



# Exercise Physiology

**AANT 317 Spring 2019**

**Class Time: MW 1:40-2:35**

**Location: SS 256**



**Instructor:** Dr. Cara Ocobock  
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## Pre-requisites & Co-requisite

In order to register for this course, students must have previously taken and passed AANT 110 (Introduction to Human Evolution) and AANT 211 (Human Population Biology). Students must have either previously passed or be currently enrolled in AANT 316 (Human Anatomy & Physiology I).

## Course Description

This course will be a broad introduction to exercise physiology. The class will be split into two basic units: 1) Powerlifters and 2) Marathoners. Topics covered will include basic nutrition, cellular metabolism, response to exercise, muscle physiology, training, body composition, some methodological exercise testing, recovery, fatigue, and activity in extreme environments.

## Course Text:

McArdle WD, Katch FL, and Katch VL. Essentials of Exercise Physiology (5<sup>th</sup> Ed.). Lippincott Williams & Wilkins. ISBN: 978-1496302090

Additional readings will be posted to the Blackboard site.

## Assessment

You will be evaluated in this class on 4 take home exams and lab assignments.

**4 Exams:** each worth 100 pts for a total of 400 pts

**12 Lab Assignments:** each worth 10 pts for a total of 120

**CLASS TOTAL:** 520

## Grade Scale

This course is graded on an A-E scale. Below are the minimum percentages required for each grade:

A: 93 %	A-: 90%	B+: 87%	B: 83%	B-: 80%	C+: 77%
C: 73%	C-: 70%	D+: 67%	D: 63%	D-: 60%	E: below 60%

**I DO NOT ALLOW EXTRA CREDIT!!! I**  
**always round up at the .5 level. I will not raise**  
**your grade at the end of the semester. You earn**  
**the grade you earn – do not even ask me – I**  
**WILL NOT RESPOND!!!**

**Attendance**

The take home exams will be based on lecture and lab; therefore, it is crucial that you attend class and take notes. Excused absences include: 1) UAlbany sporting or sanctioned event 2) Death in the family 3) Religious observance 4) Illness requiring your physical presence at a doctor or hospital 5) A professional interview. I WILL NOT provide make-up assignments for any excuse other than the five listed above. NO EXCEPTIONS! Please refer to the “Attendance and Timely Compliance with Course Requirements” section of the university’s Undergraduate Academic Regulations for more details

([http://www.albany.edu/undergraduate\\_bulletin/regulations.html](http://www.albany.edu/undergraduate_bulletin/regulations.html)). Be aware that the University Health Center will provide medical excuses only under very specific situations

([http://www.albany.edu/health\\_center/medicalexexcuse.shtml](http://www.albany.edu/health_center/medicalexexcuse.shtml)).

**Furthermore, I WILL NOT provide you with notes if you miss class. It is up to you to get them from a classmate.**

**Academic Integrity**

Plagiarism and cheating will not be tolerated. For full information on the University’s Standards of Academic Integrity, please see: [http://www.albany.edu/eltl/academic\\_integrity.php](http://www.albany.edu/eltl/academic_integrity.php).

**Disability Services**

Reasonable accommodations will be provided for students with documented physical, sensory, systemic, cognitive, learning and psychiatric disabilities. If you believe you have a disability requiring accommodation in this class, please notify the Director of the Disability Resource Center (Campus Center 137, 442-5490). That office will provide the course instructor with verification of your disability, and will recommend appropriate accommodations.

<b>Date</b>	<b>Topic</b>	<b>Reading</b>
1-23-19	Intro to class	<b>The syllabus!</b>
1-28-19	Powerlifting: Goals & Metabolism	What is powerlifting? (link on BB) Pg. 146-158, 174-175, 177-179 (oxygen deficit up to max oxygen uptake), pg 181, pgs 197-202
1-30-19	Powerlifting: Metabolism cont.	
2-4-19	Powerlifting: Muscle & Strength Part I	

2-6-19	Powerlifting: Muscle & Strength Part II	Jones et al. 2008; Krivickas et al. 2011; Shoenpe et al. 2003; Meijer et al. 2015; Trezise et al. 2016; Brechue & Abe 2002;
2-11-19	Powerlifting: Training	Strength & Conditioning; Mitchell et al. 1985; Baker et al 1994; Shiao et al. 2017; Burd et al. 2010; de Souza et al. 2010; Willardson et al. 2010 & Peruse Chapter 12 <b>Take Home Exam 1</b>
2-13-19	Powerlifting: Training...and maybe some hormones	
2-18-19	Powerlifting: Nutrition	Slater & Phillips 2011; Groen et al. 2015; Pennings et al. 2013; Cribbs et al. 2007; Tang et al. 2009
2-20-19	Powerlifting: Recovery (and recovery barriers)	Stults-Kolehmainen et al. 2014; Nedeltcheva et al. 2010; Peck et al. 2014
2-25-19	Powerlifting: Female vs. Male	Bishop et al. 1987; Lindle et al. 1997
2-27-19	Powerlifting vs. Bodybuilding	Ikegawa et al. 2008; <b>Review</b> Meijer et al. 2015; Siewe et al. 2014
3-4-19	Powerlifting: Aids and Performance enhancing drugs	Maganaris et al. 2000; Bhasin et al. 1996; Yu et al. 2014; Mattich 2007; Carpenter 2007; Miyamoto et al 1999; Pgs. 259-260
3-6-19	Powerlifting: Age & Health Concerns	Pgs 293-294, pgs 584-586, pgs 592-594; Dirks et al 2015; Tieland et al. 2012; <b>Take Home Exam 2</b>
3-11-19	Marathoner: Goal & Metabolism	Pgs. 150-153, pgs 158-168, pgs 175-186, pgs 236-243 (not swimming), 274-276; Westerterp et al. 1986; Hagerman 1992
3-13-19	Marathoner: Metabolism & Body Composition	
3-18-19	<b>SPRING BREAK</b>	
3-20-19		
3-25-19	Marathoner: Testing	Pgs. 202-220
3-27-19	<b>NO CLASS – Professor &amp; TAs at Human Biology Conference</b>	
3-30-19	<b>POWERLIFTING MEET @ ALBANY STRENGTH</b> Saturday, March 30 @ 10am 527 Central Ave, Albany, NY 12206 \$5 entry fee Attendance is optional	
4-1-19	Marathoner: Training	Karp 2007; Stellingwerff 2012; Trappe et al 2006; Hawley & Spargo 2007; Joyner & Cole 2008; Jones & Carter 2000
4-3-19	Marathoner: Endocrinology	Chapter 12
4-8-19	Marathoner: Nutrition	Stellingwerff 2013; Stroud 1998; <b>Review</b> Stellingwerff 2012 again;
4-10-19	Marathoner: Recovery	Howatson et al. 2009; Neubauer et al 2008; Nicolas et al 2011

4-15-19	Marathoner: Female vs. Male	Sparling et al. 1993; Billat et al. 2003; Pate & O'Neill 2007; Deaner et al. 2015 <b>Take Home Exam 3</b>
4-17-19	Marathoner: Performance enhancing drugs	Hoberman 2007; Pommering 2007; <b>Review</b> Carpenter 2007
4-22-19	Runner's High	Boecker et al. 2008; Raichlen 2012; Lavelle 2015
4-24-19	Marathoner: Age & Health issues	Pgs 584-586, pgs 594-597; Trappe 2012; Neilan et al. 2006; Leyk et al. 2009; Beatriz et al. 2014
4-29-19	HIIT Training	Pgs. 186-188; Perry et al. 2008; Smith et al. 2013; Kilpatrick et al. 2014; Zuhl & Kravitz (link on BB)
5-1-19	Fatigue & Psych	Derman et al. 1997; Budgett 1998; Cannaughton et al. 2008; <b>Review</b> Sparling et al. 1993; <b>Review</b> Maganaris et al. 2000
5-6-19	Squish Day 1	
5-8-19	Squish Day 2	<b>Take Home Exam 4</b>

**I reserve the right to change this syllabus at any time!**