

PSY 3219 – Biopsychology and Emotion

Time: Tue & Fr 8:30-10:00
Professor: Dr. Mate Toth

Room: T2 (Tue) / 004 (Fr)
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Office hours: Right after class, Tue/Fr 10:00-10:30, by appointment

Pre-requisites: Satisfactory completion of PSY2214 - Behavioral Neuroscience

Course Description: This course provides an overview how cognitive and emotional processes are mediated and affected by biological factors in the brain and in our body, and how alterations of these biological systems contribute to psychopathological conditions. Selected topics will be discussed, including stress, neurodevelopmental problems, their evolutionary perspective, and how current animal and human research aim to solve these problems. There will be an emphasis on fear-anxiety, and aggression-related disorders.

Learning Outcomes:

- *Critical Understanding and Thinking:*
 - Deeper understanding biological foundations of brain-behavior relations, particularly in case of emotions and memory processes
 - Basic understanding how these biological foundations are affected in mental disorders.
 - Relate behavioral neuroscience findings to phenomenological categories like sexual, aggressive behaviors, parental care, learning&memory, stress, and affective disorders.
- *Creative/Scientific Problem-Solving:*
 - Be able to form scientific questions and articulate them into actual research questions on the field of behavioral neuroscience.
 - Be able to read and synthesize information from current literature of behavioral neuroscience.
- *Scientific review and writing skills.*
 - Improve ability to write and speak about topics in behavioral neuroscience in the manner appropriate to the discipline.
 - Improve ability to work and communicate with others.

Required/Recommended Textbooks:

Readings and materials will be available on Blackboard or indicated websites.

Recommended chapters from:

Neil V. Watson and S. Marc Breedlove: *The Mind's Machine: Foundations of Brain and Behavior*, Sinauer Associates, 1st Edition, 2012.

Jaak Panksepp: *Textbook of Biological Psychiatry*; Wiley-Liss, 2003.

Course Information and Material: Course materials and information will be posted on Blackboard or e-mailed. If at any point, you have difficulty accessing materials on Blackboard, please let me know so that I can address the issue. I often communicate information/announcements to the class via email, so you should get into the habit of checking your McDaniel email on a regular basis.

Course Policies

Attendance: Because active learning is an integral part of this course, it is in your best interest to attend class regularly. If you are unable to attend class, you are still responsible for all class material, in-class assignments, and announcements. You are allowed 3 absences for any reason (no documentation is required). Because significant absence is disruptive to course progress, your classmates, your instructor, and your learning, for each additional absence, 50 points will be deducted from your final grade. If extraordinary circumstances require extra absence, contact or see me to discuss the issue.

Quizzes: The material that we will cover can be new and challenging to you. Therefore, four quizzes (simple/multiple choices or brief essays) are planned to help you keep the pace of the course and check your understanding and knowledge during the semester. Missing a quiz without documented absence means automatically 0 points (no make-up quiz). In case of documented absence, one can take a quick make-up quiz.

Exams: There will be a mid-term and a final exam in the course. The mid-term will assess your knowledge of material covered from the beginning of the semester up until the mid-term. The final exam will cover material from the mid-term to the end of the semester. Both exams will consist both choice and essay questions. You will receive a list of possible questions prior to the exam so that you can prepare your answers in advance in order to help you study. Make-up exams will only be granted in the event of a verified/documentated emergency.

Literature review

“Literature reviews are critical evaluations of material that has already been published by organizing, integrating, and evaluating previously published material. Accordingly, you need to:

- Define and clarify the problem (Choose a topic of your interest that fits into the course repertoire);
- Summarize previous investigations to inform the reader of the state of research (You are expected to include at least 5 primary research articles);
- Identify relations, both consistencies and inconsistencies, contradictions, gaps, in the literature;
- Suggest the next step or steps in solving the problem.”

Avoid common mistakes:

- “Study stacking” refers to describing each study in sequence without logical framework and integration of their conclusions.
- Too detailed summaries of studies without evaluation. It is not appropriate to include all small methodological details of a study in a review (e.g., number of participants, measures used, data, graphs), unless that information is critical for a broader point you wish to make.
- Inappropriate use of quotations. It is NOT appropriate to quote material directly from an article unless you need the author’s exact words to make a point. Basically, it means that you cannot use quotation for the present review. You need to synthesize the material, and describe it for your reader in your own words.
- You need to apply scholarly voice, scientific style (APA); accordingly you should focus on past research, not on your own personal experiences.

McDaniel College Honor Code: As a student at McDaniel College, it is expected that you know, understand and follow McDaniel College Honor Code as described in your Student Handbook.

Tips for Success in this Class

- *Come to class:* If you aren't in class, you miss the in-depth explanations and discussions that we will be having, which are designed to help you better understand the material.
- *Come to class prepared:* Do the assigned reading, keep studying regularly, and think about any questions you have about anything that you did not understand. It is not expected that you will necessarily understand everything in the reading, but having prepared before class will help you to ask questions, follow presentations, and memorize things effectively.

Grades

Assignment	Points
Quizzes (20%) – 4x50p	200
Mid-term (30%)	300
Secondary Review (30%)	300
Final Exam (20%)	200
TOTAL POINTS	1000

Grade	Points
A+	970-1000
A	930-969
A-	900-929
B+	870-899
B	830-869
B-	800-829
C+	770-799
C	730-769
C-	700-729
D+	670-699
D	630-669
D-	600-629
F	<600

Class Schedule

Day/Date	Topic	Quizzes/Exams	Reading/Assignments
Tu 1/30	Biological Psychology: Scope&Outlook		
Fr 2/2	Neuroanatomical, physiological and chemical basis of behavior		
Tu 2/6	Neuroanatomical, physiological and chemical basis of behavior		
Fr 2/9	Emotions	Quiz 1	
Tu 2/13	Aggression		Ch.11 (Mind's Machine)
Fr 2/16	Stress and affective disorders		Ch.11 (Mind's Machine)
Tu 2/20	Memory, learning and cognition	Quiz 2	Ch 7 (Biological Psychiatry)
Fr 2/23	Memory, learning and cognition		
Tu 2/27	Behavior and the motor system		Ch.13 (Mind's Machine)
Fr 3/2	Biological Psychiatry	Quiz 3	
Tu 3/6	Biological Psychiatry		
Fr 3/9	Early-life stress and plasticity		Ch.12 (Mind's Machine)
Tu 3/13	Early-life stress and plasticity		
Fr 3/16	No Class – Public holiday		
Tu 3/20	Summary for Mid-term		
Fr 3/23	Mid-Term Exam	Mid-Term Exam	
Tu 3/27	No Class – Easter holiday		
Fr 3/30	No Class – Easter holiday		
Tu 4/3	PTSD as anxiety disorder		
Fr 4/6	PTSD as cognitive disorder		
Tu 4/10	PTSD and comorbidities		Ch 11 (Biological Psychiatry)
Fr 4/13	Dimensional view of psychiatry	Quiz 4	
Tu 4/17	Research in biological psychiatry – animal models		
Fr 4/20	Somatic, immunological aspects of mental disorders		
Tu 4/24	Somatic, immunological aspects of mental disorders		
Fr 4/27	Secondary review –formulation of topics		Topic statement
Tu 5/1	No Class – Labor Day		
Fr 5/4	Consultations – review		Outline and Annotated bibliography
Tu 5/8	Consultations - review		Drafts
Fr 5/11	Summary		Drafts
Tu 5/15	Final Exam	Final Exam	Reviews due to Fr 5/18

*****Please note that this schedule may (and likely will) be modified throughout the semester as dictated by our progression through the material. Such changes will be noted repeatedly in class and via announcements.*****