BIOL 3420/5420 – Genetics Methods
Fall 2012 Syllabus
Lecture/Lab: Tuesdays 1–4:50 p.m., Life Sciences 330

Instructor: Dr. Maeli Melotto
B29 Life Science
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Office Hours: Tuesdays 09 a.m. – 12 p.m.

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Undergraduate TAs: Sanober Lateef

Description of Course Content: This course is intended to provide an overview of modern genetic tools available to answer outstanding scientific questions in biology. Students will have access to genetic mutants of plants and bacteria to perform experiments using a variety of molecular techniques followed by computational/statistical analyses of the results.

Student Learning Outcomes: Upon completion of the course, students must be familiar with Good Laboratory Practice (GLP) guideline, understand how to perform hypothesis-driven research, design experiments, and develop written and oral communication skills to report research findings.

Prerequisites: BIOL 1441, BIOL 3315 or equivalent.

Laboratory Requirements Students will be evaluated through a combination of quizzes, lab reports, a lab notebook, oral presentation, and participation.

Required Textbooks: none

Course Materials: reading assignments will be provided as the course progresses.

Tentative Lecture Schedule:

1) Module 1: Plant Biotechnology
2) Module 2: Genetic basis of plant immunity
3) Module 3: Regulation of gene expression
4) Module 4: Bioinformatics

Grading Policy: Final grade will be composed of the following:

Quizzes:	10%
Lab Report 1:	25%
Lab Report 2:	25%
Lab Notebook:	25%
Oral Presentation:	10%
Participation:	5%

Grading Scale:

100-89.5	A
89.4-79.5	B
79.4-69.5	C
69.4-59.5	D
<59.5	F

Attendance Policy: <u>Lab Attendance is mandatory</u>. If you must miss a laboratory (entirely or partially) for a <u>legitimate, documented</u> reason, contact your instructor <u>before</u> that day and time. There is no lab make up.

Make-up Exam Policy: The instructor must be notified <u>prior</u> to your missing any assignment for a <u>legitimate, documented reason</u>.

Drop Policy: <u>University drop policy will be followed</u> (see below).

<u>**IMPORTANT UNIVERSITY POLICIES:**</u>

Mandatory Online Lab 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 <u>census date may be dropped from the lab (and consequently the lecture).</u>

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

Drop Policy: Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance**. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (http://wweb.uta.edu/ses/fao).

Americans with Disabilities Act: The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the *Americans with Disabilities Act (ADA)*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

Academic Integrity: All students enrolled in this course are expected to adhere to the UT Arlington Honor Code:

I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.

I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

Instructors may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2,

suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University.

Student Support Services Available: UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at www.uta.edu/resources.

Electronic Communication Policy: UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at http://www.uta.edu/oit/cs/email/mavmail.php.

Student Feedback Survey: At the end of each term, students enrolled in classes categorized as lecture, seminar, or laboratory shall be directed to complete a Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit http://www.uta.edu/sfs.

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 syllabus.* 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. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

This course outline is tentative and subject to change.