

CASPER COLLEGE COURSE SYLLABUS

LIFE 1020, Life Sciences

Semester/Year: Fall 2014

Lecture Hours: 3

Lab Hours: 3

Credit Hours: 6

Class Time: online

Days: online

Room: online

Instructor's Name:

Instructor's Contact Information:

Office Phone:

(307)268-2873

Email: Please use Moodle Mail (Moodle Class Communication)

Alternate email:

kelseyphillips@caspercollege.edu

Office Hours:

Monday: 2:15-3 pm

Tuesday: 9:30- 11:30 am

Wednesday: 4-5 pm (by appointment ONLY)

Thursday: 9:30-11:30

Course Description: Life Sciences is an introductory course emphasizing principles of biology including cell structure and function, genetics, ecology, evolution and organismal biology. The applications of these principles to societal issues such as the biodiversity, overpopulation and global environmental changes, biotechnology, and human wellness and disease are also considered.

Statement of Prerequisites: Non-biology Majors, Elementary education majors: concurrent enrollment in EDCI 1430

Goal: Students will become familiar with major concepts necessary for general understanding of biology. Application of these concepts will be stressed.

Outcomes:

1. Demonstrate effective oral and written communication
2. Use the scientific method
3. Solve problems using critical thinking and creativity
5. Use appropriate technology and information to conduct research
6. Describe the value of personal, civic, and social responsibilities
7. Use quantitative analytical skills to evaluate and process numerical data

Course Objectives:

Students will become familiar and understand concepts relating to:

- population growth
- ecosystems
- genetics

- health and disease
- cell biology
- evolution
- taxonomy
- molecular biology
- scientific method
- diversity of life
- environmental issues

Methodology:

Students should be prepared to devote *a minimum* of 10 hours per week to this course, 12 hours per week is recommended. The course is centered on the learning cycle. Students will be required to actively participate and engage in course content. Content will be delivered using PowerPoint slides, videos, computer simulations, laboratory experiments, class discussions, field trips, and service learning activities. The LIFE 1020 course incorporates a laboratory, will provide the student inquiry-based, hands-on learning opportunities.

Evaluation Criteria:

Grading: Grades will be earned based upon the accumulation of points from the following lecture and laboratory evaluations: lecture exams, weekly online quizzes, in-class essays, laboratory exams, and laboratory reports. Your scores from each assignment will be available on the Moodle site as soon as the assignment has been graded. Please keep all returned assignments. If there is a discrepancy between a posted grade and that on a returned assignment or exam, please contact me immediately.

Final grades will be derived as follows:

400 points	9 exams (50 points each- lowest score is dropped)
175 points	Laboratory exercises (8 exercises, 25 points each- lowest score is dropped)
100 points	11 quizzes (10 points each- lowest score dropped)
100 points	Midterm Exam
100 points	Final Exam
45 points	3 Jigsaws (15 points each)
50 points	6 Discussion forums (10 points each, lowest one dropped)
15 points	Syllabus Quiz
10 points	Academic Honesty Contract

1000 POINTS POSSIBLE

Semester grades will be assigned according to the final percentage of total points possible earned by each student as follows:

90% and above	= A
80% - 89.9%	= B
70 -79.9%	= C
60 -69.9%	= D
0 -59.9%	= F

Grades may be slightly curved at the end of the semester, which is solely at my discretion. I reserve the right to allow attendance and classroom participation to influence assignment of the final course grade.

Extra credit: I will not offer individual extra credit opportunities; please do not ask for them. If I do offer extra credit, it will be offered to the entire class. Here is one extra credit opportunity available to everyone (it's worth 15 points):

In high school, going to the Principal's office was bad! In college, going to see your instructor at their office is good! Here's the deal: come visit me **during office hours** (or call if you can't come in) **between September 15 and November 3**. We'll have a 15 minute conversation to discuss how class is going, what I can do to help you, and we'll work out a game plan to help you achieve your goals.

Bonus points AND individualized attention: that sounds like a win-win! Please be advised that I make this opportunity available to all of my students, so please be patient. I'll give you the same attention as I did the person ahead of you 😊!

Examination Policy:

Midterm and Final Examinations: The mid-term and final examinations **are proctored, password protected, cumulative and closed-book.**

- Students who reside in the Casper, WY area are required to schedule a time for their exam through the Casper College Academic Testing Center <http://www.caspercollege.edu/act/index.html>
- Students who reside outside of the Casper, WY area are responsible for identifying a **testing center**. Individual proctors will not be considered. You are responsible for making your appointment, paying any proctoring fees, and knowing the policies and hours of the testing center. **Within the first two weeks** of class, please email me with the following information:
 - the name of the testing center
 - a contact person
 - Email address AND phone numberSome testing centers require a fee for proctoring. It is your responsibility to cover this fee, and is considered to be part of the cost of a distance education course.
- **If you fail to make arrangements with a proctor within the first two weeks of class, I cannot guarantee that you will be able to take the midterm or final examination.**

Testing arrangements will NOT be made during the week of the midterm or final examinations!

Quizzes and Unit Exams:

All quizzes and unit exams in the course will be administered through the course Moodle website. Please see the weekly course schedule below for timing of quizzes and exams.

- Quizzes will open at 7am on Tuesday, and close at 11:55 pm the following Monday. You will have two attempts on each quiz. The highest score is recorded.
- Unit exams will open on Thursdays at 7 am and close at 11:55 pm the following Wednesday. You will have one attempt on each Unit exam.
- I demand academic integrity on all quizzes and examinations. If it is determined that you and another student cheat on an exam or quiz, both students will receive zeros. If the behavior continues, students may be assigned a failing grade for the course or administratively withdrawn.

- Exams will be open for review after the closing date of the exam.

You are allowed to drop one quiz and one unit exam! Except in extreme circumstances, make-ups on quizzes and exams are not allowed!

Laboratory Assignments:

Laboratory assignments are designed to complement the reading and discussion material. will be assigned. Unless otherwise specified, the assignment is due no later than the Friday of the following week. ***Some laboratory assignments will take more than one day to complete! Do not wait until the last minute to start your laboratory!***

Many of our assignments will require you to graph your data. You are strongly encouraged to use a spreadsheet program (e.g. Google Spreadsheets, MicrosoftExcel) to generate these graphs. Class assignments must be submitted electronically via the course Moodle website, and uploaded to the corresponding assignment dropbox. You are required to submit your assignment as a portable document file (.pdf). Other file formats will not be accepted, and will be assigned a score of zero.

In Microsoft Word, you are able to save your document as follows:

Office Button>Save As > Adobe PDF

All assignments must be submitted electronically through Moodle. Due to security reasons, I cannot accept assignments via email or in hard copy!

Online Jigsaws: In any discipline, being able to work with others remotely through electronic means of communication is essential. We will have three jigsaw activities, and the dates for these are detailed in the schedule. These are REQUIRED. More specific instructions and a grading rubric will be provided to you through Moodle.

Discussion Forums: We will use discussion forums to clarify and supplement the assigned reading material, and your participation is crucial! Information that is not in your textbook is presented in the online forums, and may be used in examinations. Discussion forums will open on the Wednesday of the week it appears in the course schedule. Discussions will remain open for one week, and grades will be scored according to the discussion rubric provided.

Required Text, Readings, and Materials:

Essentials of Biology, Mader and Windelspecht, 3rd or 4th edition

Laboratory materials: The great thing about science is that it's all around us. An even better thing is that learning science doesn't have to be expensive. We'll be going outside and into our kitchens for most of the lab materials. You'll be expected to provide the following:

- Pineapple (fresh and canned)
- Jell-O
- 3-5 eggs
- White vinegar (about a quart)
- Fresh spinach

- Single hole punch
- Baking soda
- 2, 10CC syringes (you can get these at a pharmacy or stop by my office to pick them up)
- A scalpel, utility knife or a single edge razor blade
- Newspaper
- Plain white paper
- A digital camera (or a smartphone)
- Access to a scanner (with few exceptions, I do not accept hard copies of assignments)
- Your eyeballs and excellent observational skills

Computer and internet access: Each student in the course will be required to log onto the course Moodle website. The recommended internet browsers for the Moodle website are Mozilla Firefox and Google Chrome, which are freely downloaded. It is highly recommended that you use Mozilla Firefox or Google Chrome when taking online quizzes and exams. Errors that occur from using any other internet browser may result in crashes that could negatively impact your grade. Students may use computers on campus, at home or at other facilities that have internet access.

Last Date to Change to Audit Status or to Withdraw with a W Grade:

November 12, 2015

Student Rights and Responsibilities: Please refer to the Casper College Student Conduct and Judicial Code for information concerning your rights and responsibilities as a Casper College Student.

Chain of Command: If you have any problems with this class, you should first contact the instructor to attempt to solve the problem. If you are not satisfied with the solution offered by the instructor, you should then take the matter through the appropriate chain of command starting with the Department Head/Program Director, the Dean, and lastly the Vice President for Academic Affairs.

Academic Dishonesty: (Cheating & Plagiarism) Casper College demands intellectual honesty. Proven plagiarism or any form of dishonesty associated with the academic process can result in the offender failing the course in which the offense was committed or expulsion from school. See the Casper College Student Code of Conduct for more information on this topic.

Official Means of Communication: Casper College faculty and staff will employ the student's assigned Casper College email account as a primary method of communication. Students are responsible to check their account regularly. This is also, where you will find course evaluation links during course evaluation periods.


ADA Accommodations Policy: If you need academic accommodations because of a disability, please inform me as soon as possible. See me privately after class, or during my office hours. To request academic accommodations, students must first consult with the college's Disability Services Counselor located in the Gateway Building, Room 344, (307) 268-2557, bheuer@caspercollege.edu. The Disability Services Counselor is responsible for reviewing documentation provided by students requesting accommodations, determining eligibility for accommodations, and helping students request and use appropriate accommodations.

Schedule for the Course

The following table contains a weekly schedule for the course. Do NOT get behind; it will be **very difficult** to catch up.

Please pay attention to the foot notes in the table!

Week (Monday's Date)	Topics	Assigned Reading	Discussion	Laboratory	Quiz/Exam	Important Stuff
1 Aug 24	Unit 1: The Cell A view of life, Chemistry	Chapters 1-2	The Scientific Method	Lab 1: The Scientific Method	Quiz 1	
2 Aug 31	Organic Chemistry, Cells	Chapters 3-4	Water Olympics		Quiz 2, Unit 1 Exam	Make at least 3 naked eggs for lab next week!
3 Sept. 7	Finish Unit 1 Unit 2: Metabolism Osmosis & Enzymes	Chapter 5	Jigsaw #1: Properties of Enzymes Sept. 9-18	Lab 2: Enzymes	Quiz 3	
4 Sept. 14	Photosynthesis and Cellular Respiration	Chapters 6-7		Lab 3: Photosynthesis	Unit 2 Exam	
5 Sept. 21	Unit 3: Asexual and Sexual Reproduction The cell cycle, mitosis, meiosis	Chapters 8-9	HeLa		Quiz 4, Unit 3 Exam	
6 Sept. 28	Finish Unit 3 Unit 4: Genetics and Molecular Biology Patterns of Inheritance	Chapter 10	Jigsaw #2: Genetic Alphabet Soup Sept 30- Oct 9		Quiz 5	
7 Oct. 5	Patterns of Inheritance, Biotechnology	Chapters 10-11		Lab 4: Your family tree!	Quiz 6, Unit 4 Exam	Check with your proctor and confirm your midterm appointment
8 Oct. 12	Midterm Examination (Cumulative of Units 1-4) The midterm examination opens at 7 am on October 12, and closes at 5 pm on October 15					
9 Oct. 19	Unit 5: Evolution	Chapters 14-15	Evolution	Lab 5: Evidence for Evolution (note...this	Quiz 7	

	Evolution by Natural Selection	Chapter 19 (p. 360-363)		requires a field trip, start early!‡		
10 Oct. 26	Evolutionary Mechanisms and Population genetics	Chapters 15-16		Continue Evidence for Evolution	Unit 5 Exam	
11 Nov. 2	Unit 6: The Microbial World Viruses, bacteria and parasites!	Chapter 17	Jigsaw #3 Human Health and Disease Nov.4-13		Quiz 8, Unit 6 Exam	
12 Nov. 9	Finish Unit 6 Unit 7: Plant Diversity Plant diversity, fungi, plant anatomy & growth	Chapter 18 Chapter 20 (p. 370-373)	Dichotomous keys	Lab 6: Plant Diversity	Quiz 9	
13 Nov. 16	Finish Unit 7 Unit 8: Animal Diversity	Chapter 19			Quiz 10, Unit 7 Exam	Check with your proctor and confirm your appointment
14 Nov. 23	Finish Unit 8 Begin Unit 9: Ecology Population ecology and growth	Chapter 30		 Thanksgiving break	Quiz 11, Unit 8 exam	
15 Nov. 30	Community Ecology,	Chapter 31	Age structure of the human population	Lab 7 : Ecology		
16 Dec. 7	Ecosystems & Biomes	Chapter 32			Unit 9 Exam	
17 Dec. 14	FINAL EXAMINATION (Cumulative of Units 5-7) Be sure to schedule your appointment at the testing center! The final exam opens at 7 am on December 15 and closes at 5 pm on December 17					

‡ The “Evidence for Evolution” laboratory will require a trip to a museum with fossilized bones! The Tate Geological Museum and The Wyoming Dinosaur Center are great resources for those in Wyoming. If these museums are too far away, past students have used museums all over the United States and Canada. Contact me early, and we’ll find something to “dig into!”

Academic Honesty Contract _____/10
Syllabus Quiz _____/15
Exam 1 _____/50
Exam 2 _____/50
Exam 3 _____/50
Exam 4 _____/50
Exam 5 _____/50
Exam 6 _____/50
Exam 7 _____/50
Exam 8 _____/50
Exams Total – lowest score _____

Quiz 1 _____/10
Quiz 2 _____/10
Quiz 3 _____/10
Quiz 4 _____/10
Quiz 5 _____/10
Quiz 6 _____/10
Quiz 7 _____/10
Quiz 8 _____/10
Quiz 9 _____/10
Quiz 10 _____/10
Quiz 11 _____/10
Quizzes Total – lowest score _____

Lab 1 _____/25
Lab 2 _____/25
Lab 3 _____/25
Lab 4 _____/25
Lab 5 _____/25
Lab 6 _____/25
Lab 7 _____/25
Lab 8 _____/25
Lab Total – lowest score _____

Discussion 1 _____/10
Discussion 2 _____/10
Discussion 3 _____/10
Discussion 4 _____/10
Discussion 5 _____/10
Discussion 6 _____/10
Discussion Total – lowest score _____
Jigsaw 1 _____/15
Jigsaw 2 _____/15
Jigsaw 3 _____/15
Midterm Exam _____/100
Final Exam _____/100