

SCED 203 Matter and Energy in Life Systems (4 credits)

Spring 2022 – Alejandro Acevedo (he/him/his)

Class:	MWF 10:00 – 11:50 h in SL210
Phone/email:	Alejandro Acevedo (email: aceveda@wwu.edu)
Office Hours:	M: 12:30-13:00 h; T: 10:00-10:30 h, 12:00-12:30 h, and by appointment.
Graduate TA:	Lindsey Gard (email: gardl@wwu.edu). Office Hours: M 13-14 h in the LRC, SMATE
Required Text:	Donovan D. <i>et al.</i> (2014) Life Science & Everyday Thinking. It's about Time, Mount Kisco, NY. Available at the bookstore. Please bring the manual to class each day. Extra copies will NOT be available if you forget to bring yours.

In this third course of a four-course series you will receive a firm base in the scientific study of life through inquiry-based instruction and the conduction of scientific activities. The course emphasizes cells, genetics and the evolution of life, interactions between organisms and their environment, and energy transformations.

Learning Outcomes: At the end of this course, you will:

1. Describe how energy and matter are acquired by animals.
2. Understand how living things grow and how traits are inherited.
3. Understand how the flow of energy and matter influences over time the evolution of living organisms.
4. Understand that science and common sense use similar thought processes (logic).
5. Construct a sound scientific explanation using evidence from experiments and observations.
6. Become familiar with student-centered learning.

To succeed in this class (and in life) you will need a **strategic mindset**: effort, perseverance, and continually asking yourself how you can improve. I strongly encourage you to read about this mindset on [Canvas\Files\Resources](#).

Daily Attendance: You should attend class every day since you will be part of a group and learn the material from the daily activities, which will prepare you for the exams. More than two absences will result in the loss of your attendance points (10% of your total grade). If you know in advance you are going to be absent, you should also contact me AND a member of your group.

Late arrivals: Class starts on time. Late arrivals are greatly discouraged and will negatively impact your achievement in the course. More than three late arrivals will result in the loss of your attendance points.

Participation: You will develop your own understanding of the material through lab experiments and discussion activities. You must be engaged and respectful, questioning and contributing to the group's success. Participation is a key element in this course; you will be evaluating your group and yourself periodically.

Homework: Homework will be assigned throughout each cycle and may require conducting experiments, visiting websites, etc. Homework should be completed individually, and must be your own work. More than two missed or late homework assignments will result in the loss of your homework points.

Late work: Due dates for assigned work will be announced in class and *are due at the beginning of class* (or they are late). Work submitted late on the due-date and thereafter will receive a 20% deduction. NO work will be accepted more than one day late.

Exams: All exams will be closed book. Attendance on exam dates is required unless you have a valid medical or family emergency excuse AND have previously communicated with an instructor via phone or email.

Pre- and post-assessments: To give the instructors an idea of your current understanding of the topic and the efficacy of the course, you might be asked to answer a pre- and a post-assessment. Your grade will not be affected by these assessments, but you NEED to take them in order to receive a grade for the class. You will take one assessment at the beginning and one towards the end of the course. The assessments will be accessible via the Internet, I will post instructions on Canvas to take them.

As described by the [State Legislature](#) (see definition 9), the course is designed for you to work outside of class twice the amount of time that you work in the class.

Grades:

Final exam (cumulative)		140 point total
Chapter exams	(60 pts each)	120 points total
Homework		120 points total
Participation (evaluation by your peers and the instructors)		60 points total
Attendance:		<u>60 points total</u>
		500 points TOTAL

Your class grade is determined using the following scale:

100% ≥ A > 95%	84% ≥ B- > 80%	70% ≥ D+ > 67%
95% ≥ A- > 90%	80% ≥ C+ > 77%	67% ≥ D > 64%
90% ≥ B+ > 87%	77% ≥ C > 74%	63% ≥ D- > 60%
87% ≥ B > 84%	74% ≥ C- > 70%	60% ≥ F > 0%

Inclusiveness and Respect

You are encouraged to speak up and participate during class. Because the class will represent a diversity of individual beliefs, backgrounds, and experiences, each one of us will respect, appreciate, and embrace every other member of this class.

I am firmly committed to diversity and equality in all areas of life. In this class, I will work to promote an inclusive environment where everyone feels safe and welcome. I recognize that discrimination can be direct or indirect and take place at both institutional and personal levels. I believe that such discrimination is unacceptable and I am committed to providing equality of opportunity for all by eliminating any and all discrimination, harassment, bullying, or victimization. The success of this policy relies on the support and understanding of everyone in this class. We all have a responsibility not to be offensive to each other, or to participate in, or condone harassment or discrimination of any kind. Without failing to speak up, we also have the opportunity to think the best of everyone and give one another the benefit of the doubt.

Equal Opportunity Rights

You have the right to an educational experience that is free from illegal harassment or discrimination on the basis of race, color, creed, religion, national origin, sex, disability, age, veteran status, sexual orientation, gender identity or expression, marital status or genetic information. **If you or someone you know has experienced macro- or micro-aggressions of any kind related to personal identity on campus**, please report any issues to an instructor you feel is an ally, or to one of our College Community Ambassadors (<https://cse.wvu.edu/ambassador-program>). You can also contact the Equal Opportunity Office for additional advice and help (<http://www.wvu.edu/eoo/bias-incident-response.shtml>).

Intellectual Honesty

Science is based on trust. If a scientist states that she carried out a particular study and obtained certain results, the rest of us trust that she did such thing. This is one reason why there is no tolerance for people who are not intellectually honest, and this class will be no exception. <https://wp.wvu.edu/academichonesty/>

From WWU: Plagiarism is presenting as one's own in whole or in part the argument, language, creations, conclusions, or scientific data of another without explicit acknowledgement. (Learn more at [Understanding and Avoiding Plagiarism.](#)) Examples include but are not limited to:

- Using another person's written or spoken words.
- Using information from a World Wide Web site, CD-ROM or other electronic sources.
- Using statistics, graphs, charts and facts without acknowledging the source of the ideas.
- Paraphrasing: using someone else's argument without acknowledging the source.

Religious Accommodations

Western provides reasonable accommodation for students to take holidays for reasons of faith or conscience or for organized activities conducted under the auspices of a religious denomination, church, or religious organization. Students seeking such accommodation must provide written notice to their faculty within the first two weeks of the course, citing the specific dates for which they will be absent. "Reasonable accommodation" means that faculty will coordinate with the student on scheduling examinations or other activities necessary for completion of the course or program and includes rescheduling examinations or activities or offering different times for examinations or activities. Additional information about this accommodation can be found in [SB 5166: Providing religious accommodations for postsecondary students.](#)

Additional Resources

Do you have any concerns about your ability to learn in the classroom or your ability to take assessments in the classroom? Contact the Disability Access Center for advice, help, and to request accommodation (650-3083 or <https://disability.wvu.edu/>).

Do you want feedback on your cover letter or resume? The Career Services Center at Western will gladly review them, compare them with the posting for which you are applying, and provide feedback to you within 48 h: <https://www.wvu.edu/careers/>

Do you feel unwell or have a health-related question? Contact the Health Center (650-3400) or visit the website of Student Health (<https://studenthealth.wvu.edu/>)

Do you have an emotional or psychological concern or question? Contact the Counseling Center (650-3164) or visit the website of Counseling Services (<http://www.wvu.edu/counseling/>).

Do you have a safety concern? Contact the University Police for non-emergency services (650-3555) or visit their website (<http://www.wvu.edu/ps/police/index.shtml>).

Do you have a family or personal crisis or emergency? Contact the Office of Student Life (650-3450) or visit their website (<https://wp.wvu.edu/officeofstudentlife/>).

Do you have concerns related to being an undocumented student? Contact Student Outreach Services (650-7443) and check the following site: <https://www.wvu.edu/undocumented-students>.

Do you have financial difficulties? Go to the Financial Aid Services Center and schedule an appointment with a financial aid counselor (http://www.finaid.wvu.edu/client_services/pages/contact.php)

Do you identify as a member of the LGBTQ+ Community? Learn about resources and support by emailing L. K. Langley (they/them/theirs) at L.K.langley@wvu.edu or by visiting <https://lgbtq.wvu.edu/>

Do you or someone you know need confidential support related to sexual violence? Contact CASAS (650-3700 or <https://pws.wvu.edu/consultation-and-sexual-assault-support-casas>), the Student Health Center, and/or the Counseling Center.

To report sexual violence, please contact University Police, Bellingham Police, and/or the Title IX Coordinator in Western's Equal Opportunity Office (650-3307). Faculty are required to report sex discrimination, including sexual violence that they learn about to the Title IX Coordinator.

Are you or someone you know in distress? Help is available anytime, all the time. <https://suicideprevention.wvu.edu/get-help/>

I also encourage you to check the syllabi policies for students: <https://syllabi.wvu.edu/>

Mask Policy

Following Western's mask policy: masks will be required in the classroom through the first two weeks of the quarter. Masks will become optional for all individuals inside the classroom effective Monday April 11.

Please notice that after April 11, individuals may choose to continue wearing a mask for personal or health reasons. We will all be understanding, respectful, and considerate of individual choices to mask or not to mask.

Changes might be made to the syllabus along the course. These changes will be announced in advance.

Schedule

Week	Date	Cycle/Activity (MWF 10:00 – 11:50, SL210)
1	Mar W 30	Introduction. Chapter 1, Activity 1
	Apr F 1	Chapter 1, Activity 2
2	M 4	Chapter 2, Activity 1
	W 6	Chapter 2, Activity 3 <i>Note that class will be held in LRC (next to SL210) that day</i>
	F 8	Chapter 2, Activity 4
3	M 11	Chapter 2, Activity 4
	W 13	Chapter 2, Activity 5, 6
	F 15	Chapter 2, Activity 6
4	M 18	Chapter 2, Activity 7
	W 20	EXAM I Chapters 1-2
	F 22	Chapter 5, Activity 1
5	M 25	Chapter 5, Activity 2
	W 27	Chapter 5, Activity 3
	F 29	Chapter 5, Activity 3
6	May M 2	Chapter 5, Activity 5
	W 4	Chapter 6, Activity 1
	F 6	Chapter 6, Activity 1,2
7	M 9	Chapter 6, Activity 3
	W 11	Chapter 6, Activity 3
	F 13	EXAM II Chapters 5-part of 6
8	M 16	Chapter 6, Activity 4
	W 18	Chapter 6, Activity 4, 5
	F 20	Chapter 6, Activity 5
9	M 23	Chapter 6, Activity 6
	W 25	Chapter 7, Activity 1
	F 27	Chapter 7, Activity 1
10	M 30	HOLIDAY!!
	Jun.....W 1	Chapter 7, Activity 2
	F 3	Chapter 7, Activity 3
	R 9	FINAL EXAM Chapters 1, 2, 5, 6, 7 10:30-12:30 h

To skip:

Chapter 1: Activities 3 and 4

Chapter 2: Activity 2

Chapter 5: Activity 4

Chapter 7: Activity 4

GURs:

Foundational **Knowledge** &
Practice Literacies for
Developing, Integrating, and
Extending Your Core Capacities

