

Human Energetics
AANT 615
Fall 2018
Location: BB B005
Time: 4:05-7:15

Instructor: Dr. Cara Ocobock
Office: A&S 119
Office Hours: Monday 1-3:00pm or by appointment
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Course Description:

Like all animals, humans turn food energy into offspring, but, uniquely, humans also convert energy into art, music, and sport. Cultural influences on non-reproductive efforts and the human ability to survive and thrive across the planet are fascinating from an energetic perspective. This class examines the basic components (basal metabolic rate, physical activity, and thermoregulation for example) of human total energy expenditure (TEE, kcal day⁻¹) and the important interactions among these components that affect overall energy budgets. As knowledge of human TEE has deepened, so too has the ability to interpret observable patterns in human metabolic physiology, such as limits on the amount of calories humans are able to burn and how those limits may mediate life history variables. We will also look at some of the new theories aimed at explaining these observed patterns. However, anthropological work on how humans interact with their environments to acquire and use energy does not occur within a vacuum. The growing obesity epidemic and public interest in ways to improve health and well-being means that human energetics research is highly sought after by a broad lay audience. As such, you will be expected to give short presentations aimed at the general public to hone your communication skills.

Assignments:

Weekly (120 pts): you will have to write a 1-2 page summary of each article for each week. These will be uploaded to a google drive folder and shared with the entire class. These will serve as review guides for your comps. Each week is worth 10 points.

3 minute public talks (50 pts total): You will be in charge of presenting a 3 minute summary of the readings aimed at the general public. The weeks you are responsible for this will be decided the first day of class.

Final Paper (150 pts): You will write a review article (10-15 pages) on the topic of your choosing. The goal of a review paper is to summarize the current state of that particular subject (reviewing the currently available literatures) and then providing insight on the direction the field might consider taking to further our knowledge and understanding of that topic. More information will be given about expectations later in the semester.

Presentation (80 pts): You will give a conference style presentation on your final paper topic on the last day of class. This is to give you practice at podium talks (and talking to a mostly expert audience) if you have not already done them.

TOTAL: 400 pts.

Tentative Schedule

Date	Topic	Reading	Presenter
8/27/18	Total Energy Expenditure	Leonard & Ulijaszek 2002 Pontzer 2015 Black 1996 Leonard 2012 Dugas 2005 – Don't read before class	Ocobock
9/3/18	NO CLASS LABOR DAY		
9/10/18	NO CLASS ROSH HASHANNAH		
9/17/18	Basal Metabolic Rate	Benedict 1915 West et al. 2002 White & Seymour 2003 Raichlen et al. 2010 Henry 2005	
9/24/18	Physical Activity	Leonard et al. 1995 Pontzer 2015 Pontzer et al. 2015 Ocobock 2016 Steudel-Numbers & Tilkens 2004 Froehle & Churchill 2009	
10/1/18	Thermoregulation	Froehle 2008 Ocobock 2017 Holliday & Falsetti 1995 Katzmarzyk & Leonard 1998 Hanna & Tait 2015*	
10/8/18	Ocobock in Finland – Alex Lab Demo???		
10/15/18	Hot Climates	Hanna & Tait 2015* Avellini et al. 1980a Avellini et al. 1980b Shapiro 1980 Hori 1995	
10/22/18	Panel Discussion: Science, Scholarship, and Citizenship Talk: History, Science, and Truth in the 21 st Century		
10/29/18	Cold Climates	Leonard et al 2005 Snodgrass et al 2006 Steezman et al 2007 Snodgrass & Leonard 2009	

11/5/18	High Altitude	Beall 2006 Westerterp 2001 Leonard et al 1995	
11/12/18	Brown Adipose Tissue	Heaton 1951 Cannon & Nedergaard 2012a Cannon & Nedergaard 2012b Ouellet et al 2012 Van der Lans et al 2015 Devlin 2015	
11/19/18	Thermic Effect of Food	Tai et al 1991 Kinabao & Durnin 1990 Halton & Hu 2004 Farshchi et al. 2004	
11/26/18	Reproduction, Lactation Growth	Butte & King 2005 Bribiescas 2001 Ellison 2003 Dunsworth et al. 2012 Carter 2000 Bogin et al. 2007 Butte 2000 Butte et al. 1989 Fall et al. 2003	
12/3/18	Immune System	Muehlenbein et al. 2010 Shattuck & Muehlenbein, 2015 Urlacher et al. 2018	
12/10/18	Obesity & Presentations	Fothergill et al. 2016 Cypess & Kahn 2010 Pontzer et al. 2012	

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%

Attendance

Since a large part of this course will revolve around discussion, your attendance is crucial. 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). Be aware that the University Health Center will provide medical excuses only under very specific situations (http://www.albany.edu/health_center/medicalexexcuse.shtml).

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/etl/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.

On a Personal Note

Any student who faces challenges securing their food or housing or faces a catastrophic event (death or illness in the family for example) and believes this may affect their performance in the course is urged to contact the Vice Provost for Undergraduate Education ((518) 442-3950, or by email to UGEducation@albany.edu) for support. Furthermore, please notify me if you are comfortable in doing so. This will enable me to provide any resources that I may possess.

Please note: I reserve the right to change this syllabus at any time.