEX DIFF & ORGANIC DIFF
February 21	ORGANIC DIFF
February 26	QUANTITATION (QUIZ 5 DIFFERENTIAL)
February 28	
March 4	PCR (QUIZ 6 QUANTITATION)
March 6	AMPLIFICATION
March 11	ABI 3130 XL SETUP (QUIZ 7 AMPLIFICATION)
March 13	ABI 3130 XL RUN
March 17-21	SPRING BREAK
March 25	DATA ANALYSIS (QUIZ 8 ABI 3130XL)
March 27	
April 1	FORENSIC UNKNOWNNS (QUIZ 9 DATA ANALYSIS)
April 3	
April 8	
April 10	
April 15	MOCK TRIAL (10)
April 22	MOCK TRIAL (10)
April 24	FINAL EXAM
April 29	MOCK TRIAL (10)
May 1	MOCK TRIAL (10)