

KINES 3091 Course Syllabus  
Fall 2019

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**Instructor:** Arwen Fuller, PhD  
**Office:** HPER North, Rm. 256  
**Email:** [arwen.fuller@utah.edu](mailto:arwen.fuller@utah.edu)  
**Phone:** (801) 581-7734 (**EMAIL is preferred!**)  
**Office Hours:** At my office: TBA

**Class Info.:** Section 001 meets on Mon. & Wed. from 11:50-1:10 at CITHB Rm. 101  
Section 002 meets on Tues. & Thurs. from 9:10-10:30 at SFEBB Rm. 3180  
**Grad. TA Info.:** Rhiannon Cowan (Rhiannon.Cowan@utah.edu)

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**Course Description:**

Movement is a basic human behavior that generates and sustains health, prevents disease and enables leisure activity & sport performance. The primary objective of this course is to examine the physiological basis of human movement. In particular, it examines acute neuromuscular, metabolic, endocrine, and cardiorespiratory responses to exercise. Physiological adaptations to chronic exercise training will also be explored as will the body's response to environmental challenges during exercise in the heat and cold, and at high altitudes.

**Course Materials:**

- **Required Text: Exercise Physiology: Integrating Theory and Application, 2<sup>nd</sup> Edition**  
**William J. Kraemer; Steven J. Fleck; Michael R. Deschenes ISBN: 978-1-4511-9319-0**
- Additional course material will be posted to the Canvas online course webpage throughout the term
- **Prerequisites:** BIOL 2325 and MATH 1050, 1210 or 1080 (see course catalog). This course fulfills general education quantitative intensive (QI) BS credits.

**Learning Objectives:**

By the end of this course, students will be able to:

1. recognize how fundamental concepts from physics, biochemistry, and biology pertain to exercise physiology
2. recognize how cellular, organ, and systems-level physiology concepts are the basis for how the body responds to exercise
3. recall specific physiological mechanisms responsible for the body's systemic and cellular adjustments to acute and chronic exercise
4. employ SI units of measure to solve algebraic problems related to mechanical work and power, mechanical efficiency, human energy expenditure, estimates of oxygen consumption and caloric expenditure, cardiac output and the arterial-venous oxygen difference, estimates of mean arterial blood pressure and systemic vascular resistance, and indirect estimates of myocardial oxygen consumption
5. explain several ways in which exercise physiology concepts are critical to the improvement of human health and fitness and discuss some of the unresolved issues in exercise physiology research
6. interpret and evaluate exercise physiology-related data trends in tables, charts, and figures

**Teaching & Learning Methods:**

Methods include lecture, instructor-directed problem solving and student-driven discussion. Assessments of learning objectives include assignments, quizzes and exams.

## Evaluation Methods & Grade Distribution:

<i>Graded Item</i>	<i>Points Available</i>	<i>% of Total Grade</i>
In-class Questions	75 total	12.5% total
5 Homework Assignments	12 each (60 total)	2.0% each (10% total)
4 Math Assignments (QI)	10 each (40 total)	1.7% each (6.7% total)
5 In-class Quizzes	15 each (75 total)	2.5% each (12.5% total)
2 Midterm Exams	100 each (200 total)	16.7% each (33.3% total)
1 Cumulative Final Exam	150 total	25% total
	600 points	100%

**In-class Questions:** In-class questions will be given in-class, as such, you need to be present to complete these assessments. These assignments are not listed in the course schedule and may be given at any time during the semester (except on exam days) *without prior notification*. In-class questions must be completed during class and must be submitted at the end of class. In-class questions submitted after the end of class will not be graded.

**Homework & Math Assignments:** These assignments will be posted on Canvas, and students will submit their completed assignments according to the instructions via the Canvas "Quiz" link or by uploading a file directly to Canvas. Late assignments will NOT be accepted for any reason, *including computer, Canvas, and internet issues*, and will receive an automatic score of "0". To avoid these issues, allow ample time to upload & submit your assignment and double check that the correct document has been successfully uploaded prior to the due date/time.

**Quizzes & Exams:** Quizzes and exams will be given in class and may include multiple choice, fill-in-the-blank and short answer questions. **YOU MUST BRING a regular calculator and a pencil.** On exam days, all electronic devices (including phones, apple watches, tablets, computers, etc.) are to be turned off and stored prior to entering the testing room. If electronic devices are seen in the testing room, you will be asked to leave and will receive an automatic "0" for the exam.

- Once quizzes & exams are returned, students will have one week to discuss any grading issues with me.

## Instructor's Course Policies:

1. ***All class members must behave in a respectful manner.*** Quality teaching and learning occurs when there is little concern for harassment or ridicule. As such, *all* members of this class (instructor, TA and students alike) must treat each other with respect.
  - Students are not permitted to record (video or audio) any portion of this course without prior approval from the instructor. Please come ask me if you'd like to record class discussions or lectures.
  - Please silence all cell phones prior to the beginning of class. If you must take a call during class, immediately leave the room so you don't disturb the rest of the class.
  - Please refrain from surfing the internet, texting or social media activity during class.
2. ***Students are expected to attend class.*** I expect you to attend class and therefore, I expect that you are aware of topics that were presented and questions that were answered in class. If you are not able to attend class, you should do the following: 1) Check Canvas to make sure that you are aware of all posted assignments and their due dates as well as any announcements that were posted, 2) Talk to a fellow student who can inform you about what you missed and who can give you any notes taken during class, 3) Meet with me (or a TA) to clarify any persisting confusion or questions you still have due to your absence.

3. **Students are expected to participate in class.** I expect you to participate in class in a way that facilitates your learning. Participation includes: asking questions (in or outside of class) when concepts are not clear, providing input during in-class work, and assisting other students if appropriate. If you are struggling with a topic, **you should ask for help** from me or a TA. Ultimately, you are responsible for your own learning. It doesn't make sense to struggle in silence; if I don't know you're struggling, I can't help you.
4. **Students are expected to come to class prepared.** I expect you to work outside of class to learn the information discussed in class. 99.9% of you will not be able to do this successfully simply by attending class. You should read the assigned material and regularly review the additional course information provided on Canvas. The lectures do not work in isolation of each other. Thus, in preparation for subsequent lectures, you should become very familiar with the information that was already presented. The best way to do this is to spend significant time with the material outside of class. See my suggested study techniques described below.
5. **Students are expected to check Canvas regularly.** I expect you to check Canvas regularly (i.e. daily) so that you are aware of: 1) all announcements I post, 2) where we are in the course, 3) what due dates are impending, 4) your grade and course-standing.
6. **Students are expected to complete all assessments according to their scheduled dates.** I expect you to submit assignments and take quizzes and exams as scheduled. The assessment dates (assignment due dates and dates of quizzes and exams) are listed on the course calendar portion of the syllabus, which is available on Canvas. I suggest that you print off a copy of this schedule and keep it handy for regular reference. If any of these dates must be changed, you will be notified in a timely manner both in class and on Canvas. Missed assessments may only be made up according to the policies discussed below. Students are responsible for knowing the registration, drop, and withdrawal dates and for tracking their grades throughout the term.
7. **Late assignments will not be accepted.** In-class questions will be collected in class. As such, you need to be there to complete these assignments. Homework and math assignments will be submitted online. I will not accept assignments via email except in very unusual circumstances according to the policies discussed below. Quizzes and exams will be given in class.
8. **Students may not negotiate course grades.** You will be graded according to your performance on the assessments (which may or may not reflect your effort). Asking for a grade that you did not earn based on your performance is not professional, mature, or ethical. Your letter grade will correspond to the course percentages below, without exception. A student who earns a 72.5% will be awarded a C grade. Likewise, a student who earns a 72.4% will receive a C- grade. The ONLY basis for a change in your letter grade is a grading error so please keep track of your assignments. If you suspect a grading error has been made, please email me within 1 week of getting the assignment, quiz or exam back.

93% and above	A	73-76	C
90-92%	A-	70-72%	C-
87-89%	B+	67-69%	D+
83-86%	B	63-66%	D
80-82%	B-	60-62%	D-
77-79%	C+	59% or lower	E

9. **Students must demonstrate academic honesty and integrity.** You are expected to demonstrate integrity, and in doing so, not endeavor to cheat or misrepresent your circumstances. Examples of misbehavior include, but aren't limited to, submitting work completed by another student, completing another student's assignments, looking at or copying off of a neighbor's quiz or exam, and lying about the circumstances of an absence. These kinds of incidents are classified as academic misconduct and will be handled according to the Student Code. <http://regulations.utah.edu/academics/6-400.php>. In doing so, the first time you are caught cheating, I will provide you with a warning. If you are caught a second time, you will be given a "0" for the assessment. If you are caught a third time, you will fail the course and your case will be submitted to the College of Health's Assistant Dean of Students or the Associate Dean for Faculty and Academic Affairs. Please keep in mind that these kinds of offenses may result in your dismissal from the University.

**"GRADE REPLACEMENT" Opportunity:**

Course grades will be determined as an absolute percentage of the course total of 600 points. **Upon completion of the final exam**, students who have earned at least 420 points (a 70% or higher) **AND have completed ALL exams, quizzes, homework and math assignments** will have their lowest midterm exam grade (%) adjusted to the percentage received on their comprehensive final exam if their final exam % is higher. Completion of the in-class questions is not considered for the grade-replacement. This opportunity applies to exam grades only. **This grade replacement will NOT be reflected on Canvas and will be completed only prior to posting final letter grades.**

**Instructor's Policy on Make-up Assessments (Assignments, Quizzes, Exams):**

Assessments can only be made up **after** their original due date and only for the reasons listed below:

- Officially sanctioned University activities: Examples of these include band, debate, student government intercollegiate athletics, and government or religious obligations. In these cases, students must provide the instructor with official documentation **in advance** of the absence.
- Absences caused by other compelling reasons beyond the student's control: Examples of these include physical or mental illness, injury, and death or illness in the family or of a significant other, and the birth of *your* child. In these cases, authentic official documentation (signed and dated) of the extenuating circumstance is required.
  - Work-related absences will not be excused except in the case of unforeseen *employment* changes.
  - Vacations are NOT an extenuating circumstance. **Please share this with family members who may be prone to make travel plans for you without consulting you first.**
  - Weddings (yours or a friends) do not qualify as excused absences.
  - You should inquire **at the start of the semester** if you are unsure if a specific absence qualifies as an excused absence

**Procedures for arranging to make up an assessment:** Except in unforeseen circumstances (i.e. sudden illness, etc.), students *must* notify the instructor about the circumstances requiring rescheduling of an assessment *prior to the absence*. **Notification should be given by email to [arwen.fuller@utah.edu](mailto:arwen.fuller@utah.edu)**. Make-ups should be completed within 3 days of the missed assessment whenever possible.

**Non-Contract Note:**

This syllabus is not a binding legal contract; the instructor may modify it when the student is given reasonable notice of the modification.

## **University Policies:**

### University Safety Statement

The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit [safeu.utah.edu](http://safeu.utah.edu).

### Student Code

All students are expected to maintain professional behavior in the classroom setting, according to the Student Code, spelled out in the Student Handbook. Students have specific rights in the classroom as detailed in Article III of the Code. The Code also specifies proscribed conduct (Article XI) that involves cheating on tests, plagiarism, and/or collusion, as well as fraud, theft, etc. Students should read the Code carefully and know they are responsible for the content. According to Faculty Rules and Regulations, it is the faculty responsibility to enforce responsible classroom behaviors, beginning with verbal warnings and progressing to dismissal from class and a failing grade. Students have the right to appeal such action to the Student Behavior Committee. Students should read the Code carefully and know they are responsible for the content. <http://regulations.utah.edu/academics/6-400.php>

### Americans with Disabilities Act (ADA) Statement

The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD), <http://disability.utah.edu/>. CDS will work with you and the instructor to make arrangements for accommodations. All information in this course can be made available in alternative format with prior notification to the Center for Disability Services.

### Sexual Misconduct

Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran's status or genetic information. If you or someone you know has been harassed or assaulted on the basis of your sex, including sexual orientation or gender identity/expression, you are encouraged to report it to the University's Title IX Coordinator: Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or to the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to police, contact the Department of Public Safety, 801-585-2677(COPS). Additional information about reporting and victim supportive resources are available at the offices listed above.

## **University Resources:**

### Center for Student Wellness

Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with *anyone's* ability to succeed and thrive at the University of Utah. For helpful resources, please contact the Center for Student Wellness - [www.wellness.utah.edu](http://www.wellness.utah.edu); 801-581-7776.

### Veterans Center

If you are a student veteran, please be aware that the University of Utah has a Veteran's Support Center on campus. They are located in Room 161 in the Olpin Union Building. Hours: M-F 8-5pm. Please visit their website for more information: <http://veteranscenter.utah.edu/>.

### LGBT Resource Center

If you are a member of the LGBT community, please know that **this class is considered a safe zone**. Additionally, please know that the University of Utah has an LGBT Resource Center on campus. They are located in Room 409 in the Olpin Union Building. Hours: M-F 8-5pm. Please visit their website for more information: <http://lgbt.utah.edu/>.

### Learners of English as an Additional/Second Language

If you are an English language learner, please be aware of several resources on campus that will support you with your language development and writing. These resources include: the Department of Linguistics ESL Program (<http://linguistics.utah.edu/esl-program/>); the Writing Center (<http://writingcenter.utah.edu/>); the Writing Program (<http://writing-program.utah.edu/>); the English Language Institute (<http://continue.utah.edu/eli/>).

### The Center for Disability and Access

The Center for Disability and Access provides accommodations and services to students at the University of Utah whose condition significantly impacts their ability to function in the academic setting. Specific accommodations that are available to students depend on the documentation of the disability, the essential elements of the course, and the functional limitations created by the student's disability. In order to qualify for accommodation, students must schedule an appointment with CDA. More information about accommodations and services as well as how to qualify for services can be found on their website: <https://disability.utah.edu>

### **Instructor's Tips on how to succeed in KINES 3091:**

- Show up and be an *active* participant, and ask questions! Look for ways to *engage with* the information beyond simply looking at or "reading over" your course notes and textbook chapters. Examples of this kind of learning engagement include hand-writing your notes, using flashcards, hand-writing chapter outlines, constructing your own questions to cover class material, taking your own tests & challenging yourself to verbalize the concepts covered. Try teaching the material to your best friend, your roommate, your dog, your partner or your parent...if you can teach it, you likely know it well.
- Read, read, read! The most successful students in KINES 3091 usually devote considerable time outside of class to read the text, seek out clarification via online resources, and review lecture material. In addition to excellent attendance & engagement, repetitious & active review of the class material is nearly always the best strategy for doing well in this class.
- Take hand-written notes and re-write them or type them up. Research suggests a greater magnitude of learning when notes are hand-written rather than typed. Additionally, re-writing these notes further solidifies the concepts and highlights topics that need clarification.
- Finally, seek help early! If you find you are struggling with learning the material or performing on exams, *please don't wait* to make contact with me or the TAs...we are here to help, but **YOU** must make the first move towards getting assistance.

Tentative Course Schedule (any changes to this schedule will be announced on Canvas and in class)

<i>Week # (Dates)</i>	<i>Lecture Topics, Reading Assignments &amp; Due Dates</i>
Wk. 1 (8/19- 8/22)	Course Introduction, Essentials of Bioenergetics (Ch. 2)
Wk. 2 (8/26- 8/29)	Metabolic Pathways (Ch.2 & 3) <ul style="list-style-type: none"><li>▪ <b>HW Assign. #1 DUE</b> online by 9am on Mon. 8/26</li></ul>
Wk. 3 (9/2- 9/5)	<b>NO CLASS MON. 9/2 or TUES. 9/3 (Labor Day Holiday)</b> Metabolic Pathways (Ch. 2 & 3) <ul style="list-style-type: none"><li>▪ <b>Quiz #1</b> at start of class on Wed. 9/4 or Thurs. 9/5</li></ul>
Wk. 4 (9/9- 9/12)	Metabolic Pathways & Exercise Metabolism (Ch. 2 & 3) <ul style="list-style-type: none"><li>▪ <b>HW Assign. #2 DUE</b> online by 9am on Mon. 9/9</li></ul>
Wk. 5 (9/16- 9/19)	Skeletal Muscle & Nervous Systems (Ch. 3 & 4) <ul style="list-style-type: none"><li>▪ <b>Math Assign. #1 DUE</b> online by 9am on Mon. 9/16</li><li>▪ <b>Quiz #2</b> at start of class on Wed. 9/18 or Thurs. 9/19</li></ul>
Wk. 6 (9/23- 9/26)	Skeletal Muscle & Nervous Systems (Ch.3 & 4) <ul style="list-style-type: none"><li>▪ <b>Math Assign. #2 DUE</b> online by 9am on Mon. 9/23</li></ul>
Wk. 7 (9/30- 10/3)	<b>MIDTERM EXAM #1 on Monday 9/30 or Tuesday 10/1</b> Cardiovascular System (Ch. 6)
<b>NO CLASS THIS WEEK (10/7- 10/11)- Fall Break</b>	
Wk. 8 (10/14-10/17)	Cardiovascular System (Ch. 6) <ul style="list-style-type: none"><li>▪ <b>HW Assign. #3 DUE</b> online by 9am on Mon. 10/14</li><li>▪ <b>Quiz #3</b> at start of class on Wed. 10/16 or Thurs. 10/17</li></ul>
Wk. 9 (10/21- 10/24)	Cardiovascular & Respiratory Systems (Ch. 6 & 7) <ul style="list-style-type: none"><li>▪ <b>Math Assign. # 3 DUE</b> online by 9am on Mon. 10/21</li></ul>
Wk.10 (10/28-10/31)	Respiratory System (Ch.7) <ul style="list-style-type: none"><li>▪ <b>HW Assign. #4 DUE</b> online by 9am on Mon. 10/28</li><li>▪ <b>Quiz #4</b> at start of class on Wed. 10/30 or Thurs. 10/31</li></ul>
Wk.11 (11/4- 11/7)	Environmental Influences on the Cardiovascular and Respiratory Systems (Ch. 11) <ul style="list-style-type: none"><li>▪ <b>Math Assign. #4 DUE</b> online by 9am on Mon. 11/4</li></ul>
Wk.12 (11/11- 11/14)	<b>MIDTERM EXAM #2 on Monday 11/11 or Tuesday 11/12</b>

- Wk.13 (11/18- 11/21)                   Endocrine System (Pgs. 209-216)
- **HW Assign. #5 DUE** online by 9am on Mon. 11/18
  - **Quiz #5** at start of class on Wed. 11/20 or Thurs. 11/21
- Wk.14 (11/25, 11/26)                   Endocrine Control of Exercise Metabolism
- NO CLASS WED. 11/27 or THURS. 11/28- Thanksgiving Holiday**
- Wk.15 (12/2- 12/5)                    Endocrine Control of Exercise Metabolism & Semester Wrap-up

**Section 001 FINAL EXAM: Friday 12/13 @ 10:30am-12:30pm**

**Section 002 FINAL EXAM: Monday 12/9 @ 8:00am- 10:00 am**