PRAIRIE VIEW
A&M UNIVERSITY

BIOL 4051: RESEARCH
SPRING 2019

Instructor:	E. Gloria C. Regisford, PhD
Section # and CRN:	Lecture: P01- CRN:26661
Office Location:	Room 430G, E.E. O'Banion Building
Office Phone:	936-261-3165 FAX: 936-261-3179
Email Address:	**gcregisford@pvamu.edu**

Office Hours:	**TR: 3:00-4:00 p.m., F: 12:00 – 2:00 p.m., or by appointment**
Mode of Instruction:	**Face to Face / ONLINE**

Course Location:	**Room 103, E.E. O'Banion Building**
Class Days & Times:	**Lecture: MW 1:00a.m.-1:50 p.m**
Catalog Description:	**Biol 4051. Research.** (0-2) Credit 1 semester hour. Library and laboratory work in specific biological problems.

Prerequisites:	BIOL 1015: General Biology I and II
Co-requisites:	None

Required Texts:	**None; Journal Articles will be provided**.
Recommended Texts:	**None**

Student Learning Outcomes:

	Upon successful completion of this course, students will be able to:	Program Learning Outcome # Alignment	Core Curriculum Outcome Alignment
1	Develop a comprehensive understanding of some bioinformatics browsers and databases.	2	Critical Thinking
2	Use basic bioinformatics tools such as BLAST	2	Critical Thinking
3	Analyze and interpret the data generated from Bioinformatics research projects	2	Critical Thinking
4	Read, interpret and present scientific journal articles that are based on Bioinformatics	1	Communication
5	Write in clear, correct, grammatical prose.	1	Communication
6	Collaboratively work on Bioinformatics projects in small groups.	3	Teamwork
7	Cite research correctly according to APA format, both in the text and in the bibliography.	5	Personal Responsibility

Major Course Requirements

Course Grade Requirement	Value (percentages)	Total
1) **Exercises/Assignments** **Eight (8) Assignments**	5 each	30 %
2) **Poster Presentation** **One (1)** poster presentation	35	35 %
3) **Research Paper** **One** paper based on Bioinformatics Research Project	25	25 %
Total:		**100%**

Method of Determining Final Course Grade
Grading Criteria and Conversion:
A = 90 – 100%
B = 80 – 89%
C = 70 – 79%
D = 60 – 69%
F = 50 – 59%

Detailed Description of Major Assignments:

Assignment Title or Grade Requirement	Description
Exercise and Assignments	Class and homework assignments, designed to introduce the concepts of Bioinformatics, will be given throughout the semester.
Projects and Poster Presentation	Students will be assigned annotation projects that will use the Bioinformatics tools and databases learnt. Students will work on the annotation projects, and at the end of the semester will prepare a poster that will be presented on a given date.
Research Paper	Students will write an individual report on their assigned project. The report will be in a specific format which will be given to you by the instructor. The report will be 5 pages long, double-spaced, with 1" margins.

Course Procedures or Additional Instructor Policies
Two 1 hour lectures and computer research will be held weekly. The lecture periods consist of discussions between students and instructor. The lecture and the computer research work are intended to complement each other, with the laboratory exercises emphasizing problem-solving skills and the application of information covered in the lectures.

Taskstream
Taskstream is a tool that Prairie View A&M University uses for assessment purposes. One of your assignments may be considered an "artifact," an item of coursework that serves as evidence that course objectives are met. More information will be provided during the semester, but for general information, you can visit Taskstream via the link in eCourses.

References

World Wide Web Sites:

1. University of California, Santa Cruz Genome Browser - **http://genome.ucsc.edu/**

2. The Human Genome - **www.ncbi.nlm.nih.gov/**

3. Ensembl Genome Browser - **http://www.ensembl.org/**

4. GeneCards - www.genecards.org/

5. Bioinformatics Tutorials Series (BITS) - **http://libraries.mit.edu/tutorials/video/index.html**

6. Genomics Journal **- www.sciencedirect.com/science/journal/08887543**

7. Genomics Glossaries and Taxonomies - **www.genomicglossaries.com/**

8. National Genome Research Institute - **www.genome.gov**

9. Nature's Genome Gateway - **www.nature.com/genomics/**

10. The Oxford University Journal of Bioinformatics - **www.bioinformatics.oupjournals.org/**

11. Science Magazine Functional Genomics - **www.sciencemag.org/feature/plus/sfg/**

Tentative Schedule

Week	Topic
1/14	Overview of Topics in Course, Discussion of Syllabus Introduction to Bioinformatics
01/21	*The Human Genome Project, Reference Genomes, and Genome Annotation* **ANNOTATION assignment**
01/28	*Websites, Browsers and Databases* ***Choose research partner***
02/04	*Websites, Browsers and Databases* ***Online Quiz 1;*** *Work on Poster*
02/11	*Websites, Browsers and Databases* ***Work on Poster***
02/18	*Websites, Browsers and Databases* ***Online Quiz 2*** *Work on Poster*
02/25	*Websites, Browsers and Databases* ***Online Quiz 3*** *Work on Poster*
03/04	*Websites, Browsers and Databases* ***Online Quiz 4*** *Work on Poster*
03/11	**SPRING BREAK : WORK ON YOUR POSTERS**
03/18	*Fundamentals of Sequencing Alignment (DNA) and Nucleotide BLAST* **DNA BLAST assignment I** ***Online Quiz 5*** *Work on Poster*
03/25	*Fundamentals of Sequencing Alignment (DNA) and Nucleotide BLAST* **DNA BLAST assignment II** ***Online Quiz 6*** *Work on Poster*
04/01	*Fundamentals of Sequencing Alignment (Protein) and Protein BLAST* **Protein BLAST assignment I** ***Online Quiz 7*** *Work on Poster*
04/08	*Fundamentals of Sequencing Alignment (Protein) and Protein BLAST* **Protein BLAST assignment II** ***Online Quiz 8*** *Work on Poster*
04/15	*Project Activity* ***Work on Poster***
04/22	*Project Activity* ***Work on Poster***
04/29	**PVAMU Students' Poster Presentation** **Research Paper Due**

Student Support and Success

John B. Coleman Library
The library and its partners have as their mission "to provide resources and instructional material in support of the evolving curriculum, as a partner in Prairie View A&M University's mission of teaching, research, and service" and to support the University's core values of "access and quality, diversity, leadership, relevance, and social responsibility" through emphasis on ten key areas of service. It maintains library collections and access both on campus, online, and through local agreements to further the educational goals of students and faculty.

Center for Academic Support
The Center for Academic Support (CAS) offers Tutoring via peer tutoring. The services include workshops (i.e., Save My Semester, Recalculate Your Route), seminars (i.e., Tools You Can Use: TI-84), group review sessions (i.e., College Algebra Topic Reviews, GRE Preparation), group study opportunities (i.e., TSIA, HESI, Study Break, Exam Cram), and test-taking strategies (How to take Notes, Study Buddy, 5 Day Study Guide). The Tutoring Center is a nationally certified tutoring program through the National Tutoring Association. The peer tutors are trained and certified by the coordinator each semester. Location: J.B. Coleman Library

COMPASS
The Center for the Oversight and Management of Personalized Academic Student Success (COMPASS) is designed to help Prairie View students in their second year and beyond navigate towards graduation by providing the following services: Academic Advisement, Targeted Tutorials for Personalized Learning, Campus-Wide Referrals, and Academic & Social Workshops. Location: J.B. Coleman Library

Writing Center
The Writing Center provides student consultants on all aspects of the writing process and a variety of writing assignments. Writing Center consultations assist students in such areas as prewriting, brainstorming, audience awareness, organization, research, and citation. Location: Hilliard Hall 121

University Rules and Procedures

Disability statement (See Student Handbook):
Students with disabilities, including learning disabilities, who wish to request accommodations in class should register with the Services for Students with Disabilities (SSD) early in the semester so that appropriate arrangements may be made. In accordance with federal laws, a student requesting special accommodations must provide documentation of their disability to the SSD coordinator.

Academic misconduct (See Student Handbook):
You are expected to practice academic honesty in every aspect of this course and all other courses. Make sure you are familiar with your Student Handbook, especially the section on academic misconduct. Students who engage in academic misconduct are subject to university disciplinary procedures.

Forms of academic dishonesty:
1. Cheating: deception in which a student misrepresents that he/she has mastered information on an academic exercise that he/she has not mastered; giving or receiving aid unauthorized by the instructor on assignments or examinations.

2. Academic misconduct: tampering with grades or taking part in obtaining or distributing any part of a scheduled test.

3. Fabrication: use of invented information or falsified research.

4. Plagiarism: unacknowledged quotation and/or paraphrase of someone else's words, ideas, or data as one's own in work submitted for credit. Failure to identify information or essays from the Internet and submitting them as one's own work also constitutes plagiarism.

Nonacademic misconduct (See Student Handbook)
The university respects the rights of instructors to teach and students to learn. Maintenance of these rights requires campus conditions that do not impede their exercise. Campus behavior that interferes with either (1) the instructor's ability to conduct the class, (2) the inability of other students to profit from the instructional program, or (3) campus behavior that interferes with the rights of others will not be tolerated. An individual engaging in such disruptive behavior may be subject to disciplinary action. Such incidents will be adjudicated by the Dean of Students under nonacademic procedures.

Sexual misconduct (See Student Handbook):
Sexual harassment of students and employers at Prairie View A&M University is unacceptable and will not be tolerated. Any member of the university community violating this policy will be subject to disciplinary action.

Attendance Policy
Prairie View A&M University requires regular class attendance. Excessive absences will result in lowered grades. Excessive absenteeism, whether excused or unexcused, may result in a student's course grade being reduced or in assignment of a grade of "F". Absences are accumulated beginning with the first day of class.

Student Academic Appeals Process
Authority and responsibility for assigning grades to students rests with the faculty. However, in those instances where students believe that miscommunication, errors, or unfairness of any kind may have adversely affected the instructor's assessment of their academic performance, the student has a right to appeal by the procedure listed in the Undergraduate Catalog and by doing so within thirty days of receiving the grade or experiencing any other problematic academic event that prompted the complaint.

Disability statement (See Student Handbook):
Students with disabilities, including learning disabilities, who wish to request accommodations in class should register with the Services for Students with Disabilities (SSD) early in the semester so that appropriate arrangements may be made. In accordance with federal laws, a student requesting special accommodations must provide documentation of their disability to the SSD coordinator.

TECHNICAL CONSIDERATIONS

Minimum Recommended Hardware and Software:
- Intel PC or Laptop with Windows 7; Mac with OS X; Smartphone or iPad/Tablet with Wi-Fi
- High speed Internet access
- 8 GB Memory
- Hard drive with 320 GB storage space
- 15" monitor, 800x600, color or 16 bit
- Sound card w/speakers
- Microphone and recording software
- Keyboard & mouse
- Most current version of Google Chrome, Safari, Internet Explorer or Firefox

Note: Be sure to enable Java & pop-ups

Participants should have a basic proficiency of the following computer skills:
- Sending and receiving email
- A working knowledge of the Internet
- Proficiency in Microsoft Word (or a program convertible to Word)
- Proficiency in the Acrobat PDF Reader
- Basic knowledge of Windows or Mac O.S.

***Netiquette* (online etiquette):**
Students are expected to participate in all discussions and virtual classroom chats as directed. Students are to be respectful and courteous to others on discussions boards. Foul or abusive language will not be tolerated.

***Technical Support*:**
Students should go to https://mypassword.pvamu.edu/ if they have password issues. The page will provide instructions for resetting passwords and contact information if login issues persist. For other technical questions regarding eCourses, call the Office of Distance Learning at 936-261-3283

***Communication Expectations and Standards*:**
Emails or discussion postings will receive a response from the instructor, usually in less than 48 hours. Urgent emails should be marked as such. Check regularly for responses.

Discussion Requirement:
Online courses often require minimal to no face-to-face meetings. However, conversations about the readings, lectures, materials, and other aspects of the course can take place in a seminar fashion. This will be accomplish by the use of the discussion board. The exact use of discussion will be determined by the instructor.

It is strongly suggested that students type their discussion postings in a word processing application and save it to their PC or a removable drive before posting to the discussion board. This is important for two reasons: 1) If for some reason your discussion responses are lost in your online course, you will have another copy; 2) Grammatical errors can be greatly minimized by the use of the spell-and-grammar check functions in word processing applications. Once the post(s) have been typed and corrected in the word processing application, it should be copied and pasted to the discussion board.

Calendar:

Jan 10 - Jan 11 Thursday through Friday	Regular Registration Period
Jan 14 Monday	First Class Day
Jan 14 Monday	Tuition payment deadline is 5:00 p.m. for all students who registered for the spring semester
Jan 14 - Jan 16 Monday through Wednesday	Late registration for the spring semester for all students who have not yet registered. To complete registration, students must pay by 5:00 p.m. on Wednesday, February 6.
Jan 14 - Jan 18 Monday through Friday	Add/Drop for all students for the spring semester. Tuition payment for all students who add/drop for spring must pay by 5:00 p.m. on Wednesday, February 6.
Jan 21 Monday	Dr. Martin Luther King Day (University Closed)
Jan 22 Tuesday	Class resumes
Jan 30 Wednesday	12th Class Day (Census Date)
Jan 30 Wednesday	Last day to drop/withdraw from course(s) without academic record. A financial record will still exist.
Jan 31 - Mar 29 Thursday through Friday	Withdrawal from course(s) with record ("W")
Feb 06 Wednesday	Tuition payment deadline is 5:00 p.m. for all students who late registered and add/drop for spring semester

Feb 11 Monday	20th class day
Feb 12 - Apr 30 Tuesday through Tuesday	Submit application for Tuition Rebate for spring graduation undergraduate candidates
Mar 07 - Mar 09 Thursday through Saturday	Mid-semester examination
Mar 11 - Mar 16 Monday through Saturday	Spring Break
Mar 15 Friday	Spring Break (University Closed)
Mar 18 Monday	Class resumes
Mar 19 Tuesday	60% of Term
Mar 19 Tuesday	Mid-semester grades due by 11:59 p.m.
Mar 27 Wednesday	Founders Day/Honors Convocation
Mar 27 Wednesday	Last day to apply for spring graduation (ceremony participation)
Mar 28 - Apr 30 Thursday through Tuesday	Apply for degree conferral only for spring graduation (no ceremony participation or name listed in program)

| Mar 29

Friday	Last day for withdrawal from course(s) with record ("W")
Apr 08 - Apr 12

Monday through Friday | Priority registration for continuing students for summer and fall semesters

Priority Registration Schedule |
| Apr 15 - May 24

Monday through Friday | Pre-registration for all students for the summer and fall semester |
| Apr 19

Friday | Good Friday (Student Holiday) |
| Apr 29 - Apr 30

Monday through Tuesday | Course Review Days (Classes must convene and instructors will prepare students for final exams) |
| Apr 30

Tuesday | Last day to withdraw from the university with record |
| Apr 30

Tuesday | Last day to apply for degree conferral only for spring graduation (no ceremony participation or name listed in program) |
| Apr 30

Tuesday | Last day to submit application for Tuition Rebate for spring graduation undergraduate candidates |
| Apr 30

Tuesday | Last Class Day |
| May 01 - May 07

Wednesday through Tuesday | Final Examinations |