

Stressed Out: The science and nature of human stress: BPW

Discovery Category: Biological Sciences, D-lab

**University of New Hampshire
Occupational Therapy Department**

OT 513 - Stressed Out: The Science and Nature of Human Stress

CRN 53123/53128

Spring 2021 Syllabus

Instructors:

Barbara Prudhomme White, Ph.D., OTR/L
337 Hewitt Hall
862-2461 or cell 508-631-0918
bpwhite@unh.edu
Office Hours: by appointment.

Lab instructors: Allie Caplin Allison.Caplin@gmail.com
Janine Holder J9Holder@gmail.com or Janine.Holder@unh.edu

TA: Elise Nelson emnelson99@gmail.com

Time & Room: **LECTURE: 11:10-12:30 Tuesday/Thursday**

Location: **Horton B04**

LABS: SEE BELOW

<u>LAB #, DAY, TIME</u>	<u>Location*</u>	<u>Lab Instructors:</u>
L 1 MON 2:10 PM-3:30 PM	Parsons N104	Allie
L 2 WED 3:40PM-5:00PM	ONLINE	Janine
L 3 WED 9:40 AM – 11:00 AM	Nesmith 226	Allie
L 4 THURS 2:10 PM-3:30 PM	Nesmith 226	Allie
L 5 Wed 2:10-3:30	Chase 105	Allie

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L 7 MON 03:40 PM – 05:00 PM	Nesmith 144	Allie
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*Location may change per activity (e.g. YOGA location). *Please check Canvas announcements!*

Credits: 4

Course Organization: Learning strategies will include lecture, occasional small group work, in-class discussion, out-of-class experiences, media, and active learning labs. Your performance is assessed through multiple experiences, most of which are active learning exercises, as well as quizzes, lab reports, and tests.

Time commitment: Federal regulation defines a credit hour as an amount of work represented in the course learning outcomes and verified by evidence of student achievement that is equivalent to 3 hours of work per credit per week over a 14 - 15-week semester. This means that you should anticipate about 12 hours of time spent weekly on this course for readings, writing, quizzes, homework, participation experiences, etc. (4 credits x 3 hours of work per credit per week = 12 hours per week)

<https://www.neche.org/wp-content/uploads/2019/01/Affirmation-of-Compliance.pdf>

Course Description:

This course introduces the neurophysiologic mechanisms and anatomical structures that initiate and regulate human responses to stress. These include executive function structures in the brain responsible for cognitive appraisal strategies, the hypothalamic-pituitary-adrenal axis, the autonomic nervous system (sympathetic and parasympathetic branches), and systemic structures throughout the body that are involved in and affected by stress hormones. Students will learn about the human stress response system, about how stress impacts health and well-being, about new research investigating the effects of stress on health and development, about protective strategies for stress, about managing stress effectively in individuals and about planning stress response modulation as an intervention technique. Students will have the opportunity through guided lab experiences, to explore various stress reduction techniques, to run simple experiments via biofeedback mechanisms, to test assumptions about individual responses to stress reducing and stress enhancing experiences, and to evaluate techniques for personal and programmatic use. This course is especially designed for students who would like to improve personal stress management, or who anticipate working with others for who stress management will be part of an overall health plan.

The Discovery Program, UNH's core undergraduate course requirement, ensures that all students at UNH explore a breadth of disciplinary content areas as part of their bachelor's degree. Please note that this course meets the Discovery category requirement in Biology, and Discovery lab. As such, there will be human biology content, including anatomy and physiology, as it relates to human stress, as well as lab reports that require application of scientific methods in addressing questions.

Course Objectives (aligned with Discovery Program Learning Outcomes for BS category):

Upon successful completion of this course, students should be able to:

1. Describe the neurophysiological/neuroanatomical origins and purposes of the human stress response system.

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2. Articulate positive and negative consequences of stress and have a basic understanding of body processes (immune, cardiovascular, etc.) that are affected by stress.
 3. Demonstrate an understanding of how developmental processes (e.g. early experiences, genetic-experience influences) construct varying individual stress profiles.
 4. Articulate the complex interconnections among resources, vulnerabilities, stress buffers and protagonists, that together produce and modulate stress response profiles.
 5. Describe the health-related consequences of chronic stress.
 6. Describe both positive and negative stress management strategies (e.g. exercise vs. excessive drinking).
 7. Describe personal stress profiles along with individualized stress management plans.
 8. Demonstrate basic skill in evaluating and/or developing effective stress management intervention plans designed for self and others.
- 9. Apply scientific methods to studying basic stress responses (e.g. body temperature, heart rate, EEG) and assessing stress management techniques. Addresses Discovery Program Lab (DLab) learning outcomes:
 - Explain phenomena through observation, experimentation, and quantitative analysis.
 - Collect and interpret data.
 - Create, test, modify, confirm or invalidate hypotheses.
 - Master appropriate laboratory and field techniques used in the biological and physical sciences.
 - Communicate scientific material effectively in written and oral formats

Homework/Resources:

Posted weekly readings/videos (see syllabus) are in Canvas. These readings/videos follow along with in-class content. Please keep up in the readings and other media to participate in class discussion.

In-class responding. **TopHat subscription for the semester is required.** If this is a financial hardship, please speak privately to Barb during the first week of classes. Any information shared will be confidential.

Suggested texts for excellent supplemental reading

Sapolsky, R. M. (2004, 3rd Ed.). Why zebras don't get ulcers. NY: W.H. Freeman and Company. (approx. \$10.00).

McEwen, B. (2002). The end of stress as we know it. Joseph Henry Press. (approx. \$10.00).

Instructor Responsibilities (*Our* commitment to your success)

You may expect us to be responsive to you. You are free to e-mail or contact us regarding issues or content covered in class. Your e-mails generally will be answered within 24 hours Monday through Friday during school hours. Weekend e-mails may not be answered until the following Monday. Please schedule an appointment if you would like to speak in person. We are committed to ensuring that each person in this class is

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treated with dignity and respect by the professors, lab instructors and your peers so that you may learn in a supportive environment.

Learner Responsibilities (*Your commitment to your success*)

Canvas and TopHat access are mandatory. If you do not use your UNH email account, it is your responsibility to change the CANVAS email address to your preferred address.

Classroom climate: We expect active participation from all members of the class. This is a course about actively applying the information that you learn.... primarily in the development & care of yourself. As a result, there are lots of opportunities to be involved. This is intentionally & by design *not* a course in which you can just show up and take tests! :)

We are each responsible for promoting a classroom environment in which each person feels respected and comfortable voicing opinions, asking questions, and offering different perspectives. Your course grade will reflect participation, class and lab attendance, and your overall contributions during this course. Active participation does not always mean that you must speak up in a large class; it can also mean staying attentive, not using phones, using computers appropriately in class, emailing/meeting with instructors outside of class, following the readings & assignments in Canvas, and engaging in small group discussions.

Attendance: Attendance is expected for those who wish to learn something useful from this course. Benefits of attending include having early access to quiz questions, gathering extra credit points from in-class activity, hearing content that is not in your readings/homework (but is on tests), and participating in class discussions.

Lab attendance is required and considered a large portion of lab participation points. You may miss ONE lab without explanation: two or more missed labs result in a deduction of lab participation points. If you miss a lab, you may make one up at another lab time (it is your responsibility to let your instructor know). Options for missed yoga labs are at Hamel or scheduled classes through Health and Wellness or private vendors. See the make-up lab form posted under assignments and remember to take a selfie to confirm attendance.

Assignments: Assignment times are clearly stated in the course schedule. All assignments are due at a specified date with a two-week grace period. Assignments will not be accepted after the grace period, except for extenuating circumstances that have been discussed prior with the instructors.

UNH honor code: This code of ethical behavior and responsibility applies to all work assigned in this course and guides our decisions about sanction for students who violate the code. Consult your student handbook for descriptive information about the UNH honor code.

Accommodations: According to the ADA, each student with a disability is responsible for notifying the University of his/her disability and requesting accommodations. If you think you have a qualified disability and need classroom accommodations, contact Student Accessibility Services (SAS 201 Smith Hall). Please advise the instructor of your disability as soon as possible to ensure timely implementation of appropriate accommodations. Faculty have an obligation to respond when they receive official notice of a disability from SAS but are under no obligation to provide retroactive accommodations. Contact SAS for more information <https://www.unh.edu/studentaccessibility>, SAS.office@unh.edu)

Your academic success and overall mental health is very important. If, during the semester, you find you are experiencing emotional or mental health issues, please contact the University's [Psychological and](#)

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[Counseling Services](#) (PACS) (**3rd floor, Smith Hall; 603-862-2090/TTY: 7-1-1**) which provides counseling appointments and other mental health services. If urgent, students may call PACS M-F, 8 a.m.-5 p.m., and schedule an Urgent Same-Day Appointment.