

Biol 300 Principles of Genetics

Instructor	Kathryn M. Rafferty, PhD
Semester	Spring 2022
Lecture Section	Section1001
Lecture Time	Mon and Wed 2:30PM – 3:45PM
Lecture Location	TBE A-107
Office Hours	Thursdays from 1:00 PM until 3:00 PM in WHI 126 (the Biology Learning Center) Or email me to make an appointment
Office Location	WHI 126 (only one-on-one appointments held here)
Office Phone	702-895-5834

Course Information

Course Description/Purpose

It is my intent that this course supports the learning success of all students. Diversity of student backgrounds and perspectives is welcome and respected in this course.

BIOL 300 is primarily intended for biological-sciences majors interested in obtaining a broad background in the molecular mechanisms that govern genetic principles. The class satisfies the genetics core requirement for majors. **BIOL 300 is a 4-credit course, so attendance is required for two 75-minute lecture sessions per week and one separate Discussion section. Graded assignments will regularly be given during lecture and Discussion.**

Specific Course Learning Objectives

Upon completion of this course, students should:

- Understanding of the basic structure and function of genes in prokaryotes and eukaryotes
- Understanding of how genes are transmitted from generation to generation in prokaryotic and eukaryotic systems
- Understanding of how genetic mutations lead to genetic variation and allele interactions
- Knowledge of the basic genome organizations in all groups of organisms
- Knowledge of how transposable elements and viruses shape organismal genomes
- Mechanistic understanding of protein synthesis in all organisms
- Mechanistic understanding of how genes are expressed and regulated in eukaryotes
- Basic understanding of genome packaging and chromatin structure
- Understanding how genome packaging leads to epigenetic effects and epigenetic inheritance
- Basic understanding of how recombinant DNA technology is re-shaping modern society

Assessment of Course Learning Objectives

Assessment of course learning objectives will utilize lecture participation activities, formal lecture exams, a comprehensive final exam, and the Discussion section quizzes.

Instructor Availability

The most reliable means of communication is email via the WebCampus system. Office hours (Thursdays from 1:00 PM until 3:00 PM in WHI 126) is time I reserve each week for you! This time typically operates in a group study and discussion format where we take turns asking and answering questions. If confidential matters need to be discussed, private appointments can be scheduled. Appointments may also be arranged if academic conflicts are present during the regularly scheduled office hours; a printout of the MyUNLV class schedule is required to demonstrate such academic scheduling conflicts.

Prerequisites

A grade of "C" or better in each of the following: BIOL 196, BIOL 197 (or Biol 190A and 191A), CHEM 121, CHEM 122, ENG 101, ENG 102, and MATH 127 or higher.

Required Materials

1. A networked computer with high speed internet access for accessing WebCampus and McGraw Hill Connect is required. Computer access is available in the library and in campus computer labs.
2. Lecture text: "**Lewin's Genes XII**" (2018), by Krebs, Goldstein, Kilpatrick.
 - Available at the UNLV bookstore and through several online booksellers.
 - Students who use earlier editions of the text (Genes XI, etc) do so at their own risk because these editions are not endorsed by the instructor.
3. Discussion Manual: "**Molecular Genetics**" discussion manual, 3rd edition.
 - Available only at the UNLV Bookstore.
4. **Should instruction be moved online due to the ongoing pandemic, students are required to have a webcam and device that successfully runs Respondus Monitor. Chromebooks do not support Respondus and can not be used for online test taking.**

Class Materials and WebCampus

This course utilizes UNLV's WebCampus system. Students who have problems using WebCampus can call the Office of Information Technology (702-895-0777) to immediately report problems. **WebCampus will be used in this course to list the syllabus, lecture schedule, announcements, lecture materials, practice materials, and exam seating assignments. It will also be used to administer assignments, report grades, and for correspondence between students and the instructor.** WebCampus provides a confidential means of communicating with your instructor and for viewing grades. Please note that communication must occur through UNLV systems for the instructor to respond.

I want all students to be successful in this class, and students should use all available resources to learn the course material. Any struggle or challenge must be addressed immediately. When challenges are addressed early in the semester, the instructor can often help the student avoid receiving a grade that does not reflect his/her/their efforts and expectations for the class.

Course Policies

Classroom Conduct

Lectures will begin promptly at 2:30PM and will conclude 3:45 PM. Students are encouraged to take notes and ask questions during lecture. **The University requires that all students behave in class and in libraries in ways that do not interfere with the right of other students to learn or of instructors to teach.** Students should be aware that they are not anonymous in this class and that inappropriate behavior will not be tolerated.

Recording Lectures

The content of lecture is the intellectual property of the instructor. **Students may take audio recordings of lecture for their PERSONAL study use.** The instructor DOES NOT authorize the distribution of these recordings in any format; they may not be shared or distributed via the internet or any other medium. **PHOTOGRAPHY AND VIDEO RECORDINGS OF LECTURE ARE NEVER ALLOWED.** If course content and/or course material is used and/or distributed in an unauthorized manner, permission for audio recording will be revoked for the entire class.

Communication

All communication between instructors and students is expected to be professional and courteous. Specific policies are detailed as follows:

- Students must directly communicate with the instructor. The instructor is not allowed to communicate with friends, family members, or anyone else about matters related to individual students within this course.
- Questions about the course material are the only topics that will be addressed before or after lecture. **Questions related to grades, absences, scheduling make up assignments, and any other personal matters will only be addressed during scheduled appointments.**
- Email through WebCampus is the best method of communication; communication through non-UNLV platforms (ex: aol, yahoo, hotmail) is NOT allowed and will NOT be responded to.
- Messages will typically be addressed within 2 to 3 business days (M through F, 9AM through 5PM). You are welcome to send an email at 10:30 PM on Saturday however the response will likely come on Tuesday or Wednesday.

Exam and Attendance Policies

Exam Attendance

Attendance is mandatory at all exams, and all exams contribute to the course grade. Three lecture exams will consist of multiple-choice and short answer questions. These exams will be based primarily upon the lecture material presented in class; key concepts from the textbook may also be included.

- The instructor may excuse absence from an exam if the absence was due to observance of a religious holiday, due to a UNLV extracurricular activity, due to military service, or due to a medical or legal emergency.
 - If the absence is due to religious observances or sanctioned university events, you must notify the instructor by email 2 weeks **prior** to the exam.
 - If the absence is due to a documented medical or legal emergency, within 3 business days of the missed exam you must email your instructor AND provide original documentation (NOT A COPY) on official letterhead, signed by a physician or legal authority justifying the absence.
 - If the absence is due to Covid or Covid exposure, follow the [UNLV reporting guidelines](#) and notify your instructor for further instructions.
- In the case of an appropriately documented excused absence, a makeup exam may be administered.
- **ALL make up exams will be held the last Friday of the semester and may consist entirely of essay questions.**
- **An unexcused absence from an exam will result in a score of zero.**

A cumulative final exam will be given during the [assigned final exam time slot](#). The final exam will be composed of multiple-choice and/or short answer questions. All students must take the final exam.

Assignment and Grading Policies

In-class Assignments (Graded)

A variety of individual and group learning activities will occur during class; some assignments will be collected and graded.

Missed Assignments

Two in-class assignments will be dropped to accommodate missed classed. The requirements to make up a missed assignment are the same as those take up a missed exam.

Grading Policies

The final overall course percentage will be calculated as follows:

Assessment	Percentage
Unit Exams (1, 2 and 3)	45%
Final Exam (comprehensive)	20%

Assessment	Percentage
In-class Assignments	10%
Discussion Quizzes	25%
Total	100%

The course letter grade will be assigned based on the following guidelines:

Letter Grade	Percentage Range
A	100.0 to 90.0%
A-	89.9 to 88.5%
B+	88.4 to 87.0%
B	86.9 to 80.0%
B-	79.9 to 78.5%
C+	78.4 to 77.0%
C	76.9 to 70.0%
C-	69.9 to 68.5%
D	68.4 to 60.0%
F	< 60.0%

Letter grades will not be assigned to individual assignments or examinations. Note that the scale above is based on past performance of thousands of students in this course; students should not expect grades to be curved. Students are reminded that it is their responsibility to take necessary steps if they decide to withdraw from or audit this class. Failure to attend classes and/or exams does NOT result in an administrative withdrawal. Failure to withdraw from a class usually results in an "F" being recorded on the student's transcript.

Any occurrence of plagiarism, cheating, or any other form of academic misconduct will result in a failing grade for the entire course and an annotation of academic misconduct on the student's transcript.

University Policies

Public Health Directives

Face coverings are currently mandatory for all faculty and students in the classroom. Students must follow all active UNLV public health directives while enrolled in this class. UNLV public health directives are found at [Health Requirements for Returning to Campus](https://www.unlv.edu/coronavirus/health-requirements), <https://www.unlv.edu/coronavirus/health-requirements>. Students who do not comply with these directives may be asked to leave the classroom. Refusal to follow the guidelines may result in further disciplinary action according to the [UNLV Student Conduct Code](https://www.unlv.edu/sites/default/files/page_files/27/StudentConduct-Code.pdf), https://www.unlv.edu/sites/default/files/page_files/27/StudentConduct-Code.pdf, including being administratively withdrawn from the course.

Academic Misconduct

Academic integrity is a legitimate concern for every member of the University community. We all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility, and professionalism. **By choosing to join the UNLV community, students accept the expectations of the Student Academic Misconduct Policy, and are encouraged to always take the ethical path whenever faced with choices. Students enrolling at UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's educational mission.** An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another person, from the Internet or any other source without proper citation of the source(s). See the [Student Conduct Code](https://www.unlv.edu/studentconduct/student-conduct), <https://www.unlv.edu/studentconduct/student-conduct>.

Any occurrence of plagiarism, cheating, or any other form of academic misconduct will result in a failing grade for the entire course and an annotation of academic misconduct on the student's transcript. In addition to other examples listed in the Student Academic Misconduct policy, obtaining/viewing/use of/distribution of Publisher's materials designed for instructor use (quiz questions, exam questions, assignments, activities, etc.) is prohibited and constitutes academic misconduct.

Auditing a Course

Auditing a course allows a student to continue attending the lectures and/or laboratories and discussion sessions associated with the course, but the student will not earn a grade for any component of the course. Students who audit a course receive the same educational experience as students taking the course for a grade, but will be excused from exams, assessments, and other evaluative measures that serve the primary purpose of assigning a grade.

Classroom Conduct

Students have a responsibility to conduct themselves in class and in the libraries in ways that do not interfere with the rights of other students to learn, or of instructors to teach. Use of devices such as cellular phones and pagers, or other potentially disruptive activities are only permitted with the prior explicit consent of the instructor. **Students are specifically prohibited to record classes without instructor authorization**, including online/remote classes (either audio only, or video and audio). The instructor may rescind permission at any time during the class. If a student does not comply with established requirements or obstructs the functioning of the class, the instructor may initiate an administrative withdrawal of the student from the course.

Since the COVID-19 pandemic forced some instruction to be delivered remotely starting in Spring 2020, numerous students have asked instructors to record their synchronous classes, so that they can access them at their convenience. Instructors who agree to record their classes (audio only, or video and audio) should inform students in advance. Recorded lectures may not be broadly released to anyone, but made available exclusively to those students enrolled in the class during the particular academic term. Recorded lectures must be stored securely, and are subject to the Nevada System of Higher Education's Records Retention Policy, meaning that the recordings can only be deleted 120 days after the end of class (i.e., after grades are posted). Once this requirement is met, the recordings should be deleted. Class recordings are protected from disclosure, as they are deemed part of an educational record under the Family Educational Rights and Privacy Act (FERPA).

Classroom Surveillance

Nevada Revised Statutes (State Law) 396.970 Surreptitious electronic surveillance on campus; exceptions. [Effective January 1, 2017.]

1. Except as otherwise provided in subsection 2, it is unlawful for a person to engage in any kind of surreptitious electronic surveillance on a campus of the System without the knowledge of the person being observed.
2. Subsection 1 does not apply to any electronic surveillance:
 - a. Authorized by a court order issued to a public officer, based upon a showing of probable cause to believe that criminal activity is occurring on the property under surveillance;
 - b. By a law enforcement agency pursuant to a criminal investigation;
 - c. By a peace officer pursuant to NRS 289.830;

- d. By a uniformed peace officer of the Nevada Highway Patrol Division of the Department of Public Safety pursuant to NRS 480.365;
- e. Which is necessary as part of a system of security used to protect and ensure the safety of persons on the campus; or
- f. Of a class or laboratory when authorized by the teacher of the class or laboratory.

(Added to NRS by 1993, 2138; A 2015, 575, 3668, effective January 1, 2017)

Copyright

The University requires all members of the University Community to familiarize themselves with, and to follow copyright and fair use requirements. You are individually and solely responsible for violations of copyright and fair use laws. The University will neither protect nor defend you, nor assume any responsibility for student or employee violations of fair use laws. Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional [copyright policy information](#) is available at <https://www.unlv.edu/provost/copyright>.

Dangerous Weapons

Dangerous weapons are not permitted on campus without the express written approval of the Director of the Office of Public Safety. This policy applies to all persons on the UNLV campus, except law enforcement officers in pursuit of their duties. Facsimile weapons are also banned.

Disability Resource Center (DRC)

The [UNLV Disability Resource Center](#) (Student Services Complex, SSC-A, Room 143, <https://www.unlv.edu/drc>, telephone 702-895-0866) provides resources for students with disabilities. Students who believe that they may need academic accommodations due to a permanent disability, temporary or permanent medical need, or academic support due to pregnancy are encouraged to contact the DRC as early as possible in the academic term. A Disabilities Specialist will discuss what options may be available to you. **Students who are already registered with the DRC should request their accommodations online each semester, and may make an appointment to discuss their accommodations with their instructors.**

Diversity Statement

As an institution of higher learning, UNLV represents a rich diversity of human beings among its faculty, staff, and students, and is committed to aspiring to maintain a Campus environment that values that diversity. Accordingly, the University supports understanding and appreciation of all members of its community, regardless of race, sex, age, color, national origin, ethnicity, creed, religion, disability, sexual orientation, gender, gender identity, marital status, pregnancy, genetic information, veteran status, or political affiliation. Please see [University Statements and Compliance](#), <https://www.unlv.edu/about/statements-compliance>.

A successful learning experience requires mutual respect and trust between the students and the instructor. Accordingly, the instructor asks that students be willing to listen to one another's points of view, acknowledging that there may be disagreements, keep discussion and comments on topic, and use first person, positive language when expressing their perspectives.

Final Examinations

The University requires that final exams given at the end of a course occur on the date and at the time specified in the Final Exam schedule. The Final Exam schedule is typically available at the start of the semester, and the classroom locations are available approximately one month before the end of the semester. See the [Final Exam Schedule](#), <https://www.unlv.edu/registrar/calendars>.

Identity Verification in Online Courses

All UNLV students must use their Campus-issued ACE ID and password to log in to WebCampus-Canvas.

UNLV students enrolled in online or hybrid courses are expected to read and adhere to the [Student Academic Misconduct Policy](#), <https://www.unlv.edu/studentconduct/misconduct/policy> which states that "acting or attempting to act as a substitute for another, or using or attempting to use a substitute, in any

academic evaluation or assignment” is a form of academic misconduct. Intentionally sharing ACE login credentials with another person may be considered an attempt to use a substitute, and could result in investigation and sanctions, as outlined in the Student Academic Misconduct Policy.

UNLV students enrolled in online courses are also expected to read and adhere to the [Acceptable Use of Computing and Information Technology Resources Policy](https://www.it.unlv.edu/policies/acceptable-use-computing-and-information-technology-resources-policy), <https://www.it.unlv.edu/policies/acceptable-use-computing-and-information-technology-resources-policy> which prohibits sharing university accounts with other persons without authorization.

To the greatest extent possible, all graded assignments and assessments in UNLV online courses should be hosted in WebCampus-Canvas or another UNLV-managed platform that requires ACE login credentials for access.

Incomplete Grades

The grade of “I” (Incomplete) may be granted when a student has satisfactorily completed three-fourths of course work for that semester/session, but cannot complete the last part of the course for reason(s) beyond the student’s control and acceptable to the instructor, and the instructor believes that the student can finish the course without repeating it. For undergraduate courses, the incomplete work must be made up before the end of the following regular semester. Graduate students receiving “I” grades in 500-, 600-, or 700-level courses have up to one calendar year to complete the work, at the discretion of the instructor. If course requirements are not completed within the period indicated, a grade of “F” will be recorded, and the student’s GPA will be adjusted accordingly. Students who are fulfilling an Incomplete grade do not register for the course, but make individual arrangements with the instructor who assigned the “I” grade.

Library Resources

Librarians are available to consult with students on research needs, including developing research topics, finding information, and evaluating sources. To make an appointment with a subject expert for this class, please visit the [Libraries’ Research Consultation website](https://guides.library.unlv.edu/appointments/librarian), <https://guides.library.unlv.edu/appointments/librarian>. You can also [ask the library staff](https://ask.library.unlv.edu/) questions via chat and text message at <https://ask.library.unlv.edu/>.

Missed Classwork

Any student missing class, quizzes, examinations, or any other class or laboratory work because of observance of religious holidays will be given an opportunity during that semester to make up the missed work. The make-up opportunity will apply to the religious holiday absence only. It is the responsibility of the student to notify the instructor within the first 14 calendar days of the course for Fall and Spring courses (except for modular courses), or within the first 7 calendar days of the course for Summer and modular courses, of their intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit the [Missed Classwork policy](https://catalog.unlv.edu/content.php?catoid=32&navoid=8271&hl=), under Registration Policies, on the [Academic Policies](https://catalog.unlv.edu/content.php?catoid=32&navoid=8271&hl=) webpage, <https://catalog.unlv.edu/content.php?catoid=32&navoid=8271&hl=>

In accordance with the policy approved by the Faculty Senate regarding missed class time and assignments, students who represent UNLV in any official extracurricular activity will also have the opportunity to make up assignments, provided that the student submits official written notification to the instructor no less than one week prior to the missed class(es).

The spirit and intent of the policy for missed classwork is to offer fair and equitable assessment opportunities to all students, including those representing the University in extracurricular activities. Instructors should consider, for example, that in courses which offer a “Drop one” option for the lowest assignment, quiz, or exam, assigning the student a grade of zero for an excused absence for extracurricular activity is both contrary to the intent of the Faculty Senate’s policy, and an infringement on the student’s right to complete all work for the course.

This policy will not apply in the event that completing the assignment or administering the examination at an alternate time would impose an undue hardship on the instructor or the University that could be reasonably avoided. There should be a good faith effort by both the instructor and the student to agree to a reasonable resolution. When disagreements regarding this policy arise, decisions can be appealed

to the Department Chair/School Director, College/School Dean, and/or the Faculty Senate Academic Standards Committee.

For purposes of definition, extracurricular activities may include, but are not limited to academic recruitment activities, competitive intercollegiate athletics, fine arts activities, liberal arts competitions, science and engineering competitions, and any other event or activity sanctioned by a College/School Dean, and/or by the Executive Vice President and Provost.

Personal Violence

If you (or someone you know) experiences stalking, domestic/dating violence, or sexual assault, please know, you are not alone. There are resources that can help. The UNLV CARE Line is a 24-hour confidential and anonymous hotline that can guide you to those resources: 702-895-0602.

Rebelmail

Rebelmail is UNLV's official email system for students and by University policy, instructors and staff should only send emails to students' Rebelmail accounts. Rebelmail is one of the primary ways in which students receive official University communications, information about deadlines, major Campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the University. Sending emails within WebCampus-Canvas is also acceptable.

Tutoring and Coaching

The Academic Success Center (ASC), at the Claude I. Howard Building, provides tutoring, academic success coaching, and other academic assistance for all UNLV undergraduate students. For information regarding tutoring subjects, tutoring times, and other ASC programs and services, please visit the [ASC website](https://www.unlv.edu/asc), <https://www.unlv.edu/asc> or call 702-895-3177. The ASC is located across from the Student Services Complex (SSC). Academic success coaching is located on the second floor of SSC A, Room 254. Drop-in tutoring is located on the second floor of the Lied Library, and on the second floor of the College of Engineering building (TBE A 207).

UNLV Land Acknowledgement

UNLV is situated on the traditional homelands of Indigenous groups, including the Nuwu or Nuwuvi, Southern Paiute People, descendants of the Tudu, or Desert People. We honor and offer gratitude for those who have stewarded the land; for the land itself; and for the opportunity to cultivate a thriving, diverse, inclusive, and just scholarly community here today that works for a better tomorrow for all.

UNLV Writing Center

One-on-one or small group assistance with writing is available free of charge to UNLV students at the [Writing Center](https://writingcenter.unlv.edu/), <https://writingcenter.unlv.edu/> located in the Central Desert Complex, Building 3, Room 301 (CDC 3-301). Walk-in consultations are sometimes available, but students with appointments receive priority assistance. Students may make appointments in person or by calling the Center, telephone 702-895-3908. Students are requested to bring to their appointments their Rebel ID Card, a copy of the instructions for their assignment, and two copies of any writing they have completed on their assignment.

This syllabus is subject to change at the discretion of the instructor.

Any changes will be announced during lecture and via WebCampus.