

LIFE102-Attributes of Living Systems Syllabus- Section 002

Fall Semester 2023; Clark A101; MWF; Section 002 11:00 a.m.-11:50 a.m.

Instructor Information

Instructor

Dr. Tamla Blunt

Email

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Office Location

C027 Plant Sciences

LEARNING ASSISTANTS

Section 003 11:00-11:50 a.m.
Laila Paluszek (Lead)

This course is supported by a team of Learning Assistants (LAs). LAs are undergraduate students who have successfully completed the course in a previous semester and became peer educators to help other students master the course content. Every week, LAs meet with the instructor/instructional team to prepare activities and discuss strategies for supporting student learning. LAs also receive training in teaching and learning techniques to apply in their work with students.

In this course, LAs will assist with learning activities during lecture/recitation and will facilitate a variety of additional learning experiences outside of class. You can connect with LAs through: Group Learning Sessions (drop-in support in TILT's Great Hall held in the evenings each week), Exam Review Sessions (which occur leading up to each exam), and individual and small group tutoring (for students who are interested in additional practice with the course concepts). Find out more about working with our LAs at: <https://www.csulearningassistantprogram.org/>.

The Learning Assistant (LA) model is an evidence-informed, internationally recognized model of peer education proven to positively impact student success. Engaging with LAs can make the learning process more manageable and productive for students, especially in high-enrollment courses (like this one). Data from the CSU Learning Assistant Program indicates that students can more effectively master the course content (earning higher grades) by engaging consistently with LAs outside of class.

CONTACT INFORMATION

Office hours will be 9 a.m.-10a.m. MWF in C027 Plant Sciences.

Please contact me via the CANVAS email tool. Please include the following in your email: (1) Your name, and (2) LIFE102 Section number. Please help me to help you by identifying

yourselves. Questions regarding labs (attendance, scheduling, and grades) should be directed to Ren, the lab coordinator at lauren.hellmuth@colostate.edu, or your lab TA. I teach two sections of LIFE102 in the Fall semester with over 600 students in total, so help me help you.

I will do my best to respond to emails within 24 hours during the week (Monday through Friday). Responses will be delayed over the weekend but I will do my best to respond by the next business day. If I do not respond within 24 hours, please send me a friendly reminder!

Also, please note that the university's spam filter has been known to reject email from sources such as Yahoo! or msn accounts. If I don't respond please speak with me to see if this is what has happened or use your CSU account to send the email.

GENERAL INFORMATION

Description

LIFE102 is an introductory course in Biology that provides a basis for more advanced coursework in the life sciences. The course emphasizes the basic principles the chemistry, cell structure, cell metabolism, genetics, and evolution that are required for life. This material will be explored using five iterative themes: organization, transmitting information, energy and matter, interactions and evolution.

Expectations and Goals

Upon completion of LIFE102, students will be able to:

- Recognize the common elements required by living organisms and describe key properties of water and carbon that enable them to function to support life.
- Recognize and describe the functions of major types of cellular macromolecules
- Describe the internal components of plant and animal cells, and their functions
- Describe the composition and functions of biological membranes
- Explain the transformation of molecules and energy during the processes of cellular metabolism, respiration and photosynthesis
- Describe mechanisms of cell communication and cell reproduction (mitosis and meiosis)
- Describe how DNA replicates and how genetic information is transmitted within the cell (transcription and translation)
- Use Mendelian genetics to predict the genetic makeup of offspring given the genetic makeup of the parents
- Explain principles that govern evolution, including descent with modification, evolution of populations, and origin of species

IMPORTANT INFORMATION FOR ALL STUDENTS REGARDING COVID-19

Important information for students:

All students are directed to report any COVID-19 symptoms to the university immediately, as well as exposures or positive test results from a medical provider or home test.

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| <ul style="list-style-type: none">• If you suspect you have symptoms, or if you know you have been exposed to a positive person or have tested positive for COVID (even with a home test), you are directed to fill out the COVID Reporter. |
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- If you know or believe you have been exposed, including living with someone known to be COVID positive, or are symptomatic, it is important for the health of yourself and others that you complete the online [COVID Reporter](#). Do not ask your instructor to report for you.
- If you do not have internet access to fill out the online [COVID-19 Reporter](#), please call (970) 491-4600.
- You may also report concerns in your academic or living spaces regarding COVID exposures through the [COVID Reporter](#). You will not be penalized in any way for reporting.
- When you complete the [COVID Reporter](#) for any reason, the CSU Public Health Office is notified. Students who report symptoms or a positive antigen test through the [COVID Reporter](#) may be directed to get a PCR test through the CSU Health Network's medical services for students.

For the latest information about the university's COVID resources and information, please visit the CSU [COVID-19 site](#).

ATTENDANCE AND PARTICIPATION

Attendance and participation is a required component of this course. However, attendance will not be taken, nor do you need to inform me if you will be absent from class. It is your responsibility to come to class prepared to learn. The in-class participation points for this course are just that.....in-class points that are awarded for your participation in class. There will be no make up for these participation points unless it is an excused University sanctioned event.

HYBRID COURSE ORGANIZATION

Life 102 in Fall 2023 will be conducted in a hybrid face-to-face/online format. All lectures will be live and face-to-face. There will be assignments and quizzes on Canvas (online). **I reserve the right to utilize Zoom for in-class lectures due to unexpected circumstances (e.g., weather). There will be an announcement on Canvas if I need to teach via Zoom.**

What is a hybrid face-to-face/online format?

- A) Your participation in the course will be BOTH online and face-to-face.
- B) All lectures will be posted to Canvas as a pdf and available before class time. Lectures will not be recorded so it is important to come to class.
- C) Your in-class, face-to-face participation will center around lectures, active learning opportunities, review questions, and clarifying muddiest points.
- D) At the end of each week, by Sunday at 11:59 p.m. each week, you will complete a weekly homework assignment using the McGraw-Hill Connect tool in Canvas. The Connect Homework will open on Mondays at noon and be available until Sunday night at 11:59 p.m. each week.
- E) The bi-weekly quizzes/exams will only be open and available on Canvas for a specified time period (usually Friday-Sunday or Thursday-Saturday), not the entire week.
- F) Keep an eye on your Canvas Dashboard to make sure you are aware of all assignment deadlines!

Course Materials

Required Materials

- A) (REQUIRED) CANVAS website. The majority of course materials will be delivered via Canvas. You will need your eID to login in: <http://canvas.colostate.edu> If you are registered for LIFE102, this course will be in your listing. If you are new to CANVAS, please take the time to review the CANVAS tutorials so you can get the most out of this resource! The syllabus, announcements, lecture slides, grades, and additional resources will be posted on CANVAS
- B) (REQUIRED) CONNECT: All-Inclusive Access by McGraw-Hill. Visit [Student Support | McGraw Hill \(mheducation.com\)](#) for more info on how to use Connect. This software includes:
 - i. The textbook “Understanding Biology” (4th Edition) by Mason, Losos, and Duncan. When you register for Connect, you have the option to purchase a loose-leaf copy of the textbook. If you would like a hard-back copy, they are available directly from McGraw-Hill or through other resellers, such as Amazon.com. In addition, there are a few hard copies of the textbook on reserve in the library. You should have received an email from the CSU Bookstore to your CSU email account with instructions on how to access the textbook through Canvas.
 - ii. LearnSmart Adaptive Learning Platform. This includes interactive materials to help explore content and refine your understanding.
 - iii. Note you will not be charged for Connect until the Add/Drop deadline date.

REGISTRATION QUESTIONS:

For any registration questions, changes or other concerns for both lab and lectures sections, please contact your program advisor/advising team/undergraduate success coordinator for help.

CODE OF CONDUCT

By registering for this class, you are entering into an agreement between yourself and the instructor (me) regarding our respective roles in achieving the learning objectives articulated above in Life 102 and earning the grade in the course that you desire. As an instructor, my role is to organize and present course material in a way that guides your progress through the material and helps you to gain practice in the course objectives articulated above. As a student, your role is to attend class, not to engage in disruptive conversations or activities or otherwise engage in disruptive behavior, such as packing up to leave early. If you wish to do well in the course, you should plan on attending class, reviewing all material in a timely manner, participate in class discussions (such as interactions with LAs), review study guides, attend office hours, complete Canvas assessments (quizzes and Connect homeworks) and, form study groups, and study by *practicing* rather than simply reviewing your notes.

ACADEMIC INTEGRITY

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. You will be asked to affirm the following statement at the start of your exams: "I have not given, received, or used any unauthorized assistance." Further information about Academic Integrity is available at CSU's Practicing Academic Integrity. This course will adhere to the CSU Academic Integrity Policies and Guiding Principles as found in the General Catalog and the Student Conduct Code. Academic integrity is conceptualized as doing and taking credit for one's own work. Violations of the university's academic integrity standards include, but are not limited to:

- Cheating—includes using unauthorized sources of information and providing or receiving unauthorized assistance on any form of academic work or engaging in any behavior specifically prohibited by the faculty member.
- Plagiarism—includes the copying of language, structure, ideas, or thoughts of another, and representing them as one's own without proper acknowledgment.
- Unauthorized Possession or Disposition of Academic Materials—includes the unauthorized selling or purchasing of examinations or other academic work; stealing another student's work; unauthorized entry to or use of material in a computer file; and using information from or possessing exams that an instructor did not authorize for release to students.
- Falsification—includes any untruth, either verbal or written, in one's academic work.
- Facilitation—includes knowingly assisting another to commit an act of academic misconduct.

At a minimum, violations will result in a grading penalty in this course and a report to the Office of Conflict Resolution and Student Conduct Services.

UNIVERSAL DESIGN FOR LEARNING

I am committed to the principle of universal learning, diversity and inclusion in the classroom, and creating an equitable learning environment. 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 to others carefully are crucial to universal learning and understanding. My pronouns are she/her/hers and if you wish to share your pronouns, I will use them. Even though the content of this course is prescribed, I encourage students to engage with each other thoughtfully and with respect. Please remember the [CSU Principles of Community](#).

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 prior to implementation. A verifying memo from Student Disability Center may be required before any accommodation is provided.

ACTIVE LEARNING AND LEARNING ASSISTANTS

Class activities are an important part of this course, not only to allow you the opportunity to work in a small group format, but also to provide alternate methods for learning/understanding the material. Additionally, we will have Learning Assistants helping during the semester. They have all been in Life 102 before, so they are familiar with the material, they have fantastic study tips and learning advice. Study Sessions will also be scheduled every week during the semester and the learning assistants will be there to answer questions and explain concepts that might be confusing.

EXTRA CREDIT

Extra Credit will not be offered this semester.

GRADING

The lecture grade will be based on the following points:	Points per item	Total
Weekly Connect Homework	15	225
Weekly Participation points		75
Bi-Weekly Quizzes (7); 1 lowest score dropped	100	700
Cumulative Final (on Canvas) Final is not optional and will not be dropped	100	100
Total Points		1100

Lecture grade is calculated from a total of 1100 points available and is worth 75% of the total LIFE102 course (lecture and lab).

The total Life 102 course grade will be calculated from the following percentages:

Lecture Grade (75%) + Lab Grade (25%) = Final Grade (100%)

Example: You receive a 76% in Lecture and an 82% in Lab.

Your final grade = $(0.76 \times 0.75) + (0.82 \times 0.25) = 77.5\%$

Use this calculation to estimate your grade during the course. Please do not ask me to do this for you.

COURSE GRADES

Grades for the course will be assigned based approximately on the grading scale below. Grades may be slightly curved, but whether or not a curve is applied will be decided when we calculate final grades at the end of the semester. Individual exam and assignment grades will not be curved. We will not be conveying any information about curves until final grades are released.

Score	Grade	Score	Grade	Score	Grade
> 98.0%	A+	88.0 - 89.9%	B+	77.0 - 79.9%	C+
92.0 - 97.9%	A	82.0 - 87.9%	B	70.0 - 76.9%	C
90.0 - 91.9%	A-	80.0 - 81.9%	B-	59.5 - 69.9%	D
				< 59.5%	F

INCOMPLETE GRADES

An incomplete grade is a temporary grade and is assigned at the discretion of the instructor. An "I" is assigned if the student cannot complete the course due to circumstances beyond the student's control. A contract, indicating the amount of work to be completed, must be signed by the student and instructor before the "I" is assigned. Incompletes will be made up within a year or the grade is converted automatically to an "F" by the Registrar.

QUIZZES

Each regular quiz will have questions from the topics covered in lecture. The quizzes will have a specific time and date that they will be open for you to take. Once you open the quiz and start taking it, you have to finish it. There is no stopping and restarting the quiz. The two lowest quiz scores will be dropped. Canvas is set to calculate your total grade with the lowest score already dropped.

CONNECT from McGraw Hill

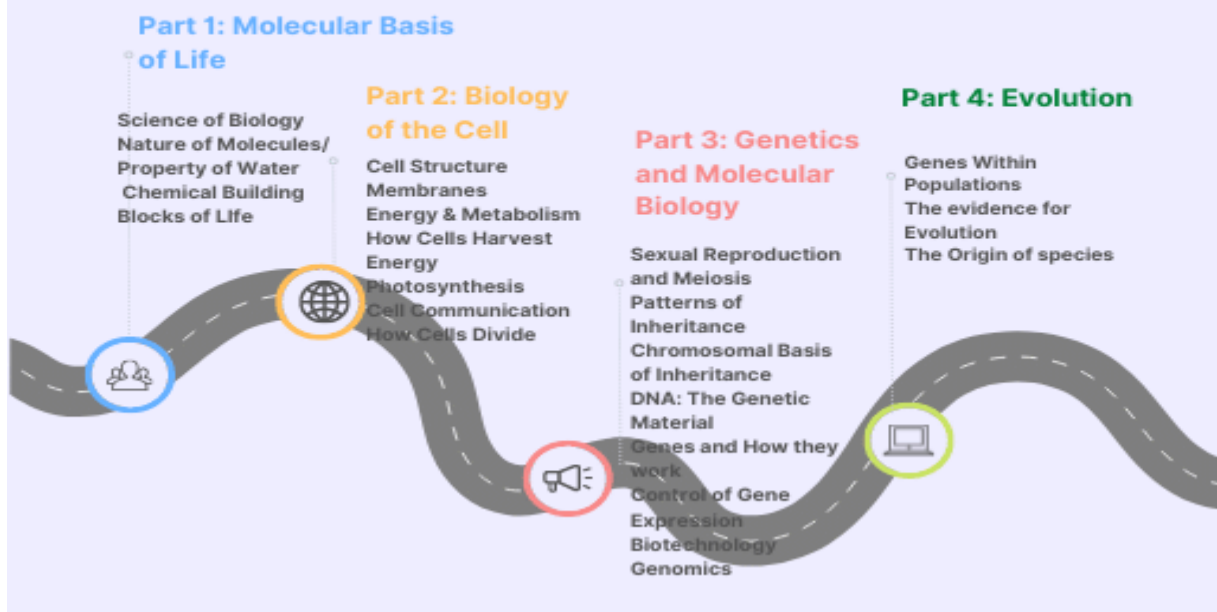
CONNECT is an online platform that accompanies the textbook; it provides access to required homework as well as the complete text of Mason Understanding Biology book and other study tools. Access to CONNECT is provided to you automatically when you register for Life102 and login the course website (Canvas). Your student account will be charged for this product assuming you remain in the class past the Add/Drop date.

For full credit, CONNECT assignments must be completed by the due date/time. In the event of technical errors (e.g. website won't accept an assignment submission although it is before the due date), you must contact CONNECT Support online and obtain a case number which will verify the date and time of the attempted submission (prior to the due date/time), then email the instructor with this information within 24 hours.

Also, the grading system on Connect is confusing and somewhat misleading. For example, unchecked answers that are marked as correct (green check) are because it was correct to leave it unchecked, not because they should've been checked. Connect does not show you what the correct answers are, but rather how you did on your previous attempt.

Be aware the time required to complete a CONNECT assignment will be different for each person, depending on your prior background and familiarity with the material. The homework assignments are set up to allow several attempts in order to get the 15 points total.

LIFE102 Course Content



Tentative Course Schedule

Week	Dates	Topic	Chapter	Connect HW And Quiz Material
Week 1	Aug 21, 23, 25	Introduction to LIFE102; Science of Biology; Atoms and Molecules; Water and Life	Chapter 2	Chapter 2
Week 2	Aug 28, 30; Sept 1	Chemical Building Blocks of Life; Macromolecules	Chapter 3	Chapter 3
Week 3	Sept 6, 8	Cell Structure	Chapter 4	Chapter 4
Week 4	Sept 11, 13, 15	Cell Structure; Cell Membranes	Chapters 4 & 5	Chapter 5
Week 5	Sept 18, 20, 22	Cell Membranes cont'd; Energy & Metabolism	Chapter 6	Chapter 6
Week 6	Sept 25, 27, 29	How Cells Harvest Energy; Cellular Respiration	Chapter 7	Chapter 7
Week 7	Oct 2, 4, 6	Photosynthesis; How Cells Divide (Mitosis)	Chapter 8	Chapter 8
Week 8	Oct 9, 11, 13	How Cells Divide (Mitosis) cont'd; Meiosis	Chapters 10 & 11	Chapter 10 & 11

Week	Dates	Topic	Chapter	Connect HW And Quiz Material
Week 9	Oct 16, 18, 20	Patterns of Inheritance; Chromosomes	Chapters 12 & 13	Chapters 12 & 13
Week 10	Oct 23, 25, 27	DNA: The Genetic Material	Chapter 14	Chapter 14
Week 11	Oct 30, Nov 1, 3	Genes and How They Work (Transcription; Translation)	Chapter 15	Chapter 15
Week 12	Nov 6, 8, 10	Control of Gene Expression	Chapter 16	Chapter 16
Week 13	Nov 13, 15, 17	Genomics; Viruses	Chapters 18 & 23	Chapters 16 & 23
Week 14	Nov 20, 22, 24	Fall Break/Thanksgiving		
Week 15	Nov 27, 29; Dec 1	Genes Within Populations; Evidence for Evolution	Chapters 19 & 20	Chapters 19 & 20
Week 16	Dec 4, 6, 8	Origin of Species	Chapter 21	Chapter 21
Week 17	Dec 11-15	Finals Week	On Canvas	

Study tips:

Time management will be important to the learning of this material. Please do not wait until the last minute to study for the quizzes/exams. How to study for this class depends on the student; these are some suggestions that previous students have found helpful.

- Skim the chapter before coming to class.
- Attend the lectures; take notes.
- Read the chapter in the book for more clarification on any concepts.
- Answer the questions from the study guides (posted in Canvas) and at the end of each chapter in the textbook.
- Be able to explain the learning outcomes defined in each chapter. This will help with understanding the material.
- Do the Connect homework.
- Utilize the concepts assignments as a study tool as they will help with the understanding of the material.
- Attend the study sessions offered at TILT and facilitated by Learning Assistants.
- Form a study group. Explain the concepts to each other.

NEED HELP?

CSU is a community that cares for you. If you are struggling with drugs or alcohol and/or experiencing depression, anxiety, overwhelming stress or thoughts of hurting yourself or others please know there is help available. Counseling Services has trained professionals who can help. Contact 970-491-6053 or go to <http://health.colostate.edu>. If you are concerned about a friend or peer, tell someone by calling 970-491-1350 to discuss your concerns with a professional who can discreetly connect the distressed individual with the proper resources (<http://safety.colostate.edu/tell-someone.aspx>). Rams take care of Rams. Reach out and ask for help if you or someone you know is having a difficult time.