

**The Pennsylvania State University  
Department of Biobehavioral Health  
Biobehavioral Aspects of Stress (BBH 432)**

*Fall 2014 Course Syllabus*

**Course Time:** MWF 2:30-3:20

**Location:** 022 Biobehavioral Health Bldg.

**Instructor**

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## **Course Objectives**

The goal of this course is to review the relationship between stress and physical, psychological and mental health. The focus is on how psychological stressors affect physiological systems and health. This is primarily a science course and we will read papers published in scientific journals as a source of current information. The course objectives are:

1. To summarize recent cutting-edge research on the health effects of stress, with special attention to underlying physiological and cellular mechanisms.
2. To introduce research methods currently used to study psychological stress.
3. To describe in detail the health effects of diverse stressors, from daily hassles to natural disasters. To examine stress effects at multiple levels: from cellular function to individual behavior to the society at large.
4. To briefly introduce the most popular types of stress management techniques.
5. To enhance critical thinking skills, particularly in regards to reading research reports on biological and behavioral factors in health.

## **Required Readings:**

- 1) **Text: Stress, Health and Wellbeing by Rick Harrington. (2013). Available at the Penn State Bookstore. Individual chapters and the eBook can be purchased or rented at:**  
[http://www.cengage.com/search/productOverview.do?Ntt=harrington || 21183704211442450384970222861483564526&N=16&Ntk=NGL || P\\_EPI&Ntx=mode%2Bmatchallpartial](http://www.cengage.com/search/productOverview.do?Ntt=harrington||21183704211442450384970222861483564526&N=16&Ntk=NGL||P_EPI&Ntx=mode%2Bmatchallpartial)
- 2) **Sapolsky: Why Zebras Don't Get Ulcers, Third Edition**
- 3) **Other Assigned Readings:** These will be available for download on the ANGEL website and announced in class and/or on syllabus.

## **Class Policies**

Please don't engage in behavior that can be distracting to other students during class (e.g. talking). Please try to remember to turn off your phone when you come into class and under no circumstances are you to answer your phone during class. The instructor reserves the right to deduct points from your grade for repeated class disruptions.

**Attendance:** Your attendance is not mandatory, but is highly recommended. I prefer that you do not email me to let me know when and why you will be absent unless you are missing an important class event. If you need to miss multiple classes, I definitely want to hear from you. I follow the PSU policy on observance of religious holidays. <http://www.sa.psu.edu/cera/relhol.html>

**EMAIL:** I will make every effort to respond to emails within 24 hours. If you do not receive a response within 24 business hours (e.g. if you send an email at 4:00 pm on Friday and do not hear back before 4:00 pm on Monday), please contact me again to be sure I have received your message. I will make announcements using the ANGEL email interface, so please be sure to check your ANGEL email to be sure you have all of the information you need for the course. ***It is highly recommended that you set your ANGEL messages up to forward to the email address you use most frequently.***

**Grading Criteria:**

**Exams:** Exams are designed to assess your knowledge, comprehension, and integration of materials discussed and reviewed in lectures, guest lectures, classroom discussions, and assigned readings. There are 4 regular exams and 1 semi-comprehensive final exam. Exams will consist of multiple-choice and essay questions.

**Breakdown of Points:** FIVE EXAMS WILL BE OFFERED. Your lowest test score will be dropped before calculating your grade. If you miss an exam, that is the one which will be dropped. You are required to take at least four exams ON TIME. You have the option of taking all five exams or only four out of five. NO MAKEUPS WILL BE OFFERED EXCEPT IN UNUSUAL CIRCUMSTANCES (WITH DOCUMENTATION OF ILLNESS, FAMILY EMERGENCY, ETC.)

Exams                      50 points for each of your 4 best test scores

**Total possible score: 200 points**

**Grading ranges:**

A = 181-200	B+ = 160-168	C+ = 127-138	F = below 79
A- = 169-180	B = 148-159	C = 109-126	
	B- = 139-147	D = 79-108	

Grade Rounding: 0.5 is rounded to next highest whole number

## **Academic Integrity**

Academic integrity is the pursuit of scholarly activity in an open, honest and responsible manner. Academic integrity is a basic guiding principle for all academic activity at The Pennsylvania State University, and all members of the University community are expected to act in accordance with this principle. Consistent with this expectation, the University's Code of Conduct states that all students should act with personal integrity, respect other students' dignity, rights and property, and help create and maintain an environment in which all can succeed through the fruits of their efforts. Academic integrity includes a commitment not to engage in or tolerate acts of falsification, misrepresentation or deception. Such acts of dishonesty violate the fundamental ethical principles of the University community and compromise the worth of work completed by others. Students are responsible for ensuring that their work is consistent with Penn State's expectations about academic integrity. Ignorance of the policies and/or violations of academic integrity is no defense against sanctions.

**Violations of academic integrity will not be tolerated in this course.** Violations of the University's Academic Integrity Policy with respect to this class include--but are not limited to--the following:

**Cheating on exams:** Using notes on exams or copying answers from another student

**Ghosting or misrepresenting:** Taking an exam, completing an assignment, signing in for another student or asking another student to do the same for you.

## **Sanctions for violations of academic integrity**

Penn State University and the College of Health and Human Development have policies on dealing with academic integrity problems. *Please note that it is the responsibility of the student to be sure that they understand what constitutes a violation of academic integrity (per above) and what the policies are with respect to such violations.* The University procedures for dealing with a violation are described in detail at this website: <http://www.psu.edu/dept/oue/aappm/G-9.html> The College's website for procedures relating violations of academic integrity can be found at: <http://www.hhdev.psu.edu/policies/academicintegrity/>

It is important that you read the policies and understand the procedures for violations of academic integrity. Sanctions for violations of academic integrity may range from minor to severe. Sanctions for plagiarism may range from downgrading the assignment with opportunity for re-submission (very minor mistakes in citation, over paraphrasing, etc.) to failure for the assignment with no opportunity for make-up (e.g., excessive paraphrasing; multiple failures to cite properly, etc.) to failure of the course with XF grade (multiple copying of paragraphs; use of work of other students; ghostwritten work etc.). Unusually serious violations of academic integrity may result in expulsion from the University. It is important that you know that the Department of Biobehavioral Health – and the faculty course instructors and Teaching Assistants – are committed to the principles of academic integrity and that students who violate the principles of academic integrity will be reported and appropriate sanctions will be taken.

### **Statement on Disabilities**

Penn State welcomes students with disabilities into the University's educational programs. Every Penn State campus has an office for students with disabilities. The Office for Disability Services (ODS) Web site provides contact information for every Penn State campus: <http://equity.psu.edu/ods/dcl> For further information, please visit the Office for Disability Services Web site: <http://equity.psu.edu/ods>. In order to receive consideration for reasonable accommodations, you must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: <http://equity.psu.edu/ods/guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with an accommodation letter. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. You must follow this process for every semester that you request accommodations.

**Final course considerations:** Any student who encounters any problem with any aspect of this course should not hesitate to talk with the professor as soon as possible. If you disagree with the policies described in this document, you should not take the course. To remain in the course is to accept the policies both herein and as described in class.

NOTE: DATES OF LECTURES AND EXAMS MAY CHANGE, WITH ADVANCED NOTICE. GUEST LECTURERS ARE BUSY PEOPLE AND MAY REQUIRE ACCOMODATIONS TO THEIR SCHEDULE.

	<b>Date</b>	<b>Topic</b>	<b>Assignment</b> Readings that are not in the text are posted on Angel
1.	Aug 25	Course Overview and Introduction to Syllabus	
2.	Aug 27	The Concept of Stress I	Sapolsky (2004) Chapter 1: Why don't zebras get ulcers? Zebras. Nesse et al., (2007): Evolutionary origins and functions of the stress response. <u>Encyclopedia of stress</u>
3.	Aug 29	The Concept of Stress II	Text, Chapter 1 pp 2-4, 15-16, 18-27
	Sep 1	<b>Labor Day Holiday, no classes</b>	
4.	Sep 3	History of Stress Research	Hans Selye (1956) The Stress of Life, Chapters 3, 4 and 10
5.	Sep 5	Physiology of Stress I	Text, Chapter 3 pp 67-84
6.	Sep 8	Physiology of Stress II	Sapolsky (2004) Chapter 2: Glands Gooseflesh and Hormones. Zebras
7.	Sep 10	A New Physiology of Stress: Theory of Allostasis	McEwen (1998) Protective and damaging effects of stress mediators. <u>New England Journal of Medicine</u> .
	Sep 12	Exam 1 review	
	Sep 15	*****EXAM 1*****	
1.	Sep 17	Research Strategies for Studying Stress and Illness I	Text Chapter 4 pp 99-108
2.	Sep 19	Research Strategies for Studying Stress and Illness II	Dickerson & Kemeny (2004): Acute stressors and cortisol responses: a theoretical integration and synthesis of laboratory research. <u>Psychological bulletin</u>
3.	Sep 22	A New Physiology of Stress: Tend and Befriend	Klein & Corwin (2002) Seeing the unexpected: how sex differences in stress responses may provide a new perspective on the manifestation of psychiatric disorders.
4.	Sep 24	Social Dominance Hierarchies	Sapolsky (2005) The Influence of Social Hierarchy on Primate Health. <u>Science</u>

	Sep 26	<b>Rosh Hashanah Holiday, no class</b>	
5.	Sep 29	Stress and Cardiovascular Disease I Guest Lecturer: Prof. Sheila West	Libby (2002) Atherosclerosis: the new view. <i>Scientific American</i>
6.	Oct 1	Social Inequality and Health	Sapolsky (2004). Chapter 17. The View from the Bottom. Zebras
7.	Oct 3	Stress and Cardiovascular Disease II Guest Lecturer: Prof. Sheila West	Text chapter 5 pp 132-147. Strike and Steptoe. Psychological factors in the development and progression of CVD.
	Oct 6	Exam 2 review	
	Oct 8	*****EXAM 2*****	
1.	Oct 10	Psychoneuroimmunology I: Basic principles	Text, Chapter 4 pp 109-117
2.	Oct 13	Psychoneuroimmunology II	Glaser & Kiecolt-Glaser (2006). Stress-induced immune dysfunction: implications for health. <i>Nature Rev Immunology</i>
3.	Oct 15	Stress and Aging I	Shalev et al. (2013). Stress and telomere biology: A lifespan perspective. <i>Psychoneuroendocrinology</i> .
4.	Oct 17	Stress and Aging II	Shalev (2012) Early life stress and telomere length: investigating the connection and possible mechanisms. <i>Bioessays</i>
5.	Oct 20	Gene-Environment Interaction	Caspi & Moffitt (2006). Gene-environment interactions in psychiatry: joining forces with neuroscience. <i>Nature Rev Neuro</i>
6.	Oct 22	Stress and Epigenetics	Zhang & Meaney (2010) Epigenetics and the Environmental Regulation of the Genome and Its Function. <i>Ann Rev Psychology</i>
7.	Oct 24	Stress, Oxytocin and Vasopressin	Meyer-Lindenberg et al. (2011) Oxytocin and vasopressin in the human brain: social neuropeptides for translational medicine
	Oct 27	Exam 3 review	
	Oct 29	*****EXAM 3*****	
1.	Oct 31	Depression I	Text, Chapter 7 pp. 231-235
2.	Nov 3	Depression II	Sapolsky (2004). Chapter 14. Stress and Depression. Zebras
3.	Nov 5	Anxiety Disorders I	Text, Chapter 7 pp. 209-216

4.	Nov 7	Anxiety Disorders II	Text, Chapter 7 pp. 209-216
5.	Nov 10	Posttraumatic Stress Disorder I	Nemeroff et al. (2006). Posttraumatic stress disorder: a state-of-the-science review. <i>Journal of Psychiatric Research</i>
6.	Nov 12	Posttraumatic Stress Disorder II	Eisenberg and Silver (2011). Growing up in the shadow of terrorism: Youth in America after 9/11. <i>American Psychologist</i> .
7.	Nov 14	Cognitive Behavioral Therapy for PTSD	Guest lecturers: Justin Watts and Laura Anne Copley
8	Nov 17	Lasting Effects of Trauma. Guest lecturer: Prof. Jennie Noll	Trickett et al (2010). Attenuation of cortisol across development for victims of sexual abuse. <i>Development and Psychopathology</i>
9	Nov 19	Exam 4 Review	
	Nov 21	*****EXAM 4*****	
	Nov 24	<b>Thanksgiving Holiday - No Class (Nov 23-29)</b>	
	Nov 26	<b>Thanksgiving Holiday - No Class</b>	
	Nov 28	<b>Thanksgiving Holiday - No Class</b>	
1.	Dec 1	Social Support and Health	Text pp. 257-231, 323-324
2.	Dec 3	Personality, Stress and Health	Text, Chapter 6
3.	Dec 5	Stress Management/Coping	Text, Chapter 10
4.	Dec 8	Innovative methods for coping with stress. Out of class assignment	Video on Coping with Stress
	Dec 10	Exam 5 Review	
	Dec 12	*****EXAM 5*****	