

## PSY 0505: Introduction to Biopsychology

Spring, 2014

Tuesdays & Thursdays 2:30-3:45 PM; Cathedral of Learning, Room 335

Section# 1060, Class# 25315

**Professor:** Peter J. Gianaros, Ph.D.

**Office:** 627 Old Engineering Hall

**Office hours:** Wednesdays: 12:00pm-1:15pm

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**Undergraduate Teaching Assistants:**

Emma Rosenzweig, Anna Schartner

**Meeting Location:** Cathedral of Learning Commons Room (1<sup>st</sup> floor)

**Office hours:** TBA (Click on "Faculty Information" on our CourseWeb page for updates)

**Email:** [biopsych@pitt.edu](mailto:biopsych@pitt.edu)

Welcome to **Introduction to Biopsychology**! We are going to do our best to make this course stimulating, interesting, and even a little fun! What follows are descriptions of this course, your professor, and your teaching assistants. Your learning objectives and responsibilities as a student are also provided. Please keep this syllabus handy: you will need to consult it often throughout the semester. When you have questions for us during the semester, please refer to this document before asking your questions.

### **So, what is Introduction to Biopsychology all about?**

It's all about the *biological basis* of our behavior, our thoughts, our motivations, emotions, and moods, and some of the deepest troubles we face as humans. And by troubles, we mean addictions, chronic stress, problems with sleeping and eating, and mental illnesses that are experienced by people all over the world. And as you may have guessed by now, this course will necessarily focus on what is arguably the most complicated and fascinating organ in your body: *the brain*.

Ideally, the material covered in this course would be spread out over several semesters. This is because Biopsychology is a vast scientific discipline. So, to provide you with an essential introduction to this discipline, we have omitted some topics to focus on helping you to achieve these main objectives:

- (a) To learn the definitions of key terms that comprise the vocabulary used by scientists in Biopsychology;
- (b) To learn the basic concepts and principles that support biological explanations of behavioral processes and that drive research in Biopsychology;
- (c) To learn how and when to apply these key terms, concepts, and principles appropriately, so that you can reason your way through new questions and problems in Biopsychology, as well as to identify how and when these terms, concepts, and principles are used *inappropriately*; and
- (d) To learn how it is that Biopsychologists have come to know what they know by using the scientific method, by using creative and critical thinking, and by using a specialized set of techniques to measure the structure and function of the brain in humans and nonhuman animals.

Achieving these objectives will prepare you not only for advanced study in this discipline, but will also allow you to appreciate and understand what it means to have a *biological perspective* of psychological and behavioral processes.

**Prerequisites and a word about being prepared:**

The formal prerequisites are: PSY 0010 or 0012 or 0015 or 0101 or 0200. In addition, it will help if you have completed other coursework in the biological and natural sciences. This is because the course will focus on the anatomy, physiology, and neurochemistry of the brain and its related systems. If you have previously taken NROSCI 1000 ‘Intro to Neuroscience’, then this class is probably not appropriate for you, because we will be covering redundant material. Also, *Psychology Majors do not need to take this course in addition to Intro to Neuroscience.*

**About the professor and teaching assistants:**

I received a B.S. from the University of Florida and a Ph.D. from Penn State. After my Ph.D., I completed a fellowship in behavioral medicine here at Pitt before becoming a faculty member of the Departments of Psychiatry and Psychology. I use brain imaging and psychophysiological research methods to study the relationships between psychological stress and physical health. I specifically study how the brain controls our cardiovascular system when we experience stress, and how the structure and function of the brain relate to a person’s risk for developing heart disease.

Emma Rosenzweig and Anna Schartner are your undergraduate teaching assistants. They took this course with Dr. Gianaros and were well within the top 1% of all students in their performance. It will be extremely helpful for you to meet with them early and often during their office hours to benefit from their experience and expertise.

**Office hours:**

You never need an appointment to see us during office hours. Still, you should know that we see students on a first come, first served basis. Therefore, it is possible that you may need to wait for a few minutes while we talk to other students who may come to see us before you. You can arrange to see us in small groups of about 2-4 if you have friends or study partners in the class. Additional office hours may be arranged by appointment. *After* class is the best time to ask brief questions and schedule appointments; before class is NOT ideal because we need to set up for class. **Finally, appointments need to be made with at least 3 days of advanced notice. We cannot promise to be able to meet with you on short notice—especially around exam time.**

**CourseWeb:**

This course has a CourseWeb page. You can access it through the Pitt Portal at my.pitt.edu. After you log in, click on “CourseWeb”. This course should be listed **2144\_PSY\_0505\_SEC1060\_INTRO TO BIOPSYCHOLOGY** under “My courses” if you are registered (allow 24 hrs after registration for the course to appear). Be sure to check CourseWeb regularly throughout the semester for announcements and other important information.

**Required textbook and MyPsychLab.com:**

Pinel, P. J. (2014). *Biopsychology* (9<sup>th</sup> Ed.), Pearson. ISBN: 978-0-205-91557-6. You may purchase this text at the Pitt Book Center. I will also make 2 copies available on 2-hour reserve at the Hillman Library Reserve Desk (use Gianaros and your Pitt ID card to check out a copy). **You do not need to bring your book to class.**

*Please know that I will assign readings only from the 9th edition of the book. Students with a different edition of the book will be responsible for determining which material is different from the current edition because I do not know the ways in which they differ. If you do not wish to purchase a hard copy of the book, you may consult the reserve copies in the library. I think you can also get an online only copy through the Pearson website for a reduced price—about 70.00, but I don't know the details. To learn more, go to <http://www.mypearsonstore.com>.*

**Attendance and other policies:**

Coming to class regularly will help you do well. This is because each class does not consist simply of a presentation of the material in your textbook (new material and new research studies in the field will be presented!). However, attendance is not mandatory and will not be taken. **Students who do not attend a lecture should contact a fellow student to determine missed information.** It is not possible to get all of this information from the TAs or the professor. In other words, please do not email us or come to office hours requesting that we provide you with information or the complete lecture slides from classes you missed. We will not accommodate these requests for any reasons—we are firm in implementing this policy out of fairness and equity to all students. Important announcements will be posted on CourseWeb. For exams, you will be responsible for the material presented in class in addition to material presented in the text. Exams will also cover *any guest lectures, videos, corrections to the material in the text, and information arising from questions/answers.*

Full class notes will **not** be made available online because taking your own notes will help you remember what you have learned. However, because having a context for the information you are about to learn will aid in your learning, an abbreviated version of key class slides will be posted on CourseWeb. I will try to make sure everything is posted no later than 10am on the day of the lecture, but in most cases everything will be posted earlier. **You are encouraged to look at these and bring them as printed copies or in electronic form to class for note taking.** I will make every effort to ensure that you have adequate time to take notes. If there is a discrepancy between text and class material, class material should be considered correct, but please point out any discrepancy that you find so that I can address it. There are places where I disagree with text material.

***We understand that students sometimes need to arrive late for class or leave early. Please attempt to do this with minimal disruption for the benefit of your classmates.*** If you anticipate needing to arrive late or leave early on a regular basis, please inform the professor directly. If late arrivals or early departures begin to cause too much disruption, this policy may be revised. Class will usually end a few minutes early to allow you to pack up before going to your next class. Please do not make noise by packing up before I formally end class because this is disruptive to your fellow students and to me.

Asking relevant questions during class is *strongly* encouraged. Please raise your hand if you have a question and share it with your classmates. I will try my best to restate questions so that you know that I understand your question and so that all students will be included in the discussion. Questions and answers are considered potential material for exams. This is one reason why it's important to come to

class. Please limit questions asked during class to those relevant to the topic being discussed. Other questions are encouraged after class or during office hours.

Please turn off / silence your cell phone before class begins. **Talking or other disruptive behavior (including cell phone use, texting, or emailing) during class will not be tolerated. It undermines both the students' and the instructor's ability to concentrate. Please be respectful and mindful of the people around you.** Computers may be used to take notes. Also, if you are using a computer for note taking, please refrain from using social media during class. At the discretion of the instructor, disruptive students will be penalized points toward their final grade.

Bringing snacks or beverages to class is OK. But, please clean up all trash as you leave the classroom.

#### **Contacting me or your teaching assistants:**

If you need to reach me for any reason, you can come to my office hours, send me an email, or call my office. Please do not call the TAs or myself at home. We have a course email address ([biopsych@pitt.edu](mailto:biopsych@pitt.edu)). This address will be checked by us regularly. Therefore, you will most likely receive fast replies to email sent to this address. However, you should allow at least 1 to 2 days for replies, especially prior to exams.

#### **Please use the course email address for all correspondence.**

**PLEASE DO NOT USE our individual email addresses for emailing. Emails to our individual addresses may not be replied to.** If there is an issue that you would like to discuss with the professor or a particular TA, please see us after class to set up an appointment, or ask that the email be directed to that person in the subject line of an email sent to [biopsych@pitt.edu](mailto:biopsych@pitt.edu)

#### **Emailing guidelines:**

- 1. Please sign all emails with your full name (first and last).**
- 2. Please do not ask questions prior to the exam that would require us to re-explain exam material.** It is appropriate to ask something along the lines of: *"I am confused about the difference between bipolar neurons and multipolar neurons. I think that bipolar neurons are neurons that have X properties, and multipolar neurons have Y properties. Is this right?"*

However, *it's not* appropriate to ask something along the lines of: *"What are bipolar neurons?"* This is because we will not re-summarize material via email that was covered in the text or in class. In these types of emails, it is best to give us your understanding of the material so that we know where there may be a misunderstanding. Generally speaking, it is best to come to office hours to go over the material before the exam, rather than relying on email. Email is best used for brief clarification questions. Asking more general questions is appropriate for exam review sessions.

- 3. Please read and reread this syllabus, consult your book, and check the information on the CourseWeb site PRIOR to contacting us with questions.** Many of your questions can be answered this way. If you ask a question that can be answered by checking these sources, we will respond to your email by asking you to check one or more of them. In particular, be sure to regularly consult the Scan your Brain; Themes Revisited; Think About It; Key Terms; and Quick Review sections of your text.

Please also be sure to use the online resources posted on courseweb. I will put links to great learning resources here.

**4. Please respond to all emails that you receive from us to let us know that you received the message and understand the information. If you don't understand the information, please request clarification.**

**Earning your grade:**

The purpose of grading is to evaluate your understanding of material presented in classes, movies, demonstrations, and readings. For this kind of class, the most practical way to assess this understanding is with objective, multiple-choice exams. To the extent possible, these exams will be designed to assess your understanding and your ability to apply concepts (rather than just memorization). Your grade will be based on exam performance and points earned on extra credit assignments.

**Exams:** There will be 3 multiple-choice exams held during the semester. A fourth exam will be held during the University-appointed final exam period. Each exam is worth 100 points. **The fourth and final exam is optional. This optional exam will be cumulative and integrative, and it can be used to replace a lower grade on another exam.** The 3 exams held during the semester will NOT be cumulative. All exams, including the fourth, cumulative, and optional final exam, will have 40 multiple-choice (4 option) questions. Sample questions will be provided prior to the first couple of exams to get you familiar with how I ask questions. I also create study guides that will help you.

**Arrive on time for exams. Late-arriving students may not be allowed to take exams. Late arrivers will never be allowed to take an exam if any student has completed the exam and left the classroom.**

Exams will cover class material that is not covered in the book, book material not covered in class, and class material covered in the book (as well as any other information presented in class).

Again, the fourth exam is optional and cumulative. It will be held during the university-appointed final exam period. See class and exam schedule below. The University assigns final exam times and does not allow faculty to change those times.

*Bring a #2 pencil with an eraser to all exams. These will not be provided, but I will bring a sharpener. **Also bring your Pitt ID and PeopleSoft number to every exam.** Cell phones, MP3 players, and other electronic devices (including dictionaries) are never permitted during exams, so please do not bring these or turn them off before entering the room. If you need help understanding an exam question, please ask us.*

**If you have a question just prior to the exam, please come to the front of the room and ask me before we begin passing out the exams and Scantron forms. It is not appropriate to ask questions once the exam materials are being distributed because it will delay the start time of the exam. It is also inappropriate to ask questions that require us to completely explain or define something prior to the exam. Please ask only brief clarification questions at that time.**

**Grade curving:**

I will not curve scores unless the average score for the exam is below 70%. If the average score for an exam (except for the final) is below this percentage, I will add the difference in percentage to everyone's score so that the average equals 70%. I will do this for each exam separately, so that you will always know where you stand in the course. Also, I would make this adjustment prior to posting the scores and would make an announcement letting you know that I have curved the scores. However, this is unlikely to be necessary, and will not be done to the final cumulative exam.

Adjustments of the final exam time will be given only for students with exam conflicts (more than three exams on the same day during finals week), as requested by university guidelines. The makeup exam will be of a different format as the regular exam, will include essay questions, and will be given no more than 24 hours from its scheduled time.

No other changes to the final exam time can be made because of university guidelines and for fairness to all students. ***If you anticipate a problem with being present for the final exam at its assigned time, you forfeit your right to use that exam to replace a prior grade, including a missed exam (see below). No exceptions to this policy will be made.***

**Makeups:** No make-up exams will be given (except for the final exam – and *only* if there are final exam conflicts as stated above). Students who miss one of the 3 exams for **any reason** will need to use the fourth exam to replace their missing grade. **Even if you do not anticipate missing an exam, you should not schedule travel prior to the final exam because that is the only time you may take the final. Policies regarding exam conflicts for student athletes are below (page 9).**

**Extra Credit Assignments:**

You can earn up to 12 points of extra credit over the semester by writing letters to people who are important to you (e.g., a former teacher, coach, or mentor, a friend, your boyfriend/girlfriend, or a relative) describing the way that a topic from class is relevant to this person. If you'd like, you can also write a letter to someone important to you explaining the way a topic is relevant to your own life. You can choose any topic from the class material (chapters and lectures) linked to each exam. Let Dr. G. or the TAs know if you have any questions about topics.

Your letters should be in essay form, and they should be carefully edited and spell-checked. Each letter should be minimally 350 words in length. Assignments will be graded based on perceived effort. You can write up to 2 letters worth 2 points each for each block of material we cover prior to each exam. Therefore, you can write up to 6 letters total for the semester.

Once your essay is complete, turn it in to us at turnitin.com. You may need to create an account if you don't have one. Then, sign up for this class:

Class ID: 7432561

Password: *pinel*

Assignment name: Extra Credit Essay about INSERT TOPIC NAME and NUMBER HERE

*(e.g., For each letter you write, you have to give it a name and a number along the lines of "Extra Credit Essay about What Biopsychology Means #1", "Extra Credit Essay about Jose and the Bull #2.")*

Additional guidelines: These letters must be completed independently. Your assignments will be checked against other assignments from this class and other existing materials to guard against plagiarism, so be sure that your work is entirely original and your own. If you wish, you may check your “originality report” to see that your work is not seen to overlap with that of others (a low % overlap indicates unique work). Please refer to the cheating and plagiarism policy in the syllabus for more information.

**This is also very important: When you are directly referring to or talking about material from the book, be sure to cite it! Avoid using quotations or direct quotes. Use your own words.**

No late assignments will be accepted.

Again, these assignments are optional. However, the more letters you write, the better your grade will be! I will not share templates or examples for this, because I want this work to be original and your own. Be creative. Have fun with this!

Please know that extra credit assignments **cannot be completed after an assigned deadline under any circumstances**. The deadlines to earn your extra credit for a particular block will be 11:59pm on the day of the exams.

You must use your Pitt email address to create your turnitin.com account. Otherwise, I can't link you with this specific class.

For more information, go to: <http://www.cidde.pitt.edu/-70>

Click on the link that says: *Student Accounts for Turnitin*

**Extra Credit Assignments and Due Dates:**

Assignments Corresponding to Each Chapter Covered by the 3 Exams	Extra Credit Points Available if You Write 2 Letters and Get Full Points for Each Letter (2pts/letter)	Due Date to Complete Media Assignments
Chapters 1, 3, 4, and 5	4	11:59pm - 2/11 (Exam 1)
Chapters 10, 12, and 14	4	11:59pm - 3/20 (Exam 2)
Chapters 15, 17, 18	4	11:59pm - 4/17 (Exam 3)

**Grading**

Maximum Points Possible:

Exam 1	100
Exam 2	100
Exam 3	100
*Final exam	100
Extra credit	Up to 12pts
Total points possible not including extra credit	300

\*If your final exam grade is higher than a regular exam grade, I will substitute your final exam grade for that exam. If it is lower, I will keep your higher score. Taking the final cannot lower your grade.

**Please note: points are used to compute grades, not percentages. These point cutoffs are extremely strict and WILL NOT BE CHANGED UNDER ANY CIRCUMSTANCES. Therefore, please do not request a higher grade based on rounding averages, or any other reason. In other words, if you are 1 point away from the next highest grade, I will not agree to requests to award the higher grade out of a strict obligation to maintain equity across all students in the course.**

Letter grades will be determined as follows, based on the university grading system:

Grade	Minimum Score	Maximum Score
A+	290	300+
A	278	289
A-	269	277
B+	260	268
B	248	259
B-	239	247
C+	230	238
C	218	229
C-	209	217
D+	200	208
D	188	199
D-	179	187
F	0	178



**Academic integrity:** Students in this course are expected to comply with the University of Pittsburgh's Policy on Academic Integrity. **CHEATING WILL NOT BE TOLERATED IN THIS COURSE! Cheating includes, but is not limited to: looking at the exam of a fellow student, a text, or a study guide; writing information on note cards, your body, your desk, a cell phone or other devices, or your clothing to look at during an exam. Any student who is found cheating or plagiarizing will receive an F for the course and will be reported to the Dean. Please do not do anything that would make us suspect that you are cheating!**

**University's statement on cheating and plagiarism:** Cheating/plagiarism will not be tolerated. Students suspected of violating the University of Pittsburgh Policy on Academic Integrity...from the February 1974, Senate Committee on Tenure and Academic Freedom reported to the Senate Council, will be required to participate in the outlined procedural process as initiated by the instructor.

**Disabilities:** *If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and Disability Resources and Services, 140 William Pitt Union, 412-648-7890 or 412-383-7355 (TTY) as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course. Arrangements for disability exams must be made through the DRS office a minimum of one week before the in-class exam date.*

**Student assistance and counseling:** Everyone feels overwhelmed by the challenges of being a student at times. We are here to help you. If you have any issues that you would like to discuss with the instructor or a TA in confidence, please schedule an appointment. Please note that we are not counselors but can direct you to a place where you can get help. **If you need someone to talk to at any point, there are several on-campus resources.**

One option is the University Counseling Center (a free, confidential service). They can be reached at 412-648-7930, and are located at 334 William Pitt Union.

Another option is the Psychology Department's Clinical Psychology Center (see [www.pitt.edu/~clinic/](http://www.pitt.edu/~clinic/)). They can be reached at 412-624-8822, and are located at 3820 Sennott Square.

Sexual assault services are given at the Sexual Assault Services Center, which is located at 334 William Pitt Union (phone: 412-648-7856).

**For emergency psychiatric care, please go to the nearest emergency room, or to the Diagnostic Emergency Center at Western Psychiatric Institute and Clinic. The clinic is located at 3811 O'Hara St. (see [wpic.upmc.com/Locations.htm](http://wpic.upmc.com/Locations.htm)). They can be reached at 412-624-2000.**

**Student Athletes:** Please ask your coach or the Athletics Department for the 'instructor's letter' and your sports schedule. Please give me your schedule during the first 2 weeks of class. Check for exam conflicts and notify me ASAP and before the exam conflict date. Please remember that it is your responsibility to contact me to make arrangements in advance of the conflict to make fair accommodations.

The *tentative* class schedule (subject to change—updates will be announced during the semester in class and on the CourseWeb page) is presented at the end of this syllabus. Please make every effort to complete the assigned reading prior to class! Research shows that students understand new information better when they have a framework for understanding. Reading the chapter will provide a good framework for understanding the information presented during class. If this is not possible, I recommend reading the outline prior to class for the same reason.

We recommend that you record the names, phone numbers, and email addresses of at least three of your classmates in case of absences or other issues.

Name:	_____	Name:	_____	Name:	_____
Email:	_____	Email:	_____	Email:	_____
Phone:	_____	Phone:	_____	Phone:	_____

Class	Date/Day	Topic	Reading	Notes
1	Tu 1/7	Introduction and course mechanics	Syllabus	Please get your textbook. This can be a hard copy or an electronic copy. Start reading Chapter 1 before the next class—and definitely read the syllabus.
2	Th 1/9	Conceptual foundations	1	Focus on sections 1.1 – 1.7
3	Tu 1/14	Anatomy of the Nervous System: I	3	Focus on sections 3.1, 3.3, 3.5, and 3.6 (You are not required to know the material in the Appendices, but you are encouraged to look at these Appendices when referenced in the text.)
4	Th 1/16	Anatomy of the Nervous System: II	3	Focus on sections 3.1, 3.2, & 3.4
5	Tu 1/21	Neural conduction	4	Focus on sections 4.1-4.4
6	Th 1/23	Synaptic transmission	4	Focus on section 4.5
7	Tu 1/28	Neurotransmitters and behavioral pharmacology	4	Focus on sections 4.6-4.7
8	Th 1/30	Methods: I	5	Focus on sections 5.1, 5.2, 5.6, 5.7
9	Tu 2/4	Methods: II	5	Focus on sections 5.3, 5.4, 5.8
10	Th 2/6	Carry over, integration and review		Come with questions, and be sure to review the study guide beforehand.
<b>11</b>	<b>Tu 2/11</b>	<b>Exam 1</b>		<b>Material from classes 2-10; Chapters 1, 3, 4, and 5 Extra credit assignments due by 11:59pm.</b>
12	Th 2/13	Brain Damage and Plasticity	10	Focus on sections 10.1-10.2
13	Tu 2/18	Brain Damage and Plasticity	10	Focus on sections 10.3-10.4
14	Th 2/20	Brain Damage and Plasticity	10	Focus on sections 10.5
15	Tu 2/25	Hunger and eating	12	Focus on sections 12.1-12.4
16	Th 2/27	Hunger and eating	12	Focus on sections 12.5-12.7
17	Tu 3/4	Sleep and arousal	14	Focus on sections 14.1-14.3
18	Th 3/6	Sleep and arousal	14	Focus on sections 14.4-14.8
<b>SPRING BREAK – NO CLASSES 3/10 – 3/14</b>				
19	Tu 3/18	Carry over, integration and review		Come with questions, and be sure to review the study guide beforehand.
<b>20</b>	<b>Th 3/20</b>	<b>Exam 2</b>		<b>Material from classes 11-17; Chapters 10, 12, and 14 Extra credit assignments due by 12am.</b>
21	Tu 3/25	Reinforcement and Addiction	15	Focus on sections 15.1-15.3
22	Th 3/27	Reinforcement and Addiction	15	Focus on sections 15.4-15.6
23	Tu 4/1	Emotion, Stress and Health	17	Focus on sections 17.1 & 17.3
24	Th 4/3	Emotion, Stress and Health	17	Focus on sections 17.5-17.4
25	Tu 4/8	Biopsychology of Clinical Disorders	18	Focus on sections 18.1-18.2
26	Th 4/10	Biopsychology of Clinical Disorders	18	Focus on sections 18.3-18.5

27	Tu 4/15	Carry over, integration and review		Come with questions, and be sure to review the study guide beforehand.
28	Th 4/17	<b>Exam 3</b>		<b>Material from classes 19-27; Chapters 15, 17, 18 Extra credit assignments due by 12am</b>
<b>Optional Final Exam (cumulative) in regular classroom Wednesday April, 23 4pm - 5:50pm</b>				