

Psychology 431 (Section 01)
Introduction to Neuropsychology
Winter 2021, Blackboard

Instructor: Xandra Xu, Ph.D.
Office: 2221 Au Sable Hall
Mailing address: 1 Campus Dr., Allendale, MI 49401
Office Phone: 331-2411
Email address: xux@gvsu.edu (email is the best way to reach me)

Online office hour: T. W. 2 – 3 pm on Blackboard Collaborate at the following link:
<https://us.bbcollab.com/guest/04bc13e0df7342fd925a1e58292953f8>

If you don't have internet access during my office hours, you may dial in at the following number:
+1-571-392-7650 PIN: 234 689 5551

Please click the following link to schedule your appointment for a time slot on T. W. 2 – 3 pm
<https://calendar.google.com/calendar/u/1?cid=Y19pYm4wYnZib2R0ODNobnJmdmFoZXNlbmlxMEBncm91cC5jYWxlbmRheci5nb29nbGUuY29t>

Texts:

Required: Kolb, B. and Whishaw, I. Q. (2015). Fundamentals of Human Neuropsychology (7th ed.), Worth Publishers: New York.

Recommended: Materials on reserve in the Mary Idema Pew Library. (can be accessed through the course blackboard)

Course description:

This course will introduce students to the physiology and functions of the human brain. The course first provides students with necessary background information, including neural communication, neuroanatomy, and sensory and motor system, needed to the study of the brain. The course then focuses on the cerebral asymmetry, and the anatomical functions of occipital, parietal, temporal, and frontal lobes. Finally, the course emphasizes higher functions, such as memory and language, which require continual interaction of the different lobes; and examines abnormalities of the brain. Lectures will focus on selected concepts and theories. Students will be responsible for all materials presented in the texts as well as lectures. Prereq. Psy 101 and Psy 300.

Learning objectives:

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

- Identify the structure and function of the major parts of the nervous system
- Describe the process of action potentials
- Describe the process of neurotransmission
- Explain the sensory and motor systems
- Analyze and think critically about basic research regarding cerebral asymmetry
- Discuss functions of the four lobes of the cerebral hemispheres
- Analyze neuropsychological concepts with respect to their relationship to everyday behavior

Course delivery/method of instruction:

This course is taught under the **online designation**, meaning that the entire course is delivered online through Blackboard, including at least one synchronous session (where we will meet at the same time) using Blackboard Collaborate Ultra. Instructional strategies include lectures (as recorded video lectures) and online activities. Video lectures will be uploaded to the course blackboard. **You will find video lectures under “Weekly Content” in the course blackboard.** Students are expected to watch video lectures and read textbook chapters weekly following the “**Course Schedule**” below. When you first login to our Blackboard course site, you will see an initial announcement inviting you to click on the “Begin Here” button. In that area you will find an orientation to our course site including where you will find what content. **Students are expected to finish watching video lectures for the week by Thursday of the week, and finish taking quizzes and/or submitting assignments by Saturday of the week.**

Course evaluation:

Exams and the Final Exam: There will be two within semester exams and a final exam. Each exam will be worth 50 points and the final exam 100 points. Exams and the final will consist of identification of brain structures, multiple choice, true-false, matching, and fill-in the blank questions. Exams and final will be given in the course blackboard, and will magically appear in the folder named “**Exams**” in the course blackboard on their scheduled dates (see “**Course Schedule**” below for their scheduled dates). **Exams and the final exam require the use of LockDown Browser** (see “**LockDown Browser + Webcam Requirement**” below for details). Students are not allowed to use any external materials, such as books, notes, paper, other devices, during any exams. In the final computation of your grade, the class participation 50 points described below will be included. The final grades will be based upon your percentage of total points (number of points you earned divided by total number of points possible, which is 250).

Class participation: Class participation including quizzes and online activities (e.g., assignments) will be worth 50 points. Quizzes and assignments will be given weekly in the course blackboard, and are open-book and open-notes. Class participation including quizzes and assignments is intended to guide students towards important concepts or theories or key issues and help students prepare for exams, and the class participation points (resulted from quizzes and assignments that are open-book and open-notes) are intended to increase students’ grade. This course focuses on learning the particular material. Students receive participation points for demonstrating learning with the aid of books and notes. **Quizzes and assignments are open-book and open-notes, but they are graded. Note:** No individual students will be given any opportunity to earn extra points. However, the class will be given opportunity to earn extra participation points as shown in the course blackboard that the total possible participation points will be more than 50 points. **We will have one required synchronous session using Collaborate Ultra. Students who are not able to attend this synchronous session must watch the recording of the session to know how to take Exam 1.** This synchronous session will be during the fourth week. I will ask you to provide some input into the scheduling, and after compiling that information, I will post the date and time. This synchronous meeting will be an interactive session where I will provide content and we will have discussion, including a Q&A about the course requirements and assignments. Plan for about 60 minutes, and I anticipate it may be a little less depending on your questions.

Make-up exams: There will not be any make-up exams. Any within semester exam that any student cannot take as scheduled in this syllabus is considered as a missed exam. A score of “0” will be given in any missed exam. Students with documentations that can substantiate legitimate reasons for missing a scheduled exam will receive prorated points according to the performance on the final exam. You must notify me in writing of your reason for missing the exam and turn in the documentations to me within a week of the missed exam. If I do not receive a written notification and documentations within a week of the missed exam, you will receive “0”.

Grading:

A - to A	= 90 - 100 %	D to D +	= 60 - 69 %
B - to B +	= 80 - 89 %	F	= below 60 %
C - to C +	= 70 - 79 %		

Course Schedule: (Underlined dates are exam dates)

Date	Topic	Watching video lectures and reading textbook chapters
Week of Jan. 19	Development of neuropsychology	Chapters 1 & 4&5
Week of Jan. 25	Neural communication	Chapters 4-6
Week of Feb. 1	Neuroanatomy	Chapter 3
Week of Feb. 8	Sensory systems	Chapter 8
Week of Feb. 15	Motor system	Chapter 9
Feb, <u>22</u> (1, 3-6, 8-9)	Exam I	
Week of Feb. 23	Cerebral asymmetry	Chapters 11 & 12
Week of Mar. 1	Occipital lobes	Chapter 13

Week of Mar. 8	Parietal lobes	Chapter 14
Week of Mar. 15	Temporal lobes	Chapter 15
Week of Mar. 22	Frontal lobes	Chapter 16
Mar. 29 (11-16)	Exam II	
Week of Mar. 30	Learning and memory	Chapter 18
Week of Apr. 5	Language	Chapter 19
Week of Apr. 12	Neurological disorders	Chapter 26
Week of Apr. 19	Psychiatric disorders and Neuropsychological assessment	Chapters 27 & 28

Apr. 26, Mon.: Final Exam (3, 4, 5, 6, 18, 19, 26, 27, 28)

Drop deadline - grade of "W" - Fri., Apr. 9, 5 pm.

This course is subject to the GVSU policies listed at <http://www.gvsu.edu/coursepolicies>

Academic Integrity

Students will do original work and will not take or receive the efforts of another person on any test or assignment, use unauthorized resources on quizzes or tests, plagiarize, or give/sell other students papers or assignments *not authorized by the instructor*. **You are responsible** for not giving the appearance of cheating, such as wandering eyes or talking during exams. **You are responsible** for making sure that the LockDown browser provides evidence that cheating is not taken place. **You are responsible** for making yourself aware of and for understanding the policies and procedures that pertain to academic integrity. To that end, be sure to familiarize yourself with the GVSU Student Code [Sections 223.00 and 223.01] related to academic integrity and Student Code Section 4 - Academic Integrity of Grades & Scholarship:

<https://www.gvsu.edu/policies/policy.htm?policyId=EFAB64E1-C25B-E1A3-CA2B08B0B821C774&search=>

Disability

If there is any student in this class who has special needs because of a learning, physical, or other disability, please contact me and Disability Support Resources (DSR) at (616) 331-2490. It is the *student's responsibility* to request assistance from DSR.

Course Policies

All official Grand Valley State University email goes to your student (Gmail) account, including any email sent from Blackboard. I will send email through Blackboard, so it is very important that you check your GVSU Gmail account on a regular basis. Likewise, I would also expect that you check our Blackboard class site on a regular basis (several times per week)

During the workweek (Monday – Friday) I will check my email daily between the hours of 9-5. You will receive a response within 48-hours. I occasionally check my email once during the weekend and reserve the right to limit my email access. Therefore, please do not expect that I will return email messages on the weekend. Depending on when you send your message, it may be Monday before you hear back from me.

Please consider the **Three Before Me** rule, where before emailing me concerning technical questions or other class logistics (due dates, assignment clarification, and the like), try learning your answer through three other means first:

1. For technical support, contact the Help Desk by phone (616.331.2101) or email: helpdesk@gvsu.edu. You can also review the support documents in our Blackboard course site or by clicking the “Help” button at the top of your Blackboard window.
2. Refer to course resources such as the syllabus, calendar, assignment details that are posted under Assignments, discussions, including the FAQ forum. Everyone is welcome to post questions and to *answer questions* that are posted there!
3. Email another student in the class and/or post your question on the Question forum (Discussion Board)

LockDown Browser + Webcam Requirement

This course requires the use of LockDown Browser and a webcam for online exams. The webcam can be the type that's built into your computer or one that plugs in with a USB cable.

Watch this brief video to get a basic understanding of LockDown Browser and the webcam feature.

<https://www.respondus.com/products/lockdown-browser/student-movie.shtml>

Download Instructions

Download and install LockDown Browser from this link:

<https://download.respondus.com/lockdown/download.php?id=936312756>

Once Installed

- Start LockDown Browser
- Log into Blackboard Learn
- Navigate to the test

Note: You won't be able to access tests with a standard web browser. If this is tried, an error message will indicate that the test requires the use of LockDown Browser. Simply start LockDown Browser and navigate back to the exam to continue.

Guidelines

When taking an online test, follow these guidelines:

- Ensure you're in a location where you won't be interrupted
- Turn off all other devices (e.g. tablets, phones, second computers) and place them outside of your reach
- Before starting the test, know how much time is available for it, and also that you've allotted sufficient time to complete it
- Clear your desk or workspace of all external materials not permitted - books, papers, other devices
- Remain at your computer for the duration of the test
- If the computer, Wi-Fi, or location is different than what was used previously with the "Webcam Check" and "System & Network Check" in LockDown Browser, run the checks again prior to the exam
- To produce a good webcam video, do the following: Remember that LockDown Browser will prevent you from accessing other websites or applications; you will be unable to exit the test until all questions are completed and submitted
 - Avoid wearing baseball caps or hats with brims
 - Ensure your computer or device is on a firm surface (a desk or table). Do NOT have the computer on your lap, a bed, or other surface where the device (or you) are likely to move
 - If using a built-in webcam, avoid readjusting the tilt of the screen after the webcam setup is complete
 - Take the exam in a well-lit room, but avoid backlighting (such as sitting with your back to a window)

Getting Help

Several resources are available if you encounter problems with LockDown Browser:

- The Windows and Mac versions of LockDown Browser have a "Help Center" button located on the toolbar. Use the "System & Network Check" to troubleshoot issues. If an exam requires you to use a webcam, also run the "Webcam Check" from this area
- Respondus has a Knowledge Base available from support.respondus.com. Select the "Knowledge Base" link and then select "Respondus LockDown Browser" as the product. If your problem is with a webcam, select "Respondus Monitor" as your product
- If you're still unable to resolve a technical issue with LockDown Browser, go to support.respondus.com and select "Submit a Ticket". Provide detailed information about your problem and what steps you took to resolve it

Supplemental reading on reserve for Psy 431:

- Anticevic, A., et al., (2013). Characterizing thalamo-cortical disturbances in schizophrenia and bipolar illness. *Cortex*, doi: 10.1093/cercor/bht165
- Bayley, P. J., O'Reilly, R. C., Curran, T., & Squire, L. R. (2008). New semantic learning in patients with large medial temporal lobe lesions. *Hippocampus*, 18(6): 575-583.
- Burguiere, E., Monteiro, P., Feng, G., Graybiel, A.M. (2013). Optogenetic stimulation of lateral orbitofronto-striatal pathway suppresses compulsive behaviors. *Sciences*, 340: 1243-1246.
- Carlson, N.R. (2013). *Physiology of Behavior*. (11th ed). Boston: Allyn and Bacon. **(Please place following pages on E-reserve: 5, 6, 29, 31, 43, 44, 46, 47, 48, 53, 69, 72, 83, 86, 90, 91, 92, 95, 107, 123, 143, 144, 151, 154, 173, 194, 211, 214, 215, 232, 236, 250, 265, 267, 461, 470, 483, 488, 538, 541, 563)**
- Davies-Thompson, J., et al. (2017) Perceptual learning of faces: a rehabilitative study of acquired prosopagnosia. *Journal of cognitive neuroscience*. 29(3): 573-591.
- De Sousa, A., McDonald, K., Rushby, J., Li, S., Dimoska, A., and James, C. (2011). Understanding deficits in empathy after traumatic brain injury. *Cortex*, 47 (5), 526-535.
- Duchaine, B., Germine, L., & Nakayama, K. (2007). Family resemblance: ten family members with prosopagnosia and within-class object agnosia. *Cognitive neuropsychology*, 24(4), 419-430.
- Kumfor, F., Irish, M., Hodges, J.R., & Piguet, O. (2013). The orbitofrontal cortex is involved in emotional enhancements of memory: evidence from the dementias. *Brain*, doi: 10.1093/brain/awt185
- Kuypers, K. et al. (2019). Microdosing psychedelics: more questions than answers? An overview and suggestions for future research. *Journal of Psychopharmacology*, DOI: 10.1177/026988119857204.
- Li, W. et al. (2016). Extensive graft-derived dopaminergic innervation is maintained 24 years after transplantation in the degenerating Parkinsonian brain. *Proceedings of the National Academy of Sciences of the United States of America*, 113(23): 6544-9.
- Malm, H. et al (2015). Pregnancy Complications Following Prenatal Exposure to SSRIs or Maternal Psychiatric Disorders: Results From Population-Based National Register Data. *The American Journal of Psychiatry*. Doi.org/10.1176/appi.ajp.2015.14121575
- Meinzer, M., Darkow, R., Lindenberg, R., et al. (2016). Electrical stimulation of the motor cortex enhances treatment outcome in post-stroke aphasia. *Brain: a journal of neurology*, 139(4): 1152-63
- Mouro, F.M., et al (2018). Chronic, intermittent treatment with a cannabinoid receptor agonist impairs recognition memory and brain network functional connectivity. *Journal of neurochemistry*, <https://doi.org/10.1111/jnc.14549>
- Oliveri, M. & Vallar, G. (2009). Parietal versus temporal lobe components in spatial cognition: setting the mid-point of a horizontal line. *Journal of Neuropsychology*, 3, 201-211.
- Paschke, R.E. & Xu, X. (2014). Human Brain Anatomy: a video PPT of human brain dissection.
- Rantanen, K., Eriksson, K., & Nieminen, P. (2011). Cognitive impairment in preschool children with epilepsy. *Epilepsia*, DOI: 10.1111/j.1528-1167.2011.03092.x
- Schmid, M. C, Mrowka, S. W, Turchi, J., Saunders, R. C, Wilke, M., Peters, A. J. et al. (2010). Blindsight depends on the lateral geniculate nucleus. *Nature*, 466(7304): 373-377.
- Yang, Z. H., Zhao, X. Q., Wang, C. X., Chen, H. Y., & Zhang, Y. M. (2008). Neuroanatomic correlation of the post-stroke aphasias studied with imaging. *Neurological research*, 30(4): 356-360.