

SYLLABUS

PSY 3306: Neuroscience of Development and Aging Fall 2024

This is a hybrid class: we meet once a week on Thursday at 9:30 AM (Weiss B035)

Instructor: [Peter J. Marshall, Ph.D., Professor of Psychology & Neuroscience](#)

Welcome to Psychology 3306! The best way to contact me outside of class is via email at peter.marshall@temple.edu or by sending me a message in Canvas. My office hours are Tuesdays from 10:30 to 11:30 AM (Zoom or in person) but it is best to first let me know that you wish to connect.

Prerequisites for this Course

PSY 1003 – Statistics for Psychology (or equivalent)

PSY 1004 – Critical Thinking in Psychology (or equivalent)

PSY 2501 or 2502 – Foundations of Behavioral Neuroscience or Foundations of Cognitive Neuroscience

Learning Objectives

This class may not be what you are expecting. We will explore questions about development that fall at the intersection of neuroscience, psychology, biology, philosophy, anthropology, and history. You will see that the study of development goes beyond studying how children think and behave, or documenting changes in the brain that occur as we get older. You can hopefully see that understanding development also involves considerations from disciplines outside psychology and neuroscience, particularly biology and philosophy.

To get a sense of where we are going, see [these reflections from students who took the course in Fall 2021](#). There will be many questions raised, and not all will be answered. One goal is to think about the questions themselves, even if we cannot answer many of them with any degree of certainty. The class is not a conventional lecture and it is not extremely content-heavy. You will get the most out of this course if you engage with the material and work to connect the dots among the topics that we will cover, and between the course material and what you have learned in other classes.

The focus of this class is on development: What it means to develop, and how development came to be part of the living world. We will be thinking about

development at different timescales, from the individual lifespan through to the vastly longer timescales of evolution. We will be paying particular attention to the development and evolution of the brain and nervous system, although we will also come to see that to understand the brain, you need to see it as being part of a body that belongs to an active, agentive individual.

Most of the students who take this course are either Psychology majors or Neuroscience majors. Some PSY students in the class may be working toward the [Cognitive Neuroscience minor](#), for which this course counts. Neuroscience majors usually take this class as an NSCI elective. There may also be some double majors. For Psychology majors, this class may help you understand how psychology and neuroscience relate to each other. It may also help you appreciate the unique position of psychology for addressing questions about how people bring meaning to their lives.

For Neuroscience majors, this is an elective that is not neuro-heavy. It will hopefully inspire you to ask big picture questions about what emerges from the lower-level processes that you are learning about in other classes.

Course Materials

This course has been designed with support from the [Textbook Affordability Project](#) at [Temple University Libraries](#). To keep your course materials costs to a minimum, this course uses Open Educational Resources (OER). These are high-quality, openly licensed educational materials available at no cost to you. The OER materials are licensed under a Creative Commons license which means you are free to use, reuse, modify, and share with attribution.

Links to the OER materials will be posted onto Canvas and you should access the readings through Canvas. Most of the readings are drawn from wider open resources that I have developed and have made accessible to anyone, anywhere:

<https://sites.google.com/peterjmarshall.com/aboutdevelopment>

<https://sites.google.com/peterjmarshall.com/enacting-life>

<https://sites.google.com/peterjmarshall.com/human-brains>

I am interested in your experience using the course materials and welcome your feedback at any time throughout the semester. If you find a broken link or cannot access something in the online course materials, please let me know.

Course Requirements

There are no exams and there is no final paper. Instead, the requirements are evenly distributed across the semester. Your final grade is out of 100 points. Most of your grade will come from completing the following on Canvas according to a regular weekly schedule:

- Annotations on readings (due **Wednesdays at 11:59 PM**) worth 27 points
- Discussion board posts (due **Wednesdays at 11:59 PM**) worth 28 points.
- Short answer assignments (due **Fridays at 11:59 PM**) worth 38 points.

The remaining points come from the following:

- Attendance at the Thursday class session (7 points).

Attendance

Attendance will be taken during each class session using the Qwickly app in Canvas. As noted above, attendance is worth 7 points. There are 14 class sessions over the semester. Attending one class session is worth 0.5 points. You can have two unexcused absences, so I will give you 1 of the 7 attendance points as a freebie. So **you can miss 2 class sessions without penalty and without needing to let me know**. Any unexcused absence beyond those 2 will result in an attendance grade of zero for that class session.

Attendance for a class session can only be excused through contacting me with a valid reason before the class on Thursday begins at 9:30 AM. There are no exceptions to this rule. I decide if the reason is valid or not and whether I will grant an excused absence. If you are having ongoing problems and cannot come to class consistently, talk to me about your situation, and you should also consider submitting an [absence notification request to the Dean of Students](#).

To see your attendance record, you need to look in Qwickly. I use Qwickly for grading attendance at the end of the semester, when I will account for the number of unexcused absences that you are allowed. As noted above, you are allowed 2 unexcused absences. I will account for any absences at the end of the semester when I go through the data from Qwickly. So if you see absences in the attendance grade, I will make adjustments at the end of the semester such that the first 2 unexcused absences will not affect your grade.

Assignment Schedule

Week 1: Introduction to the Course

- Read "[What Does it Mean to Develop?](#)" ahead of the first class session.
- Submit a *discussion board post* introducing yourself **AND** including a question based on the "What Does it Mean to Develop?" reading that you would like to see discussed (2 points, due by **Weds 8/28 at 11:59 PM**)
- Complete a *short answer assignment* on Canvas about your background and interests (2 points, due **Friday 8/30 at 11:59 PM**)
- Make two *annotations* to the syllabus using Perusall (1 point; due **Weds 9/4 at 11:59 PM**)

Weeks 2-14: Course Modules 1-13. All assignments are due by **11:59 PM** that day.

For each module you will need to complete the following **every week**:

- Complete the course readings as well as *annotations* (2 pts, due Weds).
- Post a question/comment to the *discussion board* (2 points, due Weds).
- Submit a *short answer assignment* (3 points, due each Friday except Oct 11)

Suggested Plan for Your Week

Monday-Wednesday

- Read module materials and view posts or videos from me on Canvas about the weekly topic. The materials and assignments for a course module will be available on Canvas by the end of the week before.
- Submit annotations on Perusall (worth up to 2 points; due **Weds 11:59 PM**)
- Make a post on the discussion board (up to 2 points; due **Weds 11:59 PM**).
- Work on weekly Short Answer assignment (due Friday; see below)

Thursday

- Class is at 9:30 AM. The focus will be on addressing questions from the readings and the discussion board posts, and preparing you for your Short Answer assignment. Class discussions will sometimes be in small groups.

Friday

- Submit your Short Answer (SA) assignment (3 points; due **Friday 11:59 PM**)
- You must write more than 250 words for each Short Answer assignment.
- Friday October 11 is Wellness Day: No SA assignment is due that day.

As you go through the work each week, remember that there are no exams and no final paper in this course. Doing well in this course is about steady progress. With each week you will build on what you learned in the prior weeks.

Annotations

Your annotations are graded using an algorithm that is mainly driven by the number and quality of your comments. Other factors that contribute to your score include whether your comments elicit responses from other students (comments and upvotes) and whether you are upvoting other students' comments. Note: **The expected number of quality comments per module reading is 4.** For the syllabus annotation, you only need to provide 2 comments.

For a reading that you plan to annotate, you are welcome to read the document in Google Docs in order to become familiar with the material, but you must complete the annotations in Perusall. Tip for reading: If you are reading Google Docs on your phone, you may want to install the Google Docs app.

Late or Missing Submissions

- Annotations to the course readings must be submitted by 11:59 PM each Wednesday. Annotations submitted after this deadline will not receive credit.
- Any Discussion Board or Short Answer assignment submitted after the due date and time will automatically be marked "Late" in Canvas.
- Late Discussion Board or Short Answer Assignments will still be graded but there is an automatic 10% per day (or any part of a day) penalty for late work, up to a maximum penalty of 30% for any given assignment.
- The final deadline for completing any late Discussion Board or Short Answer assignments is 11:59 PM on Weds December 11. All late assignments incur a penalty as noted above.
- Any Discussion Board or Short Answer assignments that have not been submitted on Canvas before 11:59 PM on Weds December 11 will be graded as zero for the purposes of computing your final grade.

General Course Policies

- Canvas and Perusall must be used for all assignment submissions (no emailed submissions).

- All submitted assignments are expected to be the individual effort of the student. I reserve the right to refer any cases of suspected plagiarism or cheating to the University Disciplinary Committee. I also reserve the right to give a failing grade for a given assignment due to suspected plagiarism or cheating.
- If you are interested in learning something from this course, there is no substitute for YOU reading and engaging with the course material. Outsourcing the generation of text to a large language model (LLM) to complete class assignments is not YOU learning. Prompting an LLM with questions can help with understanding some aspects of this course, but *actual learning* can only happen through your activity and engagement.

Weekly Module Topics

1. What Does it Mean to Develop?
2. The Big Picture of Development
3. The Deep History of Development
4. Constancy and Change
5. Rethinking Genes
6. Evolution and Development
7. Body Plans and Brains
8. Early Brain Development
9. Embodiment
10. What Makes Living Things Different?
11. Big Brains
12. Collective Brains
13. Aging Brains
14. TBA/Conclusions

Statement on Academic Freedom

Freedom to teach and freedom to learn are inseparable facets of academic freedom. The University has adopted a policy on Student and Faculty Academic Rights and Responsibilities (Policy # 03.70.02) which can be accessed [here](#).

Letter Grades: Based on the maximum of 100 points. There is no extra credit.

92.50 to 100	A	72.50 to 76.49	C
89.50 to 92.49	A-	69.50 to 72.49	C-
86.50 to 89.49	B+	66.50 to 69.49	D+
82.50 to 86.49	B	62.50 to 66.49	D
79.50 to 82.49	B-	60.00 to 62.49	D-
76.50 to 79.49	C+	Below 60.00	F

Disabilities and Accommodations

- Any student who has a need for accommodations based on the impact of a documented disability or medical condition should contact Disability Resources and Services (DRS) in 100 Ritter Annex (drs@temple.edu or 215-204-1280) to request accommodations and learn more about the resources available to you.
- If you have a DRS accommodation letter and you would like to discuss your accommodations, please contact me as soon as possible. I will work with DRS to coordinate reasonable accommodations for all students with documented disabilities. All discussions related to your accommodations will be confidential.

Expectations for Class Conduct

It is important to foster a respectful and productive learning environment that includes all students in our diverse community of learners. Our differences, some of which are outlined in the [University's nondiscrimination statement](#), will add richness to this learning experience. Therefore, all opinions and experiences, no matter how different or controversial they may be perceived, must be respected in the tolerant spirit of academic discourse. Treat your classmates and instructor with respect in all communication, class activities, and meetings. Remember to be careful with your own and others' privacy. In general, have your behavior mirror how you would like to be treated by others.

Technology Specifications

You will need reliable internet access to complete the assignments for this course. Limited resources are available for students who do not have the technology they need for class. Students with educational technology needs, including insufficient Wifi-access, should submit a Student Technology Assistance Application located in TUPortal and linked from the [Dean of Students Support and Resources webpage](#).

Canvas Resources for Psychology Students

For Psychology majors and minors, the "Psychology Advising and Student Resources" course site on Canvas has general information about student support services and other helpful information. If you do not see this resource on Canvas, do either of the following:

1. Enroll yourself at <https://templeu.instructure.com/enroll/BBJ4NH>
2. Go to <https://templeu.instructure.com/courses/77157> and click the button in the top right to add yourself to this Canvas site.