

Biological Psychology

Winter 2018 PSY 3180-C01-15143

MW 5:30-7:17 PM

Mt. Clemens Anton/Frankel Ctr. Room 121

Professor: Karen Doyle, Ph.D.
Office Hours: M/W 7:17 to 8:17 or by appointment
E-mail: kdoyle@oakland.edu

Required Text: Carlson, N.R., *Foundations of Behavioral Neuroscience*, 9th ed., 2014.

Purpose of the Course:

The main goal of this course is to provide you with a thorough overview of the biological basis of behavior. Neuroscience spans all levels of the organism: single cells, single neurotransmitter systems, brain regions and the entire integrated organism. We will explore specific functions of brain regions and relate that neurological functioning behaviors in everyday life. We will see that our brain is actually two halves that have slightly different functions and when working properly communicate with one another with millisecond timing. We will learn the specific functions of chemicals located in the brain and how drug treatments for psychological disorders are aimed at modulating these endogenous chemicals. We will determine how our senses combine with previous knowledge to allow for perception of the world around us. We will determine which brain structures are responsible for learning and memory and what the consequences are when these structures are damaged by trauma or aging.

Because the field and research methods of neuroscience are broad, throughout the semester we will encounter evidence from basic research, applied research, animal research, human research, empirical research articles and textbook readings, which will come from a variety of sub disciplines within neuroscience.

This class satisfies the General Education requirements in the Writing Intensive in a major area.

Course Prerequisites/corequisites: PSY 1000 and 2500 (Research Design in Psychology)

Course Goals and Student Learning Outcomes

Course Goals:

1. To understand the general relationship between central nervous system (CNS) structure and function.
2. To understand the research approaches (e.g., different animal models) that provide knowledge about CNS structure and function.
3. To understand how the research literature helps to us make informed predictions of relationships between CNS structure/function and psychological phenomena.

4. To appreciate how the area of biological psychology intersects with other areas of psychology.
5. To develop enthusiasm for exploring psychological or behavioral issues from a biopsychology perspective.

Student Learning Outcomes. By the end of the course, students will be able to:

1. Explain the general relationships between areas of the CNS (i.e., brain and spinal cord) and their functions.
2. Describe the different research approaches and tools that biopsychologists/neuroscientists use to provide knowledge about CNS structure and function.
3. To apply the above knowledge to scenarios or examples (e.g., case studies of brain damaged subjects, developing drugs to target brain areas or pathway receptors).
4. To compare and evaluate journal articles that attempt to explain psychological phenomena via physiological processes.
5. To construct a written argument (with empirical support) clarifying the relationship between CNS structure/function and a particular topic of the student's interest.

General Education Learning Outcomes (intensive writing): At least one third (1/3) of the overall course grade is based on substantive written assignments. On completion of this course the student will demonstrate

1. knowledge of the elements, writing processes, and organizing strategies for creating analytical and expository prose
2. effective rhetorical strategies appropriate to the topic, audience, context, and purpose

Class Sessions and Attendance:

Class attendance is **expected, strongly recommended, and will be recorded**. Material in class will not always be from the text, and you will be responsible for all material covered in class. You will also be responsible for any announcements made in class. If you miss a class, you are responsible for getting the notes from a fellow classmate.

There are no "excused" absences in this class. I want you to be in class! However, I do understand that life happens. Trust me, I get it. My solution is this – you have **THREE (3) "MENTAL HEALTH DAYS"** to use throughout the semester as you see fit. **I don't want or need documentation from you.** You are an adult and can make adult choices. Just remember that with adult choices come adult consequences. Skipping 3 times during the first month of the semester means that when your car breaks down at the end of the semester, you are out of luck.

FOR EVERY ABSENCE AFTER THREE, I WILL DEDUCT 3% FROM YOUR FINAL GRADE. This will add up quickly! **I reserve the right to assign you a failing grade if you miss 6 classes.**

If you are lucky enough to not use all your absences by the end of the semester (2 absences or fewer), I will **ADD 5%** to your final grade. **YOU ROCK!!!**

Please don't ask me to make an exception to this policy for you. The answer is NO.

Moodle:

I will use Moodle to distribute any class handouts (which may include the syllabus, power point slide outlines, worksheets and study guides). Most students find it easiest to take notes and study for exams when they have the materials printed and with them in class.

It is your responsibility to notify me if you are having any difficulties accessing the materials on Moodle.

Etiquette:

- **Courtesy:** Please be on time for class. If you are late, please enter the room quietly and take the first available seat. In addition, please do not pack up early. These behaviors are disruptive and disrespectful to the class.
- **Electronic Devices:** It is never appropriate to read or send text messages, or make or receive calls during class. Turn off your phones and put them away in your bag/pocket. Laptops and Tablets are for note taking only. Any students caught surfing the web will no longer be allowed to use these devices in class.
- **Communication with Professor:** Please feel free to come speak with me if you have any questions or concerns. It is important to come see me as early as possible in the semester if you are having difficulty understanding the material or if you are not satisfied with your exam score(s) so that we have time to address your concerns or to work on study and test taking strategies.

The best way to ask a question is to see me immediately after class, to attend my office hours, or to schedule an appointment. I will respond to email questions as quickly as possible – usually within 24 hours – in fact, if you do not get a response within 48 hours you should email again (some messages do get lost) (please use the subject line “Biological Psychology” and include your first and last name). If the question is lengthy or complicated I may suggest that you come to see me in person for a response. I am not likely to see emails that do not list a subject heading and those that have an irrelevant-seeming subject heading because they may get tagged as spam and not even make it to my inbox.

In addition, it is important that you check your e-mail for messages from me (or have the messages forwarded to your preferred account). I will use OU email to communicate with students when necessary (for example to notify students when exam scores have been posted or to let students know if class is canceled). If your OU email inbox is full, the message will be bounced and you may miss an important class message.

Exams / Course Requirements/ Grading:

Exams (total 300 points):

We will have 3 exams throughout the semester worth 100 points each. Please mark these dates on your calendar now, as they are not flexible. If you are unable to take an exam at the scheduled time you **MUST** notify me as soon as you find out, but it **MUST be BEFORE the scheduled exam**, and it must be for a valid, verifiable reason. A make-up exam will be given during final week of class if these criteria are met. Format and difficulty of the make-up exam will differ from the original exam.

1. **Posting of exam scores:** All exam scores will be placed on Moodle. Due to time constraints, I may not be handing back individual exams during class time. If you would like to see your exam, please schedule an appointment or come to office hours.
2. **Make-up Exams:** Make up exams are only available **under extreme circumstances**, and only with prior approval. In order to be considered for a make-up exam, students must make arrangements with me IN ADVANCE, at least one week before the scheduled exam date. If conditions are met make-up exams are taken during the last week of the semester, concurrent with the final exam. If an exam is missed, a student will receive a "0" for that exam to be averaged into the final grade.

Lab Reports (150 points): You will be required to submit written lab reports throughout the semester ending with a formal written lab report for the behavioral lab. More specific instructions on this process will be given out throughout the course

Ethics Debate (25 points): At the end of the semester, you will be participating in a debate over the ethics of brain research. Points will be awarded for preparation of material along with participation. These points cannot be made up in the case of absence.

Readings and Participation (50 course points):

I employ a style of teaching in which I call on students regularly. Therefore, you are expected to have completed the assigned reading prior to class. Repeatedly failing to do so will result in your inability to participate meaningfully in class discussion and will adversely affect your grade. By taking an active role in your learning -- reading the material before lecture, coming prepared with questions or comments, asking for clarification during lecture, meeting with other students in study groups, reviewing and recopying notes, etc -- you will improve your learning, your enjoyment of the material and most likely your grade. These points will be rewarded for performance on reading quizzes and group discussion.

Late Assignment Policy: Late assignments are subject to a daily point deduction. Any deviation from this policy is subject to my judgment as "legitimate" reason. Late work will be penalized **10% per calendar day** (with the "late clock" beginning at class time, not the end of the workday), until the graded assignment has been handed back to the class. At that point, late work will not be accepted. Excuses such as "I overslept" or "The printer wasn't working" will not exempt you from late penalties! *You have been warned...*

GRADING

	<u>Points:</u>
Exam 1	100
Exam 2	100
Exam 3	100
Practice Lab Report	5
EMG Lab Report	10
Sensory Lab Report	15
Formal Lab Report	
Mock IRB	5
Intro/Methods Draft	15
Full Draft	35
Final Draft	50
Group Presentations	20
Ethics Debate	25
Class Participation	50
Total	525

Add or Drop the Class: The University add/drop dates can be found on the website for the Office of the Registrar (<http://www.oakland.edu/registrar>). It is the student's responsibility to be aware of the many deadlines for dropping the course. Students can add into the class without the instructor's permission up to a week after the first class. Thus, our class roster and online interactions may change slightly during the first week and a half. The OU policy for an "incomplete" will be followed. See the Undergraduate Catalog (<http://catalog.oakland.edu/>); click on Academic Policies and Procedures and then Grading System. OU has "class cancellation days" wherein students with outstanding balances will be canceled (i.e., dropped) from classes and university housing. Students need to be aware of those dates. See Student Financial Services <https://oakland.edu/financialservices/payments-refunds/payments-cancellation/>

Disability Support Services: A student with a documented learning or physical disability must contact the Office of Disability Support Services, 103A North Foundation Hall, (248) 370-3266, and inform the professor of special needs during first week of classes. For more information, visit <http://www.oakland.edu/dss>

Academic Conduct: The University's regulations that relate to academic misconduct will be fully enforced. Any student suspected of cheating and/or plagiarism will be reported to the Dean of Students and, thereafter, to the Academic Conduct Committee for adjudication. Anyone found guilty of academic misconduct in this course may receive a course grade of 0.0, in addition to any penalty assigned by the Academic Conduct Committee. Students found guilty of academic misconduct by the Academic Conduct Committee may face suspension or permanent dismissal. The full policy on academic misconduct can be found in the General Information section of the Undergraduate Catalog, in the Student Handbook or at this link (<http://wwwp.oakland.edu/studentcodeofconduct/>).

Veteran Support Services: The office of Veteran Support Services (VSS) is responsible for giving support services to more than 300 veterans, service members, and dependents of veterans. VSS is staffed with personnel who are veterans and current or former students. Any student veteran or dependent of a veteran requiring assistance with navigating the Veterans Administration, understanding service-related benefits, or requires referrals to campus and community resources should contact one of the Veterans Liaisons by visiting 116 North Foundation Hall, or phoning 248-370-2010.
<http://wwwp.oakland.edu/veterans/>

Audio Recoding Policy: Students who wish to audio-record lectures may request permission to do so. These recordings may only be used for the purpose of personal study. Students may not share these recordings with other individuals without the consent of the professor. At the conclusion of the semester, students may request permission to keep these recordings if needed, otherwise it is expected that all audio-recordings will be deleted from all electronic recording and storage devices.

Departmental Policy for Resolution of Student Academic-Related Concerns: The student has an obligation to attempt to resolve all academic-related concerns with the instructor. If a suitable solution cannot be reached, then the student should consult the Department of Psychology Procedure for the Resolution of Student Academic-Related Concerns at <https://www.oakland.edu/Assets/Oakland/psychology/files-and-documents/Undergrad-Advising/Resolution%20of%20Student%20Concerns-04-2017-approved%20full%20doc.pdf>

Grading Scale

<u>Percentage</u>	<u>OU Grade</u>	<u>Percentage</u>	<u>OU Grade</u>
<u>100</u>	<u>4.0</u>	<u>79</u>	<u>2.9</u>
<u>99</u>	<u>4.0</u>	<u>78</u>	<u>2.8</u>
<u>98</u>	<u>3.9</u>	<u>77</u>	<u>2.7</u>

<u>97</u>	<u>3.9</u>	<u>76</u>	<u>2.6</u>
<u>96</u>	<u>3.8</u>	<u>75</u>	<u>2.5</u>
<u>95</u>	<u>3.8</u>	<u>74</u>	<u>2.4</u>
<u>94</u>	<u>3.8</u>	<u>73</u>	<u>2.3</u>
<u>93</u>	<u>3.7</u>	<u>72</u>	<u>2.2</u>
<u>92</u>	<u>3.7</u>	<u>71</u>	<u>2.1</u>
<u>91</u>	<u>3.6</u>	<u>70</u>	<u>2.0</u>
<u>90</u>	<u>3.6</u>	<u>69</u>	<u>1.9</u>
<u>89</u>	<u>3.5</u>	<u>68</u>	<u>1.8</u>
<u>88</u>	<u>3.4</u>	<u>67</u>	<u>1.7</u>
<u>87</u>	<u>3.4</u>	<u>66</u>	<u>1.6</u>
<u>86</u>	<u>3.3</u>	<u>65</u>	<u>1.5</u>
<u>85</u>	<u>3.3</u>	<u>64</u>	<u>1.4</u>
<u>84</u>	<u>3.2</u>	<u>63</u>	<u>1.3</u>
<u>83</u>	<u>3.2</u>	<u>62</u>	<u>1.2</u>
<u>82</u>	<u>3.1</u>	<u>61</u>	<u>1.1</u>
<u>81</u>	<u>3.1</u>	<u>60</u>	<u>1</u>
<u>80</u>	<u>3.0</u>	<u>≤59</u>	<u>0</u>

The percentages for your course grade are rounded to nearest whole number based on the number in the tenth position. For example, 69.46% is equal to 69% and receives an OU grade of 1.9

◀ Lecture and Reading Outline ▶

NOTE: This schedule is TENTATIVE. The exam dates will not change unless there is some emergency. The material we cover may need to change depending on how quickly we proceed. "The instructor reserves the right to amend, modify, or alter the syllabus and course schedule as necessary.

WEEK	DATE	Chapter	ASSIGNMENTS/ CLASS ACTIVITIES	TOPICS
<u>1</u>	1/1/2018		HAPPY NEW YEAR!!!	
	1/3/2018	Syllabus Ch. 1		Course Introduction/The Nature of Behavioral Neuroscience
<u>2</u>	1/8/2018	Ch. 1	Syllabus Quiz	Natural Selection and Evolution

	1/10/2018	Ch. 3	Watch Mythbusters/ What is a Lab Report?	Structure of the Nervous System
<u>3</u>	1/15/2018	MLK DAY – NO CLASS		
	1/17/2018		MythBusters Lab Report Due	Structure of the Nervous System
<u>4</u>	1/22/2018			Lateralization of Function
	1/24/2018	Exam 1: Ch. 1, 3, Lateralization of Function		
<u>5</u>	1/29/2018	Ch. 2		Cells of the Nervous System
	1/31/2018	Ch. 4		Cells of the Nervous System/ Psychopharmacology
<u>6</u>	2/5/2018			Drugs and Addiction
	2/7/2018	In Class Activity: EMG		
<u>7</u>	2/12/2018	Ch. 6		The Visual System
	2/14/2018	Ch. 7	EMG Lab Report Due	Audition, the Body Senses, and the Chemical Senses
<u>8</u>	2/19 & 2/21	HAVE A GREAT WINTER RECESS!		
<u>9</u>	2/26/2018			Audition, the Body Senses, and the Chemical Senses
	2/28/2018	In Class Activity: Sensory and Motor Systems		
<u>10</u>	3/5/2018	Exam 2: Ch. 2, 4, 6, 7		
	3/7/2018		Sensory and Motor Systems Lab Report Due Outline Research Proposal Find Articles	Research Work Day
<u>11</u>	3/12/2018		Mock IRB write up in class	Research Work Day
	3/14/2018	Ch. 8	Intro and Methods Due Data Collection	Sleep and Biological Rhythms
<u>12</u>	3/19/2018	Ch. 12	Data Collection	Learning

	3/21/2018		Data Collection	Memory
<u>13</u>	3/26/2018		Data Collection	Memory
	3/28/2018	Ch. 9	Data Collection	Reproductive Behavior
<u>14</u>	4/2/2018		Data Analysis	Reproductive Behavior
	4/4/2018		Nailing That Presentation	Wiggle Room/ Research Work Day
<u>15</u>	4/9/2018	Exam 3: 8,9,12		
	4/11/2018		Full Draft Due	Peer Review Day/Research Work on Presentation
<u>16</u>	4/16/2018		Final Draft Due	Beh. Neuro. Ethics Debate
	4/18/2018	READING DAY – NO CLASS		
<u>17</u>	TBD	Behavioral Neuroscience Project : Group Presentations		