

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

Spring 2021 – Alejandro Acevedo (he/him/his)

<b>Class:</b>	Offline AND Zoom via Canvas: some M and W, most F 13:00~14:30 h (see schedule)
<b>Phone/email:</b>	Alejandro Acevedo (email: <a href="mailto:aceveda@wwu.edu">aceveda@wwu.edu</a> )
<b>Office Hours:</b>	Via email
<b>Graduate TA:</b>	Sarah Swan (email: <a href="mailto:swans4@wwu.edu">swans4@wwu.edu</a> ). <u>Office Hours:</u> via email
<b>Required Text:</b>	Donovan D. <i>et al.</i> (2014) Life Science & Everyday Thinking. It's about Time, Mount Kisco, NY. <b>Available electronically on Canvas for free.</b>

In this third course of a four-course series you will receive a firm base in the scientific study of life through modified inquiry-based instruction. 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. Construct a sound scientific explanation using evidence from experiments and observations.
5. Be aware of the concept of student-centered learning.

Typically, the class relies on activities conducted by you with other students to collect evidence and construct your ideas about the topic in question. Unfortunately, this approach will not be possible this quarter. The general template for the class will thus be: offline work in your textbook supplemented with pdf files or other material as collected evidence, submission of some of this offline work as assigned by me (participation points), submission of assigned homework (homework points), class discussion during Zoom meetings (attendance points), and completion of three exams, including a cumulative final (exam points). The schedule at the end of the syllabus details all the assigned material.

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](#).

**Attendance:** You should be present during Zoom meetings. *More than one absence 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 let me know the reason.

**Late arrivals:** Zoom meetings will start on time (13:00 h). Late arrivals are greatly discouraged and will negatively impact your achievement in the course. *Over two late arrivals will result in the loss of your attendance points.*

**Participation:** Typically, the class relies on activities conducted by you with other students. Unfortunately, this approach will not be possible this quarter. Hence, you will submit via Canvas assigned pages from the textbook that show your work.

**Homework:** Homework will be assigned throughout the quarter. It should be completed individually, and must be your own work. The grading will emphasize completion and a little of correctness in the answers. More than two missed or late homework assignments will result in the loss of your points.

**Late work:** Due dates and times for assigned work are found in the schedule at the end of this syllabus. Work submitted late will receive a 20% deduction. NO work will be accepted more than one day late.

**Exams:** All exams will be online via Canvas, timed, and closed book. I will be trusting everyone unless they give me a reason not to. Exams will be due as indicated on Canvas unless you have a valid medical or family emergency excuse AND have previously communicated with me.

### Grades:

The point distribution is as follows:

Final exam (cumulative, submitted online, graded)	140 point total
Chapter exams (60 pts each, submitted online, graded)	120 points total
Homework (submitted online, graded)	100 points total
Participation (assigned manual pages, submitted online, ungraded)	80 points total
Attendance (present and participating during Zoom meetings, ungraded)	<u>60 points total</u>
	500 points TOTAL

The grade will be 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. 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, which is using someone else's argument without acknowledging the source by imitating the argument using other words.

Learn more at [Understanding and Avoiding Plagiarism](#)

## 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](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](mailto: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/>

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

**Schedule SCED203 Online**

<b>Wk</b>	<b>Date</b>	<b>Cycle/Activity to do online</b> (Individual work, skip discussions) <b>Read also notes on Canvas</b>	<b>Zoom video meeting</b> (13:00 - ~14:30 h) To whiteboard	<b>Pages to turn in</b> [Due at 13:00 h] <b>If possible as pdf</b>	<b>Homework</b> [Due at 13:00 h] <b>Submit only pp with answers</b>
<b>1</b>	<b>Mar</b> W 31	<b>Chapter 1</b> Activity 1 pp 1-1-1 to 1-1-7	<b>Introduction</b>		
	<b>Apr</b> F 2	Activity 2 pp 1-2-1 to 1-2-6	<b>Discuss pp 1-1-6, 1-1-7</b>	pp 1-1-1 pp 1-1-4 pp 1-1-6 (3 total)	
<b>2</b>	M 5	<b>Chapter 2</b> Activity 1 pp 2-1-1 to 2-1-20		pp 1-2-3 (1 total)	pp 1-1-9
	W 7	Activity 3 pp 2-3-1 to 2-3-13		pp 2-1-1 pp 2-1-6 pp 2-1-7 pp 2-1-10 pp 2-1-11 pp 2-1-17 pp 2-1-19 (7 total)	pp 1-2-5 to 1-2-6 pp 1-Conclusion-1 to 1-Conclusion-3
	F 9	Activity 4 pp 2-4-1 to 2-4-9	<b>Discuss pp 1-2-2, 1-2-3, 1-2-4, 2-1-20, 2-1-25, 2-3-11</b>	pp 2-3-1 pp 2-3-5 pp 2-3-7 pp 2-3-11 pp 2-3-12 (5 total)	pp 2-1-21 to 2-1-25
<b>3</b>	M 12	Activity 5 pp 2-5-1 to 2-5-7		pp 2-4-1 pp 2-4-2 pp 2-4-9 (3 total)	pp 2-3-15 to 2-3-21
	W 14	Activity 6 pp 2-6-1 to 2-6-10		pp 2-5-1 pp 2-5-5 pp 2-5-6 pp 2-5-7 (4 total)	pp 2-4-11 to 2-4-16
	F 16	Activity 7 pp 2-7-1 to 2-7-13	<b>Discuss pp 2-4-9, 2-5-6, 2-6-19</b>	pp 2-6-1 pp 2-6-7 pp 2-6-9 pp 2-6-10 (4 total)	pp 2-5-9 to 2-5-10
<b>4</b>	M 19	<i>Study for exam</i>	<b>Discuss pp 2-7-11, 2-7-2, 2-7-3, 2-7-4, 2-7-5, 2-7-6, 2-7-7; Review</b>	pp 2-7-2 pp 2-7-3 pp 2-7-4 pp 2-7-5 pp 2-7-6 pp 2-7-7 pp 2-7-11 (7 total)	pp 2-6-11 to 2-6-19
	W 21	<b>EXAM I Chapters 1-2</b> (Via Canvas)			pp 2-7-15 to 2-7-18 pp 2-Conclusion-1 to 2-Conclusion-3
	F 23	<b>Chapter 5</b> Activity 1 pp 5-1-1 to 5-1-10			
<b>5</b>	M 26	Activity 2 pp 5-2-1 to 5-2-15		pp 5-1-1 pp 5-1-3 pp 5-1-9 (3 total)	
	W 28	Activity 3 pp 5-3-1 to 5-3-19		pp 5-2-1 pp 5-2-7 pp 5-2-13 pp 2-5-14 pp 5-2-15 (5 total)	
	F 30	Activity 5 pp 5-5-1 to 5-5-15	<b>Discuss pp 5-1-9, 5-2-13, 5-2-14, 5-2-15, 5-3-17, 5-3-18, 5-3-19</b>	pp 5-3-1 pp 5-3-4 pp 5-3-11 pp 5-3-18	pp 5-2-17 to 5-2-19 [Read also pdf file on Canvas]

<b>Wk</b>	<b>Date</b>	<b>Cycle/Activity to do online</b> (Individual work, skip discussions) <b>Read also notes on Canvas</b>	<b>Zoom video meeting</b> (13:00 - ~14:30 h) To whiteboard	<b>Pages to turn in</b> [Due at 13:00 h] <b>If possible as pdf</b>	<b>Homework</b> [Due at 13:00 h] <b>Submit only pp with answers</b>
				pp 5-3-19 (5 total)	
6	May M 3	<b>Chapter 6</b> Activity 1 pp 6-1-1 to 6-1-12		pp 5-5-1 pp 5-5-3 pp 5-5-5 pp 5-5-11 pp 5-5-15 (5 total)	pp 5-3-21 to 5-3-37
	W 5	Activity 2 pp 6-2-1 to 6-2-7		pp 6-1-2 pp 6-1-6 pp 6-1-8 pp 6-1-10 pp 6-1-11 (5 total)	pp 5-5-17 to 5-5-24 pp 5-Conclusion-1 to 5-Conclusion-3
	F 7	Activity 3 pp 6-3-1 to 6-3-12	Discuss pp 5-5-14, 5-5-15, 6-1-2, 6-1-10, 6-1-11, 6-2-3	pp 6-2-3 pp 6-2-4 (2 total)	
7	M 10	Activity 3 pp 6-3-13 to 6-3-20		pp 6-3-1 pp 6-3-6 pp 6-3-7 pp 6-3-11 pp 6-3-12 (5 total)	
	W 12	<i>Study for exam</i>	Discuss pp 6-3-9, 6-3-10, 6-3-11, 6-3-12, 6-3-14, 6-3-17, 6-3-18, 6-3-19, 6-3-20, 6-3-21; Review	pp 6-3-14 pp 6-3-15 pp 6-3-20 pp 6-3-21 (4 total)	
	F 14	<b>EXAM II Chapters 5-parts of 6</b> (Via Canvas)			pp 6-3-23 to 6-3-26 [Read also pdf file on Canvas]
8	M 17	Activity 4 pp 6-4-1 to 6-4-17			
	W 19	Activity 5 pp 6-5-1 to 6-5-8		pp 6-4-1 pp 6-4-5 pp 6-4-7 pp 6-4-12 pp 6-4-14 pp 6-4-15 pp 6-4-16 (7 total)	
	F 21	Activity 5 pp 6-5-9 to 6-5-20	Discuss pp 6-4-15, 6-4-16, 6-5-6, 6-5-7, 6-5-8, 6-5-13, 6-5-19	pp 6-5-1 pp 6-5-6 pp 6-5-7 pp 6-5-8 (4 total)	pp 6-4-19 to 6-4-27
9	M 24	Activity 6 pp 6-6-1 to 6-6-14		pp 6-5-9 pp 6-5-11 pp 6-5-13 pp 6-5-16 pp 6-5-18 pp 6-5-19 (6 total)	
	W 26	<b>Chapter 7</b> Activity 1 pp 7-1-1 to 7-1-14		pp 6-6-2 pp 6-6-5 pp 6-6-11 pp 6-6-13 (4 total)	pp 6-5-21 to 6-5-24
	F 28		Discuss pp 6-6-11, 6-6-12, 6-6-13, 7-1-11, 7-1-2, 7-1-13,	pp 7-1-2 pp 7-1-5 pp 7-1-11 pp 7-1-14	p 6-6-15 to 6-6-16 pp 6-Conclusion-1 to 6-Conclusion-4

			7-1-14	(4 total)	
<b>Wk</b>	<b>Date</b>	<b>Cycle/Activity to do online</b> (Individual work, skip discussions) <b>Read also notes on Canvas</b>	<b>Zoom video meeting</b> (13:00 - ~14:30 h) To whiteboard	<b>Pages to turn in</b> [Due at 13:00 h] <b>If possible as pdf</b>	<b>Homework</b> [Due at 13:00 h] <b>Submit only pp with answers</b>
<b>10</b>	M 31	<b>HOLIDAY!!</b>			
	W 2	<i>Study for exam</i>			
	F 4	<i>Study for exam</i>	<b>Review</b>		
<b>11</b>	<b>M 7</b>	<b>FINAL EXAM Chapters 1,2,5,6,7</b> <b>(Via Canvas) 15:30-17:30 h</b>			

**To skip:**

Chapter 1: Activities 3 and 4

Chapter 2: Activity 2

*Chapters 3-4*

Chapter 5: Activity 4

# GURs:

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

