

**Genetic Methods BIO 3420-001 5420-001
Spring 2010**

Where: LS 334 or as announced

When: TU 1:00-4:50 PM

Instructor

Name: Ellen J. Pritham, Ph.D

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Email Address: pritham@uta.edu

Office Hours: Thursday 10:00 AM-1:00 PM

Lab website: <http://www3.uta.edu/faculty/pritham>

Class notes

Laboratory lessons and additional reading materials will be posted on my website

<http://www.uta.edu/biology/pritham/classnotes/index.htm>

Description of Course Content: This course will be modeled after a cutting edge genomics research laboratory where students use a combination of computational and experimental approaches to see what genomes are made of and how they evolve. The course will be taught in a computer classroom and experimental lab. Course content will have the theme of transposable elements, which comprise a staggering 50% of the human genome and over 75% of some plant genomes. By helping to determine the transposable element content of a genome, students will learn that the genome is more than an instruction manual for making an organism; it is also an historical record of how species evolve. In addition, students will learn how transposable elements are used as molecular tools for gene tagging, functional dissection and mapping. The course will consist of lectures and in lab experiments. Grading will be based on student presentations and participation, lab notebooks and lab reports.

Requirements: BIOL 1441, Genetics 3315 or the equivalent

Textbooks and Other Course Materials:

Any genetics textbook, new versions are preferred

Modern Genetic Analysis by Griffiths et al., 2nd Edition, Freeman Publisher

Concepts of Genetics by Klug et al., 9th Edition Pearson

Genetics: A Conceptual Approach by Benjamin A. Pierce, 3rd Edition, Freeman Publisher

Introduction to Genetic Analysis by Griffiths et al., 9th Edition

Tentative schedule

Section 1 Bioinformatics and Sequence Analysis

Section 2 Gene regulation

Section 3 Mendelian Genetics

Section 4 Genetic variation

Student learning outcomes:

Students will be graded on their laboratory notebooks and participation, lab reports and presentations.

Grading Policy: 50% of the grade will be based on laboratory notebooks, which will be periodically collected throughout the semester. In addition, each student will write a laboratory report and graduate students will do an oral presentation (50% of the grade).

Attendance Policy: Attendance is mandatory.

Drop Policy: The instructor follows the UTA policy. You **WILL** receive a failing grade if you do not properly withdraw from the course through the registrar. The last day to drop this course is April 2, 2010.

Make-up exams: There will be **NO** make-up labs.

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.

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 covering new material will be given.

Drop for non-payment of tuition: Payment must be received by the term due date of January 13, 2010. If you are dropped from this class for non-payment of tuition, you may secure an Enrollment Loan through the Bursar's Office. You may not continue to attend class until your Enrollment Loan has been applied to outstanding tuition fees.

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.

Grade Grievance Policy: Instructor follows University Policy as outlined in the catalog.

Mandatory Online Safety Training:

1. Go to <http://www.uta.edu/training>.
2. Log on using your network log-on ID and password (what you use to access email). If you do not know your NetID or need to reset your password, visit <https://webapps.uta.edu/oit/selfservice/>.
3. The available courses for completion will be listed under "Training I'm Enrolled In". Complete the course entitled 'Student Lab Safety Training – General.' ***NOTE: If you completed Wet, Dry or Biology Lab Safety Training course last semester for another class, that training is still applicable until the end of this academic year. Please follow instructions in #4 to print the certification page for your TA.

4. Go to 'Training I've Completed' and print the displayed page for your TA. Verify that it shows clearly your name, and that 'General, Wet, Dry or Biology' training is completed/passed and the date when the training was completed. If you have just completed the training but it is not updated on the 'Training I've Completed' page, please log out of the system and log back in. If the training still does not show up on this page, call the Helpline at 817-272-5100.
5. If you were enrolled in a course with a lab last semester and did not complete the training or if you do not see training for this academic year listed, email compliance@uta.edu providing your name, a contact phone number, NetID and course (e.g. BIOL 1441-005) and request the appropriate training for your course.
6. Students who have not completed the training by census date may be dropped from the lab (and consequently the lecture).
7. Lab Safety Training is required to be completed once every academic year. Training completed in the Fall semester is valid for the Fall, Spring and Summer sessions. It is your responsibility to print your training certification page and turn it in each semester to your TA for each course with a lab you are enrolled in.

For training specific questions, contact the Environmental Health and Safety office at 817-272-2185.

For technical assistance with the training, please contact the Office of Institutional Compliance at 817-272-5100 or email compliance@uta.edu