



BSc 304.01E: Genetics Spring 2020 (3sh)

COURSE SYLLABUS: Spring 2020

INSTRUCTOR INFORMATION

Instructor: Dr. JP Slovak

Office: SCI 231

Phone: 886-5368

Office hours: MWF 10 – 11, 1-2-Please make an appointment for other times.

Email:John.Slovak@tamuc.edu

Fax: 886-5997

Course Location and Time: MWF 9:00-9:50, BA 243

COURSE INFORMATION

REQUIRED TEXTBOOK :

GENETICS: Analysis and Principles, by Robert J. Brooker, 6th edition ISBN- 978-1259616020.

Course Description

This course will provide a rigorous foundation in principles of genetics that govern biological functions at the level of molecules and cells in organisms, including humans. The topics include: basic and extension of Mendelian inheritance, structure and function of genes, chromosomes and genomes, biological variation resulting from recombination, mutation, and selection, population genetics, use and application of genetic methods and genomics to analyze biological function and inherited disease.

Student learning outcomes

1. Conceptualize principles of Mendelian genetics.

The syllabus/schedule are subject to change.

2. Understand how genetic information for biological functions are maintained in chromosomes and altered during evolution and under disease causing conditions.
3. Understand and critically analyze the fundamental concepts in molecular genetics.

COURSE REQUIREMENTS

Tests: This will include three tests and a comprehensive final.

Quizzes: Quizzes will be given in class throughout the semester. These will be in preparation for exams.

LABORATORY:

You must be enrolled in a BSc304 laboratory section in order to receive credit for the course. The laboratory will account for 25% of your final grade. The laboratory sessions will begin the SECOND week of classes. You will receive a complete schedule, syllabus, and further instructions from your Lab Instructor at the first meeting. All labs meet in STC 324, and the material will be available for download at eCollege.

GRADING(points)

- A >270
- B 240-269
- C 210-239
- D 180-209

Assessments

Exam 1	50 points
Exam 2	50 points
Exam 3	50 points
FINAL Comprehensive EXAM	100 points
Quizzes	50 points
Lab	100 points
Total	400 points

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TECHNOLOGY REQUIREMENTS

LMS

All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

YouSeeU Virtual Classroom Requirements:

<https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements>

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

COMMUNICATION AND SUPPORT

If you have any questions or are having difficulties with the course material, please contact your Instructor.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

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<https://community.brightspace.com/support/s/contactsupport>

Interaction with Instructor Statement

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies

Tests will not be made up unless the absence is excused according to university policy. If the test is not made-up the student will receive no (0) points. The makeup must be completed within one week of the original test date unless there are extenuating circumstances (i.e. extended hospital stay).

Syllabus Change Policy

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

University Specific Procedures

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the [Student Guidebook](http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx).
<http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum:
<https://www.britannica.com/topic/netiquette>

TAMUC Attendance

For more information about the attendance policy please visit the [Attendance](http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx) webpage and [Procedure 13.99.99.R0.01](http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx).
<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

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Academic Integrity

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

[Undergraduate Academic Dishonesty 13.99.99.R0.03](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

[Graduate Student Academic Dishonesty 13.99.99.R0.10](#)

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf>

Students with Disabilities-- ADA Statement

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services

Texas A&M University-Commerce

Gee Library- Room 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: studentdisabilityservices@tamuc.edu

Website: [Office of Student Disability Resources and Services](#)

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

Nondiscrimination Notice

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

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Campus Concealed Carry Statement

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

COURSE OUTLINE / CALENDAR

Topics and reading assignments(chapters) (***week of***)(January 13-May 8MW)

Chapters we will cover(dates, week of)

- Ch. 1: Introduction to Genetics (1-13)
- Ch. 2: Basic Mendelian Inheritance (1-20)
- Ch. 3: Reproduction & Cell Division (1-27)
- Ch. 4: Extensions of Mendelian Inheritance(2-3)
- Ch. 5: Non-Mendelian Inheritance (2-10)
- Ch. 6: Gene Linkage & Gene Mapping (2-17)
- Ch. 9-10: DNA genetic material & Chromosome Structure Ch. 8: Chromosomal variation & Disease (3-2)
- Ch. 11: DNA Replication(3-16)
- Ch. 12: Gene Transcription and RNA Modification(3-23)
- Ch. 13: Translation of mRNA(3-30)
- Ch. 14: Gene regulation in Bacteria(4-6)
- Ch. 15: Gene Regulation in Eukaryotes(4-13)
- Ch. 16: Gene Regulation in Eukaryotes(4-20)
- Ch. 19: DNA Mutation & Repair(4-27)

*All reading assignments should be completed within the week in which the corresponding lecture takes place. All topics in the readings will not necessarily be

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covered in lecture, but you may find question from the reading on tests. Please read.

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