THE UNIVERSITY OF TEXAS AT EL PASO
COLLEGE OF SCIENCE
BIOINFORMATICS PROGRAM AND
DEPARTMENT OF MATHEMATICAL SCIENCES

Course #:	BINF 5354 (CRN 11528) or STAT 5354 (CRN 11504)
Course Title:	Post-Genomic Analysis
Credit Hours:	3
Term:	Fall 2021
Course Meetings & Location:	TR 10:30 - 11:50 AM; Hudspeth Hall 313 ***Please check Blackboard for updates
Prerequisite Courses:	STAT 5380, 5385, 5428, 5329, or Instructor Approval
Instructor:	Dr. Ming-Ying Leung
Office Location:	Bell Hall 225
Contact Info:	Phone # (915)747-6836 E-mail mleung@utep.edu Fax # (915)747-6502
Office Hours:	math.utep.edu/Faculty/mleung/officehours
Textbook(s), Materials:	Required: None Suggested: Biological Sequence Analysis: Probabilistic Models of Proteins and Nucleic Acids by R. Durbin, S. Eddy, A. Krogh and G. Mitchison. Introduction to Probability Models by Sheldon M. Ross.
Course Objectives (Learning Outcomes):	Students will learn to apply appropriate probabilistic models and statistical techniques to address bioinformatics data analysis problems. This course will focus on the processing and analysis of a large set of whole exome sequencing data from patients with cancer. It is assumed that you have some programming experience in Python and R.
Course Activities/Assignments:	Through assigned projects, class discussions, hands-on labs, as well as oral presentations in the seminar, students will also acquire the skills to identify bioinformatics problems that require advanced mathematical and statistical knowledge, and to describe and discuss these issues with individuals with suitable expertise. Students will be expected to attend lecture, read the course materials, and solve problems in the assignments. Study groups to discuss the problems and brainstorm approaches to problem solving are encouraged, however, the written assignments and computer programs turned in for grading must be your own work and reflect your individual effort.

Technology Requirements:	Parts of the course content may be delivered via the Internet through the Blackboard learning management system. Ensure your UTEP e-mail account is working and that you have access to the Web and a stable web browser. Google Chrome and Mozilla Firefox are the best browsers for Blackboard; other browsers may cause complications. When having technical difficulties, update your browser, clear your cache, or try switching to another browser.
	To attend online, you will need to have access to a computer/laptop, scanner, a webcam, and a microphone. You will need to download or update the following software: Microsoft Office, Adobe Acrobat Reader, Windows Media Player, QuickTime, and Java. Check that your computer hardware and software are up-to-date and able to access all parts of the course.
	If you do not have a word-processing software, you can download Word and other Microsoft Office programs (including Excel, PowerPoint, Outlook and more) for free via UTEP's Microsoft Office Portal. Click the following link for more information about Microsoft Office 365 and follow the instructions.
	IMPORTANT: If you encounter technical difficulties beyond your scope of troubleshooting, please contact the UTEP Help Desk as they are trained specifically in assisting with technological needs of students. Please do not contact me for this type of assistance. The Help Desk is much better equipped than I am to assist you!
Assessment of Course Objectives:	BINF/STAT 5354: Homework, exam, project;
Course Schedule:	**September 8** – Class Census Day. If a student drops before the census date, neither the course nor a grade will appear on the student's academic record. This is the last day to drop without a W. **October 29** - Course Drop Deadline
Grading Policy:	BINF/STAT 5354: Assessment of the course is based on homeworks, exam, and project.
Make-up Policy:	No late homeworks are allowed. Make-up examinations will not be given.
Course Communication:	**Email:** UTEP e-mail is the best way to contact me. I will make every attempt to respond to your e-mail within 24-48 hours of receipt. When e-mailing me, be sure to email from your UTEP student account and please put the course number in the subject line. In the body of your e-mail, clearly state your question. At the end of your e-mail, be sure to put your first and last name, and your university identification number. **Announcements:** Check the Blackboard announcements frequently for any updates, deadlines, or other important messages.

Attendance Policy:	Class attendance is required and noted at the beginning of class; more than two unexcused absences will result in an instructor-initiated drop or final grade reduction. .
Academic Integrity Policy:	Violations of academic integrity, including unauthorized submission of work performed by others, will be pursued vigorously to result in the most severe sanctions. Please refer to UTEP's policy cited in sa.utep.edu/osccr/academic-integrity.
Civility Statement:	No text messaging in class. Please silence cell phones before coming to class. Students are expected to actively participate in class discussions and group activities. Group work that is not completed in class is to be finished as homework, so use the class time wisely by staying focused on the class topic and avoiding chit-chat.
Disability Statement:	If a student has or suspects she/he has a disability and needs an accommodation, he/she should contact the Center for Accommodations and Support Services (CASS) at 747-5148, email at cass@utep.edu, or go to Room 106 Union East Building. The student is responsible for presenting to the instructor any CASS accommodation letters and instructions.
Military Statement:	If you are a military student with the potential of being called to military service and/or training during the course of the semester, you are encouraged to contact as soon as possible.
COVID-19 Precautions:	Please stay home if you have been diagnosed with COVID-19 or are experiencing COVID-19 symptoms. If you are feeling unwell, please let me know as soon as possible, so that we can work on appropriate accommodations. If you have tested positive for COVID-19, you are encouraged to report your results to covidaction@utep.edu, so that the Dean of Students Office can provide you with support and help with communication with your professors. The Student Health Center is equipped to provide COVID 19 testing.
	The Center for Disease Control and Prevention recommends that people in areas of substantial or high COVID-19 transmission wear face masks when indoors in groups of people. The best way that Miners can take care of Miners is to get the vaccine. If you still need the vaccine, it is widely available in the El Paso area, and will be available at no charge on campus during the first week of classes. For more information about the current rates, testing, and vaccinations, please visit epstrong.org.