



BIOL 2420: Human Physiology, Fall 2017

Course Description

Welcome! This course is designed to help you gain a broad understanding of human physiology. To achieve this, we will study human biological function at several levels, including atoms/molecules, cells, tissues, organs, and organ systems. Working knowledge of the relevant anatomy will also be obtained. The knowledge and understanding of human health and biology that you obtain in this course can be applied to other courses, your career, and your daily life.

Course Objectives

In this course, you will:

- gain **factual knowledge** (terminology, classifications, methods, and trends in human physiology)
- learn **fundamental principles** (general physiological mechanisms and theories)
- **develop specific skills** that are used by medical and lab professionals (diagnostic tests and lab techniques)

Course Instructor: Dr. Habashi

Contact information: Use the Canvas inbox (allow 24 h for a response; expect delays on weekends/holidays).

Office location/office hours:

- Tuesdays, 1:45–2:45 PM, and by appointment; Milton P. Miller Bldg. Room 171B

Class meetings

| Section | Lecture | Lab sections |
|------------------|--|--|
| USU-Brigham City | T/R, 8:00-9:30 PM (Miller Bldg. Room 154) | • R, 5:00-7:00 PM (Miller Bldg. Room 173) |
| USU-Tooele | T/R, 8:00-9:30 PM (Science & Technology 214) | • W, 5:15-7:15 PM (Science & Technology 208) |
| Logan BATC | T/R, 8:00-9:30 PM (Room 131) | • R, 5:00-7:00 PM (Miller Bldg. Room 173) |

Required materials

1. "Fundamentals of Human Physiology"* by Stuart Ira Fox. 2009. McGraw-Hill (ISBN 978-0-07-340349-6).
2. All lab assignments will be posted on Canvas (follow the "Lectures & Labs" link).

*This text can be purchased from the USU Campus Store. Go to "<http://campusstore.usu.edu/>" or call 800-662-3950. A copy of the text is on reserve at the Brigham City campus testing center (by appointment only).

Lab fee

As part of your registration for this class you were required to pay a \$70.00 lab fee. This fee is used to buy the materials used by students in the weekly labs.

General Course Requirements

You are required to attend and actively participate in all lectures and labs, and to complete all assigned readings before coming to each class meeting. This is a challenging course with a lot of interesting material to cover; **1–2 hours of study per day outside of class time is suggested**. Read the syllabus carefully and discuss any questions with your instructor. Adjustments may be made to the class schedule during the semester; however, lab test and exam dates will not change. Adjustments will be posted on Canvas. By continuing in the course after reading the syllabus, you are indicating that you accept the terms of the syllabus.

Grading

Grades will be based on the following assessments. All scores in the grade book (except the final exam) will be considered finalized on Tuesday, 12/8/17, at 5:00 PM. No special projects will be offered to improve your grade.

| Evaluation method | # of points possible |
|-----------------------------------|----------------------|
| Lecture Assessments and Quizzes | 50 |
| Lab Assessments and Participation | 50 |
| Lab Tests | 100 |
| Lecture Exams | 400 |
| Final Exam | 200 |
| TOTAL | 800 |

Lecture Assessments and Quizzes

Regular attendance and participation are an essential part of this course. To promote this, in-class or outside assignments/quizzes based on the day's assigned readings/lecture material will be administered at random points during the semester. These assignments/quizzes are due when called for; therefore, it is vital to arrive to class on time and not to leave early. No late assignments/quizzes will be accepted, and there are no makeups.

Lab Assessments and Participation

Each lab will have 5 points of credit associated with it; however, your lowest lab score will be dropped. To earn these points, you will be required to (1) complete a pre-lab assignment prior to coming to class each week, (2) participate fully in all lab activities and assessments, and (3) complete a lab assignment during class that will be handed in before you leave the lab session. **No make-up labs will be offered.** You will not receive credit for a pre-lab if you do not attend the entire lab session.

- For all labs (except Lab 11), you will have **1 full week** to contest your score in the grade book. For Lab 11, you will have until 12/8/17 at 5:00 PM to contest your score. **Submit all questions about lab grades via the Canvas inbox to your lab instructor.** Once each deadline has passed, no adjustments will be considered.

You will receive a zero if you attend a lab section other than the one you are registered for, or if you fail to follow proper lab safety procedures. Points will be automatically deducted for phone use, surfing the internet, outside conversations, bringing food/drink/gum into the lab, arriving late/leaving early, and/or not following the lab instructor's directions.

Lab Tests

- There will be two lab tests, worth 50 points each, given at the beginning of class on the dates listed in the schedule. You must arrive to lab within the first 15 minutes of class on test days, or you will receive a zero. **Make-up lab tests will be given only with prior approval from your lab instructor. All make-ups will have 10% deducted from the score.**
- After each lab test is graded, you will have 3 business days to contest your score. Submit all questions to **your lab instructor** via Canvas. After that, no score adjustments will be considered.

Lecture Exams

There will be 5 lecture exams, each composed of ~50 questions and worth 100 points each, given on the dates listed in the schedule. You will take each exam at a USU testing center. It is your responsibility to make your own testing center appointments, and picture ID will be required for each exam. You are responsible for knowing testing center hours and policies. Do not make a testing center appointment during lab time. **No make-up exams will be given for any reason;** however, the lowest of your 5 scores will be dropped. Exam questions will be formulated based on the assigned readings, lectures, handouts, laboratories, videos, articles, class discussions/demonstrations/assignments, and other materials distributed in class or posted on Canvas. You may bring a pen/pencil and calculator to each exam.

- You will have 1 full week from the date of each lecture exam to contest your score. **Submit all questions via the Canvas inbox to Dr. Habashi.** After the week is up, no score adjustments will be considered.
- **You may view your old exams with Dr. Habashi any time before 3:00 PM on 12/7/17.**

Final Exam

A comprehensive final exam worth 200 points will be given from Monday, 12/11/17, to Tuesday, 12/12/17. You will take the final at a USU testing center. You will need to make your own testing center appointment, and photo ID will be required. **There is no make-up for the final. The exam may not be taken early, except in exceptional circumstances and with prior approval from Dr. Habashi.**

Grading scale (grades are not rounded):

| Percentage | Grade |
|---------------|-------|
| 93-100% | A |
| 90-92% | A- |
| 87-89% | B+ |
| 83-86% | B |
| 80-82% | B- |
| 77-79% | C+ |
| 73-76% | C |
| 70-72% | C- |
| 67-69% | D+ |
| 60-66% | D |
| 59% and below | F |

Need extra help?

- **Dr. Grant Wilson** (Brigham/BATC lab instructor), E-mail through Canvas inbox. Office hours (Miller Bldg. Room 173): Tuesdays @ 2:30-3:30 PM, and by appointment.
- **Dr. Devron Brown** (Tooele lab instructor), E-mail through Canvas inbox. Office hours by appointment.
- **Josh Baxter** (Tutor), E-mail through Canvas inbox. Reviews: Tuesdays, 6:30-7:30 PM (Brigham: Miller Bldg. Room 155; Tooele: Conf-114; BATC: Room 131).

Classroom Policies and USU Student Information

Unacceptable Classroom Behavior:

Behavior that disrupts the learning/teaching environment will not be tolerated. If you engage in disruptive behavior, I will ask you to stop. If it happens again, you will be asked to leave the room (and possibly the course) so that other students can benefit from the limited amount of class time available. The course facilitators at each campus will report disruptive behavior to the instructor.

1. Once class has started, **all cell phones must be put away (not on your desk, in your hand, or on your lap)**. No outside conversations are permitted. Use of laptop computers/tablets is permitted only for purposes related to the class.

2. Only students registered for the course are allowed to attend class sessions. Children, spouses, friends, etc. of students will not be permitted in the classroom during class.

For a full description of USU's policy on classroom incivility, see <http://www.usu.edu/policies/pdf/Classroom-Incivility.pdf>.

Withdrawal Policy and "I" Grade Policy:

Students are required to complete all courses for which they are registered by the end of the semester. In some cases, a student may be unable to complete all of the coursework because of extenuating circumstances, but not due to poor performance or to retain financial aid. The term 'extenuating' circumstances includes: (1) incapacitating illness which prevents a student from attending classes for a minimum period of 2 weeks, (2) a death in the immediate family, (3) financial responsibilities requiring a student to alter a work schedule to secure employment, (4) change in work schedule as required by an employer, or (5) other emergencies deemed appropriate by the instructor.

Student Athletes:

Student athletes who will miss class due to team travel must make arrangements with Dr. Habashi through Canvas **at least 10 days prior to the date of travel**. Written notification from USU regarding team travel is required before any accommodations will be considered.

Course Conflicts:

Students with a course conflict due to a University-sponsored event or another USU course must contact Dr. Habashi through the Canvas inbox **at least 10 days prior to the date of the conflict** to request accommodations; otherwise, no accommodations will be considered. Written documentation from University staff/faculty will be required before any accommodations will be considered.

Class Cancellations:

Unless the USU-Brigham City campus is closed by President Cockett, classes will be held as scheduled for all students. Should closure occur, your instructor will post instructions for you as an "Announcement" on Canvas. To stay informed, visit the Personal Information page on Banner and update your "Code Blue Alert" phone number.

Honor Code Policy:

As stated in The Student Code, "Each student has the right and duty to pursue his or her academic experience free of dishonesty. The Honor System is designed to reinforce the higher level of conduct expected and required of all Utah State University students." Upon admission to the university, you agreed to abide by this Honor Code by signing the Honor Pledge, which reads: "I pledge, on my honor, to conduct myself with the foremost level of academic integrity." Complete academic honesty is expected in this course. Cheating on exams or plagiarism on written assignments will result in a failing grade and may result in further action according to University policy.

Accommodation for Disabilities:

Students with ADA-documented physical, sensory, emotional or medical impairments may be eligible for reasonable accommodations. Veterans may also be eligible for services. Brigham City/BATC students should contact Jill Rasmussen, Director of Students, Room D102, (435) 919-1246. At other USU campuses, contact your advisor. All accommodations are coordinated through the Disability Resource Center (DRC) in Room 101 of the University Inn on the Logan Campus, (435)797-2444 voice, (435)797-0740 TTY, or toll free at 1-800-259-2966. Please contact the DRC as early in the semester as possible to ensure that your request can be considered. Alternate format materials (Braille, large print, or digital) are available with advance notice.

Grievance Process:

Students who feel they have been unfairly treated...may file a grievance through the channels and procedures described in the Student Code: <http://www.usu.edu/student-services/pdf/StudentCode.pdf#page=3> (Article VII. Grievances, pp. 27-36).

Course communications:

Email is an official form of communication at USU. Any communication to you about this course will be sent to the email address you have listed in Canvas as your preferred address. You are responsible for any information conveyed to you at that email address.

To ensure that Canvas is using the email account you prefer, do the following:

- Log in to Canvas and click on the link "Profile" at the top right of the page.
- Click on "Notifications" at the left side of the screen.
- Verify your email address.
- You may also opt to receive course notifications via text on your cell phone. Click the downward arrowhead to the right of "Email me at" on the "Notifications Preferences" page to bring up the option "Text my Cell at."

It is your responsibility to check your Canvas account at least once a day so that you do not miss announcements or emails to the class. All questions regarding academic progress or grades must be sent via the Canvas inbox.

To log in to Canvas, go to: canvas.usu.edu (no "www"). Your username is your Banner username (your "A" number) and your password is your BANNER password. BIOL 2420 should appear under the heading "Courses."

- For help with Canvas, contact the IT service desk: **435-797-HELP (4357)** or 1-877-878-8325.

Diversity Statement:

Regardless of intent, careless or ill-informed remarks can be offensive and hurtful to others and detract from the learning climate. If you feel uncomfortable in a classroom due to offensive language or actions by an instructor or student(s) regarding ethnicity, gender, or sexual orientation, contact one of the following: at USU Brigham City, contact Jill Rasmussen, Room D102, (435) 919-1246; at other regional campuses, contact your advisor, or; Moises Diaz, Director of Multicultural Student Services (435) 797-1733, moises.diaz@usu.edu; James Morales, Vice President of Student Services (435) 797-1712, james.morales@usu.edu; Ann Austin, Vice Provost for Faculty Development and Diversity, ann.austin@usu.edu; Maure Smith, GLBTA Services, maure.smith@usu.edu; Steven Russell, Student Advocate (435) 797-1720, s.r.@aggiemail.usu.edu. You can learn about your student rights by visiting: www.usu.edu/student-services/studentcode.

Anticipated Weekly Schedule

| Week | Date | Topic (Lecture #) | Chapter |
|------|------|--|---------|
| 1 | 8/29 | Intro. to the Course / The Chemical Basis of Life (1) | 1 |
| 1 | 8/31 | Cells and Their Parts (2) | 2 |
| 1 | | Lab 1: Lab Safety / Measurement / Chemistry | |
| 2 | 9/5 | Cellular Respiration / How Cells Reproduce (3) | 2 |
| 2 | 9/7 | Tissues (4) | 2 |
| 2 | | Lab 2: Microscopes and Cells / Histology | |
| 3 | 9/12 | **LECTURE TEST 1** during testing center open hours | |
| 3 | 9/14 | Transport Across the Membrane (5) | 3 |
| 3 | | Lab 3: Diffusion / Osmosis / Enzymes | |
| 4 | 9/19 | Neurons & Synapses (6) | 4 |
| 4 | 9/21 | Central & Peripheral Nervous Systems (7) | 5 & 6 |
| 4 | | Lab 4: The Nervous System | |
| 5 | 9/26 | Central & Peripheral Nervous Systems (8) | 5 & 6 |
| 5 | 9/28 | **LECTURE TEST 2** during testing center open hours | |
| 5 | | Lab 5: Senses & Perception | |

| | | | |
|----|-----------------|--|----|
| 6 | 10/3 | Sensory System (9) | 7 |
| 6 | 10/5 | Sensory System (10) | 7 |
| 6 | | **LAB TEST #1** (labs 1-5) | |
| 7 | 10/10 | The Endocrine System (11) | 8 |
| 7 | 10/12 | The Endocrine System (12) | 8 |
| 7 | | Lab 6: Blood Glucose & Cholesterol Testing / Hematocrit / Electrocardiography | |
| 8 | 10/17 | **LECTURE TEST 3** during testing center open hours | |
| 8 | 10/19 | ☺ <i>No Class: Go to your Friday classes instead!</i> | |
| 8 | | <i>-No Lab</i> | |
| 9 | 10/24 | Muscle Physiology (13) | 9 |
| 9 | 10/26 | Blood & Circulation (14) | 10 |
| 9 | | Lab 7: Muscles / Blood Typing / Blood Cell Counts | |
| 10 | 10/31 | Blood & Circulation (15) | 10 |
| 10 | 11/2 | **LECTURE TEST 4** during testing center open hours | |
| 10 | | Lab 8: Lysozyme / Blood Pressure / Heart Rate | |
| 11 | 11/7 | Immune System (16) | 11 |
| 11 | 11/9 | Immune System (17) | 11 |
| 11 | | Lab 9: Breathing Rate / Spirometry / Pulse Oximetry / Heart & Lung Dissection | |
| 12 | 11/14 | Respiratory System (18) | 12 |
| 12 | 11/16 | Urinary System (19) | 13 |
| 12 | | Lab 10: Urinalysis / Kidney Dissection / Pregnancy Testing | |
| 13 | 11/21 | **LECTURE TEST 5** during testing center open hours | |
| 13 | 11/23 | ☺ <i>No Class: Thanksgiving Holiday</i> | |
| 13 | | <i>-No Lab</i> | |
| 14 | 11/28 | Digestive System (20) | 14 |
| 14 | 11/30 | Male Reproductive System (21) | 15 |
| 14 | | **LAB TEST #2** (labs 6-10) | |
| 15 | 12/5 | Female Reproductive System (22) | 15 |
| 15 | 12/7 | Human Development (23) | 15 |
| 15 | | Lab 11: Reproduction / ELISA | |
| 16 | 12/11 and 12/12 | **FINAL EXAM** during testing center open hours | |