

Your Lifestyle, Your Memory
200.120.13 Intersession 2015
Course Syllabus

Days/Times: Mon, Wed, Fri 9:30am-11:30am (1 credit)
Location: Krieger Hall #205

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Office Hours: by appointment (Ames Hall #121)

Description:

Variables affecting bodily function also affect brain function—one of the most critical being memory. The ability to form, store, and recall past events plays a critical role in guiding behavior in a complex, dynamic environment. Lifestyle choices involving diet, exercise, caffeine, stress, and sleep affect brain processing related to memory function. This course will explore how these types of decisions affect the brain physiologically and the mind psychologically, specifically in regards to memory performance.

Learning Objectives:

Students should obtain a good working knowledge and basic understanding of the following areas:

- 1) Basic structure and function of the nervous system
- 2) Behavioral components and underlying neural correlates of memory
- 3) Effects of diet, exercise, caffeine, stress, and sleep on learning and memory

Website:

The Blackboard website will be used for uploading lecture slides and other materials. All readings are optional supplements and are available now via hyperlinked citations in the Schedule of Classes and not on Blackboard. Lecture slides will be posted *after* each class as well as any additional materials used during lecture.

Requirements:

The course grade (pass/fail; there is no curve) will be determined based on the following requirements.

- 1) **Quizzes (50%):** There will be a short quiz prior to each lecture (5 quizzes, 10% each), testing material from the previous lecture/readings. You will be given 10 minutes at the beginning of the class for the quiz. You must be on time otherwise you will have less time or no time at all to take the quiz. There are no make-up quizzes.
- 2) **Summary Report (15%):** As an individual, provide a brief written summary (<1 page, single-spaced, including References) that will help form the basis of your group's scientific presentation (see below for details).
- 3) **Scientific Presentation (25%):** In a group, choose a lifestyle factor of interest—one that is not a topic of the course (i.e. alcohol, marijuana, love, etc). Locate at least three unassigned empirical articles—one must be recent (2011-2015)—that tests the effect of that variable on memory. Use these articles to formulate a brief presentation to inform your classmates. Present background information and general observed effects. Completely describe *one* of the articles: provide the background, logic, hypothesis, methods, results, and interpretations/applications. Provide the audience with a take-home message or piece of advice for their daily life. You will have ~15min for the PowerPoint presentation and audience questions.

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- 4) **Resolutions (10%):** Submit a list of 5-10 “New Year’s Resolutions” based on the lecture material. You must have 1-2 resolutions per lecture topic, with at least one per topic being very specific. Note the resolution, its corresponding topic, and the expected behavioral outcome.

Grading Guidelines:

An assignment is considered late if it is submitted after 9:30am on the due date. The late penalty is a loss of 5% from the assignment’s grade for each 24 hours that it is late. This course is pass/fail such that “Pass” is 69.5% and higher whereas “Fail” is less than 69.5%. There is no curve/rounding and there is no extra credit available.

Policies and Support Services:

This course is governed by the policies set forth in The Johns Hopkins University Undergraduate Student Handbook, which contains information on a wide variety of topics, such as support services and policies relating to student rights and responsibilities.

Some JHU student support services that you may find useful include:

Service	Location	Contact
Library E-Reserves	Website	410-516-8377 reserves@jhu.edu
Summer & Intersession Programs	3505 N. Charles Street, Suite 101 Website	410-516-4548 intersession@jhu.edu
Office of Student Disability Services	385 Garland Hall Website	410-516-4720 studentdisabilityservices@jhu.edu

Statement of Diversity and Inclusion:

The Johns Hopkins University is a community committed to sharing values of diversity and inclusion in order to achieve and sustain excellence. We believe excellence is best promoted by being a diverse group of students, faculty, and staff who are committed to creating a climate of mutual respect that is supportive of one another’s success. Through its curricula and clinical experiences, we purposefully support the university’s goal of diversity, and in particular, work toward an ultimate outcome of best serving the needs of students. Faculty and candidates are expected to demonstrate an understanding of diversity as it relates to planning, instruction, management, and assessment.

A Word on Ethics:

The strength of the university depends on academic and personal integrity. In this course, you must be honest and truthful. Ethical violations include cheating on exams, plagiarism, reuse of assignments, improper use of the Internet and electronic devices, unauthorized collaboration, alteration of graded assignments, forgery and falsification, lying, facilitating academic dishonesty, and unfair competition. Report any violations you witness to the instructor. Ethical violations will result in failure of the course and disciplinary action.

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Schedule of Classes

The following schedule is subject to change. For each day, articles are listed in the recommended reading order. All citations are hyperlinks to an online version (access may be limited to Johns Hopkins University).

Date	Topic	Optional Supplements
Mon, Jan 5 th	Introduction to the Course and Neuroscience	See Blackboard for the syllabus and other resources.
Wed, Jan 7 th	Higher-Order Cognitive Processes	Scoville & Milner (1957), Sherry & Schacter (1987), Squire (2004), Nadel et al. (2012)
Fri, Jan 9 th	Diet, Deficits, and Dementia Choose group, topic, and empirical papers.	<u>Effects:</u> Molteni et al. (2002), Asem & Holland (2012), Johnson & Kenny (2010), Gustafson (2008) <u>Application:</u> Davidson et al. (2007), Kanoski & Davidson (2011), Bouton (2011)
Mon, Jan 12 th	Exercise Your Brain Caffeinate Your Brain: Introduction	Molteni et al. (2004), Hillman et al. (2008) Haskell et al. (2005), Arendash et al. (2009)
Wed, Jan 14 th	Caffeinate Your Brain The Stress is Driving Me Crazy!	Kaur et al. (2008), Reissig et al. (2009) <u>General:</u> Arnsten (2009), Vedhara et al. (2000), Roozendaal et al. (2009) <u>Hormones:</u> Schwabe et al. (2010), Lupien et al. (2007)
Fri, Jan 16 th	Sleep More, Remember More Summary Report due.	<u>Typical Sleep:</u> Stickgold & Walker (2007), Mednick et al. (2011), Payne et al. (2009) <u>Dreams, Meditation, Hypnosis:</u> Stickgold et al. (2001), Zeidan et al. (2010), Wagstaff et al. (2007)
Mon, Jan 19 th	<i>Martin Luther King Jr. Day (No Class)</i>	
Wed, Jan 21 st	Scientific Presentations All printed slides due.	
Fri, Jan 23 rd	Review, Discussion, and Conclusion Resolutions due.	