



BIOCHEMISTRY AND  
MOLECULAR BIOLOGY  
COLORADO STATE UNIVERSITY

**LIFE 201B –  
INTRODUCTORY GENETICS –  
Molecular/Immunological/Developmental**

## Course Syllabus

### INSTRUCTOR INFORMATION

Instructor: Prof. Thomas Kuhn; Prof. Lubna Tahtamouni

Email: [Tom.Kuhn@colostate.edu](mailto:Tom.Kuhn@colostate.edu); [lubna.tahtamouni@colostate.edu](mailto:lubna.tahtamouni@colostate.edu)

Phone: 970-491-5531

Communication Policy: Responses to emails will be provided within 1 business day, 8 a.m.–5 p.m.

### GRADUATE TEACHING ASSISTANTS:

1. Callie Slaughter: [callie.slaughter@colostate.edu](mailto:callie.slaughter@colostate.edu); office hours Monday 8-10 am, AZ E208
2. Rojina Shrestha: [rojina.shrestha@colostate.edu](mailto:rojina.shrestha@colostate.edu); office hours Thursday 5-7 pm, Yates 316
3. Ban AlKurdi: [ban.alkurdi@colostate.edu](mailto:ban.alkurdi@colostate.edu); office hours Thursday 11-1 pm
4. Taylor Zhao: [taylor.zhao@colostate.edu](mailto:taylor.zhao@colostate.edu); office hours Tuesday 8-10 am, A/Z E342
5. Sydney Risen: [sydney.risen@colostate.edu](mailto:sydney.risen@colostate.edu); office hours Monday 12-2 pm
6. Adam Timmerman: [adam.timmerman@colostate.edu](mailto:adam.timmerman@colostate.edu); office hours Thursday 12-2 pm, AZ E208A
7. Sarah Sparrow: [sarah.sparrow@rams.colostate.edu](mailto:sarah.sparrow@rams.colostate.edu); office hours Monday 1-3 pm
8. Adam Koch: [adam.koch@colostate.edu](mailto:adam.koch@colostate.edu); office hours Thursday 2-4 pm, MRB 250

### PREREQUISITES FOR COURSE

LIFE 102

### COURSE DESCRIPTION & OBJECTIVES

**Course Description:** To provide an integrated interdisciplinary molecular genetics experience for biomedically oriented students with backgrounds and interests in biochemistry, cell and molecular biology, microbiology, developmental biology, and genetics.

Upon the completion of LIFE 201B, a successful student will be able to:

1. Understand the basic features of the molecules and macromolecules of genetics: nucleic acids, proteins, chromatin, chromosomes.

2. Understand the molecular processes of the central dogma of molecular genetics: replication, DNA repair, recombination, transcription, RNA processing, translation.
3. Know the principles of the fundamental experimental techniques used in molecular genetics.
4. Understand the principles of genome evolution.
5. Understand the molecular and cellular processes involved in molecular genetics: cell cycle/mitosis, meiosis, development, cancer.

## TEXTBOOK / COURSE READINGS

Essential Cell Biology, 4th edition By Alberts et al. 2013. The course textbook is available through the CSU Bookstore.

## COURSE MATERIALS & EQUIPMENT

**Organization of content:** Life 201B consists of 6 modules/units comprised of readings, lectures, quizzes, and written assignments. Students should complete all tasks in each module before moving on.

We will provide materials on Canvas to help you grasp my organization of the course content. These materials define what concepts we want you to know and understand. The materials also aid your study outside of class.

1. 6 Module/Units outlines
2. Lecture slides
3. Homework-written assignments

## LECTURE FORMAT

In-person lectures will be held in Clark A104 during normal class time (Section 001/231: 11:00 am-11:50 AM), and in Pathology 101 during normal class time (Section 002/232: 3:00-3:50 MWF). Lecture notes will be posted to the Canvas class page *no later than 2 hours prior to normal class time*.

## OFFICE HOURS

By appointment.

### How to Study

Come to the lectures prepared (know something about what we will talk about) having read the textbook pages and looked over the lecture outlines. First and foremost, space out your studying. Do not “cram” in the day or before an exam. Rather spend time each day studying the course material. Use the quizzes as practice for the exams. Study your notes including key

terms and concepts, and then take the quiz the first time without your notes. If you do not do as well as you would like, review your notes again and take the quiz a second time with your notes and book open. Finally, we strongly suggest that you practice diagramming the biochemical processes on a notebook or a white board multiple times rather than just looking over them to study them. You will find the information sticks in your memory much more quickly and you will recognize gaps in your understanding more readily. Using this approach in a study group is even more effective.

Please review the [core rules of netiquette](#) for some guidelines and expectations on how to behave in an online learning environment.

## COURSE POLICIES

**There will be no make-up exams offered.** Unexcused absences from an exam or quiz will be given a *zero*. If you have an excused absence (based on written or other verifiable evidence) from an exam or quiz, your final grade will be based on a percentage of the total possible points for the exams and quizzes you did take. ***Alternatively, students can schedule to take the exam early with the instructor if they know they cannot take the exam (only if they have an excused absence such as health emergency or family urgent issue) at the regularly scheduled date and time.*** If you have questions concerning the grading of any of your exams or quizzes, the questions you want re-graded should be discussed with the instructor within a week of grading. You must also provide a **written** explanation as to why you feel the question should be re-graded. Exams **will not be accepted for re-grading after this one-week period**, so go over your exam carefully soon after it has been returned to you.

## GRADING POLICY

There is a total of 480 points from Exams, 160 points from Quizzes, and 160 points from the written assignments.

ASSIGNMENT*	GRADE POINTS	GRADE PERCENTAGE
Exams	4x120=480	60%
Quizzes	10x16=160	20%
Written assignments	6x26.5=160	20%
<b>Total:</b>	<b>800</b>	<b>100%</b>

*\*Keep a copy of all work created for the course, including work submitted through Canvas course learning management system.*

Each of the 4 exams in LIFE 210 will be worth 120 points (480 total), and the 10 quizzes on Canvas are worth 16 points each (160 total). In addition, there will be 6 written assignments required, each worth 26.5 points (160 total), for a cumulative total of 800 points possible.

If you achieve the following point totals for LIFE 210 you will be assured the **minimum** letter grade shown:

Letter grade	Range
A+	100%-96.67%
A	<96.67%-93.33%
A-	<93.33%-90.0%
B+	<90.0%-86.67%
B	<86.67%-83.33%
B-	<83.33%-80.0%
C+	<80.0%-76.67%
C	<76.67%-70.0%
D	<70.0%-60.0%
F	<60.0%-0.0%

Each exam or quiz will not be curved individually, but the final total points required for a course grade might be curved depending on the averages and distribution of points. In addition, your grade for LIFE 201B will be determined based on the total 800 points (combined). Students in LIFE 201B have averaged around 80% of the total points possible over the past several years. As a result, there is usually no grading curve.

As a student enrolled in this course, one of your responsibilities is to submit course work by the due dates listed in Canvas. With that said, we take our role as your instructors very seriously, and, in fact, we care about how well you do in this course and that you have a satisfying, rewarding experience.

To that end, it is our commitment to you to respond individually to the work you submit in this class and to return your work in a timely manner. Assignments will be returned within 1 week, if, however, due to unforeseeable circumstances, the grading of your work takes longer than the times we have listed here, we will keep you informed of our progress and make every effort to return your work with feedback as soon as we can.

## CANVAS INFORMATION & TECHNICAL SUPPORT

Canvas is where course content, grades, and communication will reside for this course.

- [Login for Canvas](#)
- [Canvas Support](#)

- For passwords or any other computer-related technical support, contact the [Central IT Technical Support Help Desk](#).
  - (970) 491-7276
  - [help@colostate.edu](mailto:help@colostate.edu)

The [Technical Requirements](#) page identifies the browsers, operating systems, and plugins that work best with Canvas. If you are new to Canvas quickly review [the Canvas Student Orientation](#) materials.

## ACADEMIC INTEGRITY & CSU HONOR PLEDGE

This course will adhere to the CSU [Academic Integrity/Misconduct](#) policy as found in the General Catalog and the [Student Conduct Code](#).

Academic integrity lies at the core of our common goal: to create an intellectually honest and rigorous community. Because academic integrity, and the personal and social integrity of which academic integrity is an integral part, is so central to our mission as students, teachers, scholars, and citizens, I will ask that you affirm the CSU Honor Pledge as part of completing your work in this course.

Further information about Academic Integrity is available at CSU's [Academic Integrity - Student Resources](#).

## Universal Design for Learning/Accommodation of Needs

I am committed to the principle of universal learning. This means that our classroom, our virtual spaces, our practices, and our interactions be as inclusive as possible. Mutual respect, civility, and the ability to listen and observe others carefully are crucial to universal learning.

If you are a student who will need accommodations in this class, please contact me to discuss your individual needs. Any accommodation must be discussed in a timely manner. A verifying memo from [The Student Disability Center](#) may be required before any accommodation is provided.

The Student Disability Center (SDC) has the authority to verify and confirm the eligibility of students with disabilities for the majority of accommodations. While some accommodations may be provided by other departments, a student is not automatically eligible for those accommodations unless their disability can be verified and the need for the accommodation confirmed, either through SDC or through acceptable means defined by the particular department. Faculty and staff may consult with the SDC staff whenever there is doubt as to the appropriateness of an accommodative request by a student with a disability.

The goal of SDC is to normalize disability as part of the culture of diversity at Colorado State University. The characteristic of having a disability simply provides the basis of the support that is available to students. The goal is to ensure students with disabilities have the opportunity to be as successful as they have the capability to be.

Support and services are offered to student with functional limitations due to visual, hearing, learning, or mobility disabilities as well as to students who have specific physical or mental

health conditions due to epilepsy, diabetes, asthma, AIDS, psychiatric diagnoses, etc. Students who are temporarily disabled are also eligible for support and assistance.

Any student who is enrolled at CSU, and who self-identifies with SDC as having a disability, is eligible for support from SDC. Specific accommodations are determined individually for each student and must be supported by appropriate documentation and/or evaluation of needs consistent with a particular type of disability. SDC reserves the right to ask for any appropriate documentation of disability in order to determine a student's eligibility for accommodations as well as in support for specific accommodative requests. The accommodative process begins once a student meets with an accommodations specialist in the SDC.

## Third-party Tools/Privacy

Please note that this course may require you to use third-party tools (tools outside of the Canvas learning management system), such as Skype and others. Some of these tools may collect and share information about their users. Because your privacy is important, you are encouraged to consult the privacy policies for any third-party tools in this course so that you are aware of how your personal information is collected, used and shared.

## Copyrighted Course Materials

Please do not share material from this course in online, print, or other media. Course material is the property of the instructor who developed the course. Materials authored by third parties and used in the course are also subject to copyright protections. Posting course materials on external sites (commercial or not) violates both copyright law and the CSU Student Conduct Code. Students who share course content without the instructor's express permission, including with online sites that post materials to sell to other students, could face appropriate disciplinary or legal action.

## Undocumented Student Support

Any CSU student who faces challenges or hardships due to their legal status in the United States and believes that it may impact their academic performance in this course is encouraged to visit [Student Support Services for Undocumented, DACA & ASSET](#) for resources and support.

Additionally, only if you feel comfortable, please notify your professor so they may pass along any additional resources they may possess.

## FOOD INSECURITY

Any CSU student (along with faculty and staff) who is experiencing food insecurity can receive support from the [Rams Against Hunger](#) program. Services include a food pantry, a meal-swipe program, pocket pantries, and in-person assistance with navigating federal aid eligibility. The RAH page includes numerous resources as well as county, state and federal programs which are described and linked.

## Title IX/Interpersonal Violence

For the full statement regarding role and responsibilities about reporting harassment, sexual harassment, sexual misconduct, domestic violence, dating violence, stalking, and the retaliation policy please go to: [Title IX – Sexual Assault, Sexual Violence, Sexual Harassment](#).

If you feel that your rights have been compromised at CSU, several resources are available to assist:

- Student Resolution Center, 200 Lory Student Center, 491-7165
- Office of Equal Opportunity, 101 Student Services, 491-5836

A note about interpersonal violence: If you or someone you know has experienced sexual assault, relationship violence and/or stalking, know that you are not alone. As instructors, we are required by law to notify university officials about disclosures related to interpersonal violence. Confidential victim advocates are available 24 hours a day, 365 days a year to provide support related to the emotional, physical, physiological and legal aftermath of interpersonal violence. Contact the Victim Assistance Team at: 970-492-4242.

## Religious Observances

CSU does not discriminate on the basis of religion. Reasonable accommodation should be made to allow individuals to observe their established religious holidays. Students seeking an exemption from attending class or completing assigned course work for a religious holiday will need to fill out the [Religious Accommodation Request Form](#) and turn it in to the Division of Student Affairs, located on the second level of the Administration building.

Once turned in, the Division of Student Affairs will review the request and contact the student accordingly. If approved, the student will receive a memo from the Dean of Students to give to their professor or course instructor.

Students are asked to turn in the request forms as soon as the conflict is noticed. Similarly, unanticipated conflicts requiring a religious observance, such as a death in the family, can also be reviewed.

## CSU Principles of Community

**Inclusion:** We create and nurture inclusive environments and welcome, value and affirm all members of our community, including their various identities, skills, ideas, talents and contributions.

**Integrity:** We are accountable for our actions and will act ethically and honestly in all our interactions.

**Respect:** We honor the inherent dignity of all people within an environment where we are committed to freedom of expression, critical discourse, and the advancement of knowledge.

**Service:** We are responsible, individually and collectively, to give of our time, talents, and resources to promote the well-being of each other and the development of our local, regional, and global communities.

**Social Justice:** We have the right to be treated and the responsibility to treat others with fairness and equity, the duty to challenge prejudice, and to uphold the laws, policies and procedures that promote justice in all respects.

## DIVERSITY AND INCLUSION

The [Mission, Vision, and Focus](#) webpage of the Vice President for Diversity includes a comprehensive statement of CSU's commitment to diversity and inclusion.

## STUDENT PARENTS/GUARDIANS/CAREGIVERS

I realize that student parents/guardians and caregivers face distinctive challenges in succeeding academically, and I'm committed to supporting those of you who are parents to achieve our course's learning outcomes. If you encounter challenges in meeting course expectations – for example, fulfilling attendance and participation requirements or submitting assignments due to a child or person in your care's illness, essential appointment, school closure, etc. – please contact me as soon as possible (beforehand if feasible or as soon afterward you reasonably can if not). We'll develop a plan for you to make up missed work. If you need to bring your child or person you care for to class, for example because you're nursing or planned childcare became unavailable, I encourage you to do so if it's feasible for you to participate in class and support your child or person in your care.

Finally, know that [pregnant and parenting students are guaranteed equal educational opportunities by Title IX](#); know your rights, the protections provided, and how to advocate for yourself.

## STUDENT CASE MANAGEMENT

[Student case management](#) is available to help students with extenuating life circumstances and connect them with resources. In some cases, after you and I discuss your situation, I may request [verifiable documentation for class absences](#) from the SCM office if you request considerations for absences or missed coursework.

## MENTAL HEALTH AND WELLNESS

CSU is a community that cares. You are not alone. CSU Health Network Counseling Services has trained professionals who can help. Your student fees provide access to a wide range of support services.

Call Counseling Services at (970) 491-6053, and they will work together with you to find out which services are right for you.

Visit <https://health.colostate.edu/about-counseling-services> to learn more and <https://health.colostate.edu/mental-health-resources/> for additional student mental health and well-being resources. An extensive set of mental health resources is available to CSU students: <https://health.colostate.edu/mental-health-resources/>

If you are concerned about a friend or peer, use **Tell Someone** by calling (970) 491-1350 or visiting <https://supportandsafety.colostate.edu/tell-someone/> to share your concerns with a professional who can discreetly connect the distressed individual with the proper resources. Rams Take Care of Rams. Reach out and ask for help if you or someone you know is having a difficult time.



## SP22 COVID INFORMATION

### **Important information for students:**

**Masks are required inside university buildings. You must also meet university vaccine or exemption requirements.**

**All students are expected and required to report to the COVID Reporter (<https://covid.colostate.edu/reporter/>) when:**

- You suspect you have symptoms of COVID, regardless of whether or not you are vaccinated and even if your symptoms are mild
- You have tested positive for COVID through a non-CSU testing site, such as home test or test at a pharmacy
- You believe you may have been exposed to COVID go to the COVID Reporter and follow the guidance under “I believe I have been in close contact with someone who has COVID-19.” This guidance will depend upon your individual circumstances

You will not be penalized in any way for reporting symptoms or concerns.

**Do not ask me as your instructor to report for you. It is your responsibility to report through the COVID Reporter promptly.**

**As your instructor I may not ask you about vaccination status or if you have COVID but you may freely volunteer to send me information from a public health official - if you have been asked to isolate or quarantine.**

When you complete the COVID Reporter, the CSU Public Health office is notified. Once notified, that office will contact you and, depending upon each situation, will conduct contact tracing, initiate any necessary public health requirements and notify you if you need to take any steps.

If you do not have internet access to fill out the online COVID-19 Reporter, please call (970) 491-4600.

For the latest information about the University’s COVID resources and information, including FAQs about the spring semester, please visit the **CSU COVID-19 site** <https://covid.colostate.edu/>.