











Advanced Human Physiology (Biol 4600)
Schedule of Classes, Spring 2018

<u>WEEK</u>	<u>DAY</u>	<u>SUBJECT</u>	<u>READING IN BOOKLET</u>	<u>CORRESPONDING READING IN TEXT</u>
1	Mon, Jan 8	Brief Introduction and Interactions Between the Cells and the Extracellular Environment, Part #1	3-13	130-142
	Tues, Jan 9	Interactions Between Cells and the Extracellular Environment, Part #1	3-13	130-142
	Wed, Jan 10	Interactions Between Cells and the Extracellular Environment, Part #2	14-23	142-149
	Fri, Jan 12	Interactions Between Cells and the Extracellular Environment, Part #3 Optional Review Session at 4:30 pm in VSB 130	24-29 -----	149-161 -----
	Mon-Fri	“Reproduction Revealed #1” at Canvas Site	446-451	702-705
	Tues-Thur	Lab #1: DVD (no lab points, but questions in upcoming lab quiz and final exam)	2	-----
2	Mon, Jan 15	HOLIDAY 	-----	-----
	Tues, Jan 16	The Nervous System, Part #1	30-38	162-171
	Wed, Jan 17	The Nervous System, Part #2	39-57	172-184
	Fri, Jan 19	The Nervous System, Part #2 Optional Review Session at 4:30 pm in VSB 130	39-57 -----	172-184 -----
	Mon-Fri	“Reproduction Revealed #2” at Canvas Site	452-460	705-710
	Tues-Thur	Lab #2: WBC Differential Counts and Leukemia (10 points possible)	3-15	-----
3	Mon, Jan 22	The Nervous System, Part #3	58-72	185-205
	Tues, Jan 23	The Nervous System, Part #3	58-72	185-205
	Wed, Jan 24	The Central Nervous System, Part #1	73-89	206-225
	Fri, Jan 26	The Central Nervous System, Part #1 Optional Review Session at 4:30 pm in VSB 130	73-89 -----	206-225 -----
	Mon-Fri	“Reproduction Revealed #3” at Canvas site	461-463	710-712
	Tues-Thur	Lab #3: Osmosis and Diffusion (10 points possible)	16-21	-----
4	Mon, Jan 29	EXAM #1 (Last Day to Drop Without Notation on Transcript)	-----	-----
	Tues, Jan 30	The Central Nervous System, Part #2	90-102	225-242

	Wed, Jan 31	The Central Nervous System, Part #2	90-102	225-242
	Fri, Feb 2	The Autonomic Nervous System Optional Review Session at 4:30 pm in VSB 130	103-113 -----	243-265 -----
	Mon-Fri	“Reproduction Revealed #4” at Canvas site	464-467	712-716
	Tues-Thur	Lab #4: Reflex Functions (10 points possible)	22-32	-----
5	Mon, Feb 5	The Autonomic Nervous System	103-113	243-265
	Tues, Feb 6	Endocrine Glands, Part #1	114-137	316-341
	Wed, Feb 7	Endocrine Glands, Part #1	114-137	316-341
	Fri, Feb 9	Endocrine Glands, Part #2 Optional Review Session at 4:30 pm in VSB 130	138-147 -----	341-358 -----
	Mon-Fri	“Reproduction Revealed #5” at Canvas site	468-471	716-719
	Tues-Thur	Lab #5: Evaluation of Sensory Structures (10 points possible)	33-49	-----
6	Mon, Feb 12	Endocrine Glands, Part #2	138-147	341-358
	Tues, Feb 13	Muscle, Part #1	148-163	359-377
	Wed, Feb 14	Muscle, Part #1	148-163	359-377
	Fri, Feb 16	Muscle, Part #2 Optional Review Session at 4:30 pm in VSB 130	164-179 -----	377-403 -----
	Mon-Fri	“Reproduction Revealed #6” at Canvas site	472-474	719-722
	Tues-Thur	LAB QUIZ # 1 and DVD (5 points possible for attendance)	-----	-----
7	Mon, Feb 19	HOLIDAY*	-----	-----
	Tues, Feb 20	EXAM #2 (*Attend lectures and office hours as if it were Monday!)	-----	-----
	Wed, Feb 21	Muscles, Part #2	164-179	377-403
	Fri, Feb 23	Blood Optional Review Session at 4:30 pm in VSB 130	180-197 -----	404-414 -----
	Mon-Fri	“Reproduction Revealed #7” at Canvas site	475-477	722-725
	Tues-Thur	No labs this week!	-----	-----
8	Mon, Feb 26	Blood	180-197	404-414
	Tues, Feb 27	Coagulation	198-212	414-418
	Wed, Feb 28	Coagulation	198-212	414-418
	Fri, Mar 2	Heart Optional Review Session at 4:30 PM in VSB 130	213-231 -----	418-431 -----
	Mon-Fri	“Reproduction Revealed #8” at	478-486	725-730

		Canvas site		
	Tues-Thur	Lab #6: Muscles (10 points possible)	50-57	-----
9	Mon, Mar 5	SPRING BREAK	-----	-----
	Tues, Mar 6	SPRING BREAK	-----	-----
	Wed, Mar 7	SPRING BREAK	-----	-----
	Fri, Mar 9	SPRING BREAK	-----	-----
	Mon-Fri	SPRING BREAK (No labs)		-----
10	Mon, Mar 12	Heart	213-231	418-431
	Tues, Mar 13	Blood Vessels, Atherosclerosis, Cardiac Arrhythmias, and Lymphatic System	232-247	431-449
	Wed, Mar 14	Blood Vessels, Atherosclerosis, Cardiac Arrhythmias, and Lymphatic System	232-247	431-449
	Fri, Mar 16	Cardiac Output, Blood Flow, and Blood Pressure, Part #1 Optional Review Session at 4:30 PM in VSB 130	250-266 -----	450-468 -----
	Mon-Fri	“Reproduction Revealed #9” at Canvas site	487-489	730-733
	Tues-Thur	Lab #7: Dissection of Sheep’s Brains and Examination of Previously Exposed Human Brains (10 points possible)	58-72	-----
11	Mon, Mar 19	EXAM # 3	-----	-----
	Tues, Mar 20	Cardiac Output, Blood Flow, and Blood Pressure, Part #1	250-266	450-468
	Wed, Mar 21	Cardiac Output, Blood Flow, and Blood Pressure, Part #2	267-289	468-492
	Thur, Mar 22	Last day to drop with a “W” on transcript	-----	-----
	Fri, Mar 23	Cardiac Output, Blood Flow, and Blood Pressure, Part #2 Optional Review Session at 4:30 pm in VSB 130	267-289 -----	468-492 -----
	Mon-Fri	“Reproduction Revealed #10” at Canvas site	490-492	733-734
	Tues-Thur	Lab #8: Blood Pressure, Heart Rate, Electrocardiography, and Heart Sounds (10 points possible)	73-91	-----
12	Mon, Mar 26	The Immune System, Part #1	290-313	493-514
	Tues, Mar 27	The Immune System, Part #1	290-313	493-514
	Wed, Mar 28	The Immune System, Part #2	314-330	514-531
	Fri, Mar 30	The Immune System, Part #2 Optional Review Session at 4:30 pm in VSB 130	314-330 -----	514-531 -----

	Mon-Fri	“Reproduction Revealed #11” at Canvas site	493-498	734-737
	Tues-Thur	Lab #9: Blood Coagulation Testing (10 points possible)	92-106	-----
13	Mon, Apr 2	Respiratory Physiology, Part #1	331-348	532-546
	Tues, Apr 3	Respiratory Physiology, Part #1	331-348	532-547
	Wed, Apr 4	Respiratory Physiology, Part #2	349-357	547-559
	Fri, Apr 6	Respiratory Physiology, Part #2 Optional Review Session at 4:30 pm in VSB 130	349-357 -----	547-559 -----
	Mon-Fri	“Reproduction Revealed #12” at Canvas site	499-504	737-742
	Tues-Thur	LAB QUIZ #2 and DVD (5 points possible for attendance)	-----	-----
14	Mon, Apr 9	EXAM #4	-----	-----
	Tues, Apr 10	Respiratory Physiology, Part #3	358-371	559-598
	Wed, Apr 11	Respiratory Physiology, Part #3	358-371	559-598
	Fri, Apr 13	Respiratory Physiology, Part #3 Optional Review Session at 4:30 PM in VSB 130	358-371 -----	559-598 -----
	Mon-Fri	“Reproduction Revealed #13” at Canvas site	505-507	742-746
	Tues-Thur	Lab #10: Glucose Tolerance Test, Urinalysis, and Kidney Dissection (10 points possible)	107-120	-----
15	Mon, Apr 16	Physiology of the Kidneys, Part #1	372-388	581-598
	Tues, Apr 17	Physiology of the Kidneys, Part #1	372-388	581-598
	Wed, Apr 18	Physiology of the Kidneys, Part #2	389-401	598-618
	Fri, Apr 20	Physiology of the Kidneys, Part #2 Optional Review Session at 4:30 pm in VSB 130	389-401 -----	598-618
	Mon-Fri	“Reproduction Revealed #14” at Canvas site	508-511	-----
	Tues-Thur	Lab #11: Semen Analysis and Examination of Testes (and evaluations of TAs and UAs) (10 points possible). Confirm your points earned to-date in lab with your TA during this lab! (The TA will make a note that this meeting occurred so there are NO disagreements later about your lab points!)	121-145	-----
16	Mon, Apr 23	The Digestive System, Part #1	402-425	619-636
	Tues, Apr 24	The Digestive System, Part #1	402-425	619-636
	Wed, Apr 25	The Digestive System, Part #2	426-445	636-660

	Fri, Apr 27	The Digestive System, Part #2 Optional Review Session at 4:30 pm in VSB 130	426-445 -----	636-660 -----
	Mon-Fri	“Reproduction Revealed #15” at Canvas site	512-515	746-753
	Tues-Thur	Lab #12: DVD and Discussion on Natural Childbirth (5 points possible for attendance)	146-147	-----
17	Wed, May 2	Comprehensive Final Exam 3:30-5:20 PM	-----	-----



Advanced Human Physiology (Biol 4600)

(5 credits)

Spring 2018

- A. Instructor:** **Dr. Andy Anderson** (Please call me Andy!)
 Address: Biology Department
 VSB 231
 Utah State University
 Logan, UT 84322-5305
 Phone: 797-1913 (If I'm not in, leave a message on my voice mail.)
 E-mail: andy.anderson@usu.edu (messages sent to this personal email arrive much quicker than messages sent to me via Canvas, so use this personal email)

B. Teaching Assistants (TAs) and Undergraduate Aides (UAs):

- There are TAs and several volunteer Undergraduate Aides assigned to this course. Their names and office hours will be provided during the first days of class.
- Historically, students who utilize the TA and UAs faithfully earn higher grades!

C. Meeting Times:

- Lecture** (index # 10424) – This class meets on Mondays, Tuesdays, Wednesdays, and Fridays for 50 minutes of lecture from 3:30-4:20 PM in VSB 130. There is an optional review session every Friday at 4:30 PM in VSB 130.
- Laboratory** – There are three laboratory offerings which meet in **VSB 219**. Students are **required** to sign up for one laboratory section per week. Please go to the laboratory you regularly attend! **Don't move around because the TAs need to keep track of your points earned in lab!**

Index #	Section	Day	Time
10425	501	Tuesday	11:00 am - 12:50 pm
10426	502	Tuesday	1:00 pm - 2:50 pm
12405	503	Thursday	1:30 pm – 3:20 pm

D. Required Materials for Biol 4600:

1. Stuart Ira Fox's book "*Human Physiology*", 14th edition. This text is available at the USU Bookstore.
 - a. This text has a nice glossary at the back of the book on pages G1-G19.
 - b. If you are interested in using the "Connect" features (which are optional for this class), the Connect URL for our text is
<http://connect.mheducation.com/class/a-anderson-smartstart-course 1>
2. Course booklets (3 volumes) which contains all needed lecture notes, supplemental articles, and laboratories. These booklets are available at the USU Bookstore.
3. ¾ length lab coat (these are for sale at the USU Bookstore).

E. Optional Materials for Biol 4600:

1. It is recommended (but not required) that students have one other physiology text available for study. An extra text will often serve to clarify points which are confusing, or reinforce those which are considered important.
2. I used to suggest that students purchase a medical dictionary, but now most students can just look words up on their smart phone.

F. Course Booklets:

1. For each lecture in this course (and for the "Reproduction Revealed" presentations at the Canvas site) the student is provided with an outline of the subjects to be discussed that day. These outlines are designed to guide your participation during the lectures and also to guide you in your reading of the textbook. These outlines typically have articles attached on which you will be tested. All of these outlines and articles have been collected into course booklets for your use.
2. If there is information in your textbook that is not mentioned in class, or not mentioned in the course booklets, it will not be on the exam.
 - a. You are encouraged to read supplemental information in your text, but you will only be tested on what is cited in the course booklet or in our class discussions.
 - b. Note that the booklets often requires you to read articles in the text [i.e.: *Read the "Clinical Application on page 54]* for use on your tests!

G. Lecture Recordings and Images

1. The audio recording of the lectures and review sessions, and the images used, will be available on the Internet shortly after the lectures and reviews are over. You can access them by going to the CANVAS site for this course. The lectures and images from the last time this course was taught (spring 2017) will be there as well.
2. **"Reproduction Revealed" at the Canvas site.**
 - a. There are 15 required "Reproduction Revealed" presentations at the Canvas site.
 - b. You are required to listen to one of these short presentations every week of the semester (except for Spring Break).

- c. The notes for these “Reproduction Revealed” presentations are in your booklet of lecture notes.
- d. Questions from these “Reproduction Revealed” presentations, the notes, and the supplemental readings for each will appear on your regular exams and on your Final Exam.
- e. You must listen to one of these “Reproduction Revealed” presentations every week, and read the designated supplemental readings, to be prepared for your exams!

H. Examinations, Quizzes, and Lab Points for Biol 4600

1. There will be four one-hour exams of 100 points each and a two-hour comprehensive final exam (over everything except articles used in earlier exams) worth 200 points. The lecture notes, **class discussions**, handouts, laboratories, and occasional articles distributed in class will be used to formulate exam questions.
2. **There will be two lab quizzes (50 points each) presented in the laboratory that will be prepared and administered by the TAs.**
3. Students will have the score on their lowest hourly exam dropped. Their grade will be calculated using the remaining three hourly exams, the lab quizzes, the lab points (for pre-lab quizzes and attendance), and the final. (If you miss a lecture exam, that is the one which will be dropped).
4. Those students who (“heaven forbid!”) score less than 70% on the first two exams **should seriously seek intensive tutoring or drop the class.**
5. As indicated on the course schedule, there are points that are earned for every laboratory this semester (total of 115 possible). These will be recorded by your lab TA.
 - a. Students have the ability to earn 5 points for a pre-lab quiz at the start of each of the 10 **active** labs and an additional 5 points for attendance.
 - 1) For those **passive** labs when you only watch a video (following the lab quizzes) or when you listen to my wife, there is no pre-lab quiz and you will only earn the 5 points for attendance.
 - b. The pre-lab quiz will be 5 questions over the lab that is to be done that day and it will start at 3 minutes after the schedule lab starting time! It will only last for about 5 minutes.
 - c. This pre-lab quiz accomplishes two things: it insures you are to your lab on time and it makes the TAs and UAs happy because you have looked over the lab before arriving and ready to answer the pre-lab questions.
 - 1) If a student arrives in the lab too late to take the pre-lab quiz, they will NOT be allowed to take the pre-lab quiz. Remember one of the purposes for this pre-lab quiz is to have student arrive on-time!
 - d. **Each TA** in each of the respective labs will create 5 straightforward questions for the students to answer, print up this pre-lab quiz before lab, score it, and keep a record of points earned (5 points per pre-lab quiz) to be turned into to me at the end of the semester.
 - 1) The scored pre-lab quizzes can be returned to the students at the next lab.

- e. **Each UA** will take attendance (worth 5 points) at some point in the lab (usually after one hour) and give that list to the **TA** for recording.
 - f. So, the **TA** will be keeping a permanent record of the points earned from the pre-lab quiz and from attendance (with the help of the UA).
6. The letter grade is based on the percentage of total points earned on their three highest hourly exams (100 points each), the two lab quizzes (50 points each), the final (200 points), and points earned in the laboratory for pre-lab quizzes and attendance (115 points). **THERE IN NO EXTRA CREDIT OR SPECIAL PROJECTS TO IMPROVE YOUR GRADE.** The breakdown is as follows:

Actual Points Earned	Percentage of Total Points Earned	Grade
661-715	93-100	A
640-660	90-92	A-
611-639	86-89	B+
590-610	83-85	B
568-589	80-82	B-
540-567	76-79	C+
518-539	73-75	C
497-517	70-72	C-
468-496	66-69	D+
425-467	60-65	D
424 or less	59 or less	F

- 6. Up through the last office hour you are invited to see me or the TAs to view the exam keys and debate your scores. **After the last office hour I will only discuss the final exam with you, not your scores on earlier tests or quizzes.**
- 7. You **MUST** confirm your points earned in lab with your TA as indicated on the schedule two weeks before the end of classes.

I. Course Goals:

The main goal of this course is to give students a **detailed** understanding and working knowledge of the functioning of their own bodies. Numerous medical examples will be provided to illustrate the importance of the systems presented. The *Clinical Applications* and other medical citations from the text will be specifically reviewed at the regular Friday review sessions.

It is expected that upon successful completion of this course students will be able to effectively apply the knowledge gained in more advanced courses, in their careers, and in their daily lives.

J. Student's Responsibilities:

The student is expected to attend all lectures and laboratories, take supplemental notes, read the assigned readings, refer to suggested references as needed and achieve a cumulative score of greater than 75% on the exams. To prepare for the exams students

should study about 2 hours per day outside of class (make charts or lists, write practice questions, analyze articles, etc.)

In the event there is some difficulty, it is the **student's responsibility** to contact the instructor, UAs, or TA for advice or assistance. Free tutoring is available with the TA and UAs.

K. Instructor's Responsibilities:

The instructor is expected to attend all lectures, read the assigned reading, present supplemental articles, and prepare examinations which are fair and representative of the material covered. The instructor will also be available at posted office hours to answer **specific** student questions and provide needed assistance.

L. Teaching Assistants and Undergraduate Aides' Responsibilities:

There are several TAs and several UAs assigned to this course each semester. The TAs and UAs will come to the lectures as needed so that they will be qualified tutors for each of your exams. Some of the UAs will attend the review sessions each week where the *Clinical Applications* and other medical examples from the text will be reviewed and students are quizzed by the UAs with questions the UAs have prepared. The TAs and UAs will assist the instructor in writing the lecture exams. The TAs will correct and score the exams promptly after they are taken by the students. The TAs and UAs will have published office hours to provide help to interested students. **(If the TAs or UAs fail to show up at his/her office hour, please let me know!).**

The TAs and UAs are also expected to attend their individual laboratories, prepare pre-lab quizzes, take attendance, have all the necessary materials available, and be knowledgeable about the scheduled lab exercises. The TAs and UAs will write and administer two lab quizzes. After correcting these quizzes, they will turn them in to Andy for grade recording and posting.

M. Library References:

1. A copy of the course textbook, "*Human Physiology, 14th edition*" is on reserve at the Media Collections Department in the Library.
2. Check the subject index in the Library to find additional useful books on physiology and anatomy.

N. Below you will find a University statement on Academic Honesty.

1. **DO NOT REMOVE ANY EXAMINATION MATERIALS FROM THE CLASSROOM OR LABORATORY ON EXAM DAYS!**
2. **DO NOT COPY OR REMOVE ANY EXAMINATION MATERIAL FROM THE TEACHING ASSISTANTS' OFFICES!**
3. If you fail to follow these rules, I will make every effort to subject the offender to the disciplinary procedures designated by the University.

Honor Pledge

Students will be held accountable to the Honor Pledge which they have agreed to: "I pledge, on my honor, to conduct myself with the foremost level of academic integrity."

Academic Dishonesty

The Instructor of this course will take appropriate actions in response to Academic Dishonesty, as defined the University's Student Code:

Acts of academic dishonesty include but are not limited to:

1. Cheating: (1) using or attempting to use or providing others with any unauthorized assistance in taking quizzes, tests, examinations, or in any other academic exercise or activity, including working in a group when the instructor has designated that the quiz, test, examination, or any other academic exercise or activity be done "individually"; (2) depending on the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments; (3) substituting for another student, or permitting another student to substitute for oneself, in taking an examination or preparing academic work; (4) acquiring tests or other academic material belonging to a faculty member, staff member, or another student without express permission; (5) continuing to write after time has been called on a quiz, test, examination, or any other academic exercise or activity; (6) submitting substantially the same work for credit in more than one class, except with prior approval of the instructor; or (7) engaging in any form of research fraud.
2. Falsification: altering or fabricating any information or citation in an academic exercise or activity.
3. Plagiarism: representing, by paraphrase or direct quotation, the published or unpublished work of another person as one's own in any academic exercise or activity without full and clear acknowledgment. It also includes using materials prepared by another person or by an agency engaged in the sale of term papers or other academic materials.

Full text of the Student Code available at available at available at <http://www.usu.edu/studentservices/pdf/StudentCode.pdf>:

O. Students with Disabilities

Students with physical, sensory, emotional or medical impairments may be eligible for reasonable accommodations in accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973. All accommodations are coordinated through the Disability Resource Center (DRC) in Room 101 of the University Inn, 797-2444, 797-0740 TTY, or toll free at 1-800-259-2966. Please contact the DRC as early in the semester as possible. Alternate format materials (Braille, large print or digital) are available with advance notice.

P. Unacceptable Classroom Behavior

Since a significant goal of this class is to prepare each of you for your upcoming exams, then behavior that disrupts the classroom environment will be discouraged.

1. Once class has started, **cell phones should be silenced** and no ring tones or conversations are permitted.
2. Once class has started, **talking and whispering among students is strongly discouraged**. If you need to talk, please leave the class and conduct your conversation outside. If students persist in talking among themselves during

class, they will be asked to leave the room so other students can benefit from the limited amount of class time available.

3. Use of laptop computers in class is acceptable, provided it is utilized for notes or materials used in this class. **It is not acceptable to use your computer in class for recreational purposes or for doing work for a different class.** When you come to this class it is expected that you will focus your attention on this class and not engage in computer activities that detract from the classroom experience or that will distract your classmates. If the problem persists, you will be requested to cease your computer activities.

Q. University policy on withdrawals and incomplete grades.

1. I direct your attention to the current USU policy on incompletes and withdrawing from courses in the on-line Catalog, under Registration.
 - a. You will note that “incomplete grades” are only given for conditions beyond the students’ control and not due to poor performance. A student who receives an incomplete must retain all the scores they earned up to the date of the incomplete and later will **ONLY** be allowed to finish the remaining quizzes or exams.

S. Notice on lab fees (\$60)

1. As part of your registration for this class you were required to pay a “lab fee” of \$60. This fee is used by me to buy lab supplies and obtain specimens. All of your lab fees are used to enhance your learning opportunities in this course and to help your TA, UAs, and your instructor, to hopefully make it easier for you to succeed in this challenging subject.

T. Laboratory Safety (New Rules!)

1. The entire university has adopted a **NEW** safety protocol for all student laboratories. The **minimum** required protection to enter a laboratory is:
 - a. Fully closed shoes
 - d. $\frac{3}{4}$ length laboratory coat that is fastened shut (These are for sale at the USU bookstore and you will need to purchase one if you have not already done so).
2. If you do not have this minimum required protection, you will **NOT** be allowed to enter (no exceptions for **ANY** time you enter the lab!).
 - a. I realize that for some labs you merely have a quiz or watch a video. However, the University policy is for entering a lab, regardless if the lab is active or not because of the hazardous chemicals in the lab!
3. **When working with chemicals, animal products, or urine, you must also wear the nitrile gloves provided.**
4. Additional protective gear, such as eye goggles, may be provided depending upon the lab activity. I do not anticipate that at this time.
5. If you desire, you can store the lab coat, pants, skirt, or full-closed shoes in the lockers in the hallway outside of the laboratory. You can secure it with you own lock. However, please remove this lock, and clean out the locker, at the end of the semester!

General Information for Interested Students Biol 4600

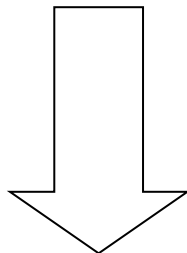
Some students may be interested in taking further courses with me. This sheet will provide that information.

A. Courses Taught by D. Andy Anderson

1. Fall Semester 2018
 - a. Elementary Microbiology (Biol 2060) 4 credits
 - b. Human Dissection (Biol 4000) 1 credit
32. Spring Semester 2019
 - a. Human Anatomy (Biol 2320) 4 credits
 - b. Bioethics (Biol 3100) 3 credits
 - c. Advanced Human Physiology (Biol 4600) 5 credits
4. Others
 - a. Independent Study (Biol 3760) 1-2 credits – available every semester
 - 1) Students earn credit by writing a term-paper (or more than one) on a mutually agreed topic
 - b. Teaching Internship (Biol 4710) 1 credit – available every semester
 - 1) This credit is available to students who wish to volunteer as an undergraduate aide in a class they have previously excelled in. (Grade of “B” or better)
 - c. I oversee a Medical College Admissions Test (MCAT) review course (Biol 1030, ST: MCAT, one credit, pass/fail). This is offered in the spring and is taught by two Undergraduate Teaching Fellows.
 - d. I oversee a Dental Admissions Test (DAT) review course (Biol 1040, ST: DAT, one credit, pass/fail). This is offered in spring and is taught by two Undergraduate Teaching Fellows.

B. Other Courses of Interest

1. Emergency Medical Technician (EMT)
 - a. Contact Bridgerland Applied Technology College (435-753-6780)
 - 1) These classes have limited enrollment.
2. Biology Prehealth Programs Orientation (Biol 1750), 1 credit, fall semester. This course is designed to allow students to meet and listen to a wide variety of health professionals so they can perhaps choose a career for their own future.

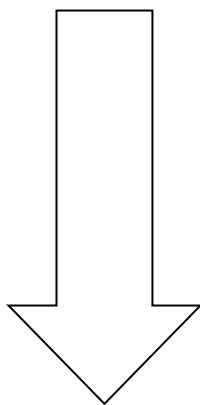


**Student Performance
On Exams and Quizzes in Biol 4600
During the Previous Seven Years**

Average Quiz Scores (50 pts)

Average Exam Scores (100 pts)

Year	Semester	#1	#2		#1	#2	#3	#4	Final
2017	Spring	39.9	43.7		75.0	71.9	80.0	68.5	75.3
2016	Spring	38.0	43.2		76.1	76.1	72.1	74.9	72.5
2015	Spring	42.7	44.9		78.7	73.9	76.0	75.0	78.7
2014	Spring	41.4	43.7		78.4	77.5	74.1	75.5	72.4
2013	Spring	40.4	43.4		75.4	79.1	76.1	75.2	75.4
2012	Spring	45.3	40.7		75.8	79.0	81.8	69.3	74.5
2011	Spring	43.7	36.8		83.6	84.4	82.2	73.6	79.4
Average		41.6	42.3		77.6	77.4	77.5	71.1	75.5



Student Final Grades in Previous Seven Years Of Biol 4600

Semester	Year	Position	Points	Grade
Spring	2017	High	676*	A
Spring	2017	Low	411.5	F
Spring	2017	Average	589.2	B-
Spring	2016	High	681*	A
Spring	2016	Low	407.5	F
Spring	2016	Average	577	B-
Spring	2015	High	704*	A
Spring	2015	Low	444	D
Spring	2015	Average	560.5	C+
Spring	2014	High	582	A
Spring	2014	Low	268	F
Spring	2014	Average	475.7	C+
Spring	2013	High	566.5	A
Spring	2013	Low	311	F
Spring	2013	Average	478.1	B-
Spring	2012	High	578	A
Spring	2012	Low	242.5	F
Spring	2012	Average	476.4	C+
Spring	2011	High	559	A
Spring	2011	Low	409	D+
Spring	2011	Average	495.5	B

* Starting in 2015 students could now earn 115 points for pre-lab quizzes and attendance in the labs.