

**Graduate School of Public Health
Department of Epidemiology**

- Course Number: **EPIDEM 2017**
- Course Title: **Population Neuroscience Seminar**
- Term/Academic Year: **Fall 2021**
- Dates: **Monday 12-1, August 30 – December 13, 2021**
- Location: **A622 Public Health**
- Credits: **1, full term course, 1hrs/wk.**

Course director

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Summary of course: This seminar focuses on the methods and current literature in population neuroscience. Population neuroscience draws from multiple fields, including epidemiology, neuroimaging, and cognitive psychology, to understand the intrinsic (e.g. genetic) and extrinsic (e.g. environmental) factors that contribute to brain structure and function in various populations (healthy, aging, and diseased).

Learning Objectives.

1. Be able to explain epidemiological approaches to study brain structure and function;
2. Be able to discuss the foundational methodologies of population neuroscience;
3. Be able to distinguish between intrinsic and extrinsic determinants of health in relation to neurologic function.
4. Know the existing neuroepidemiologic studies that have publicly available datasets.

Texts: Required

Textbook is available for download through PittCat: Population Neuroscience. Tomas Paus. ISBN: 978-3-642-36449-5 | Publication Date: 2013 | Edition: 1.

Journal Articles: Readings will be provided via Canvas for individual classes.

Recommended readings will be posted to Canvas.

Prerequisite/Recommended preparation

Interest in neuroepidemiologic methods and their application to the study of behavior is recommended.

Course Requirements:

1. **Attendance and participation:** Students are expected to contribute regularly during lecture, journal club, and student presentations. For journal club weeks, students must read the article before class and post 2 discussion questions to Canvas before class.
2. **Study Introduction:** Students will provide a 5-6 minute introduction of their chosen cohort study. This presentation should include the primary research questions for which the study was developed, who was included in the study, and what the main measures are.
3. **Final presentation and paper:** Presentations should be 15 minutes and papers should be approximately 2-3 pages. All students should identify a research question of interest and discuss

how they would use their study to answer this question. This should include a brief background on why the research question is important, a discussion of why this study is appropriate for the research question, and a description of the measures to be used to define both the exposure and the outcome, including strengths and weaknesses of these measures.

Doctoral and post-doctoral students should further critically review the strengths and limitations of using this particular study to answer the research question (e.g. possible selection biases, length of follow-up, etc.).

Research questions should be submitted to the instructor by 5:00 PM, Monday 10/4.
Papers are due by 5:00 PM, Monday 11/8.

Grading Scale:

Honors, Satisfactory, Unsatisfactory

Student Performance Evaluation:

40% Participation
10% Study Introduction
20% Paper
30% Final Presentation

Participation: Students are allowed one excused absence with advanced notice. Any additional absences will need to be made up with a 2-page critical review of that week's materials. If you need to miss class due to COVID quarantine or other related reasons, attempts will be made to accommodate remote learning; please contact the instructor as early as possible.

Presentations/Paper: Students will be assessed on the quality and completeness of their presentations/paper.

Accommodation for Students with 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 as early as possible in the term.

Academic Integrity Statement

All students are expected to adhere to the school's standards of academic honesty. Cheating/plagiarism will not be tolerated. The Graduate School of Public Health's policy on academic integrity, which is based on the University policy, is available online in the Pitt Public Health Academic Handbook www.publichealth.pitt.edu/home/academics/academic-requirements. The policy includes obligations for faculty and students, procedures for adjudicating violations, and other critical information. Please take the time to read this policy.

Sexual Misconduct, Required Reporting and Title IX Statement

The University is committed to combatting sexual misconduct. As a result, you should know that University faculty and staff members are required to report any instances of sexual misconduct, including harassment and sexual violence, to the University's Title IX office so that the victim may be provided appropriate resources and support options. What this means is that as your professor, I am required to report any incidents of sexual misconduct that are directly reported to me, or of which I am somehow made aware.

There are two important exceptions to this requirement about which you should be aware:

A list of the designated University employees who, as counselors and medical professionals, do not have this reporting responsibility and can maintain confidentiality, can be found here:

www.titleix.pitt.edu/report/confidentiality

An important exception to the reporting requirement exists for academic work. Disclosures about sexual misconduct that are shared as part of an academic project, classroom discussion, or course assignment, are not required to be disclosed to the University's Title IX office.

If you are the victim of sexual misconduct, Pitt encourages you to reach out to these resources:

- Title IX Office: 412-648-7860
- SHARE @ the University Counseling Center: 412-648-7930 (8:30 A.M. TO 5 P.M. M-F) and 412-648-7856 (AFTER BUSINESS HOURS)

If you have a safety concern, please contact the University of Pittsburgh Police, 412-624-2121.

Other reporting information is available here: www.titleix.pitt.edu/report-0

Statement from the Department of Gender, Sexuality, and Women's Studies

Diversity Statement

The University of Pittsburgh Graduate School of Public Health considers the diversity of its students, faculty, and staff to be a strength and critical to its educational mission. Pitt Public Health is committed to creating and fostering inclusive learning environments that value human dignity and equity. Every member of our community is expected to be respectful of the individual perspectives, experiences, behaviors, worldviews, and backgrounds of others. While intellectual disagreement may be constructive, no derogatory statements, or demeaning or discriminatory behavior will be permitted.

If you feel uncomfortable or would like to discuss a situation, please contact any of the following:

- the course instructor;
- the Pitt Public Health Associate Dean responsible for diversity and inclusion;
- the University's Office of Diversity and Inclusion at 412-648-7860 or <https://www.diversity.pitt.edu/civil-rights-title-ix/make-report/report-form> (anonymous reporting form)

Health and Safety Statement

During this pandemic, it is extremely important that you abide by the [public health regulations](#), the University of Pittsburgh's [health standards and guidelines](#), and [Pitt's Health Rules](#). These rules have been developed to protect the health and safety of all of us. Universal [face covering](#) is required in all classrooms and in every building on campus, without exceptions, regardless of vaccination status. This means you must wear a face covering that properly covers your nose and mouth when you are in the classroom. If you do not comply, you will be asked to leave class. It is your responsibility have the required face covering when entering a university building or classroom. For the most up-to-date information and guidance, please visit coronavirus.pitt.edu and check your Pitt email for updates before each class.

If you are required to isolate or quarantine, become sick, or are unable to come to class, contact me as soon as possible to discuss arrangements

Schedule

DATE	TOPIC	Readings
8/30	Introduction to Population Neuroscience	Book Chapters 1 & 2
9/6	Labor Day, no class	
9/13	Population-based approaches to Neuroscience	Falk et al, 2013
9/20	Student presentations of neuroepidemiologic cohorts	
9/27	Student presentations of neuroepidemiologic cohorts	
10/4	Epidemiologic Concepts and Causality	Book Chapters 8 & 9 ** Research question due
10/11	Journal Club – Coley, 2021	Reading on Courseweb
10/18	Neuroimaging – Dr. Beth Shaaban	Book Chapter 7
10/25	Behavioral Assessment – Dr. Andrea Weinstein	Book Chapter 7
11/1	Intrinsic and Extrinsic Risk Factors	Book Chapters 3-6
11/8	Journal Club – Gianattasio, 2021	Reading on Courseweb **Papers due
11/15	Student presentations	
11/22	Thanksgiving Break – no class	
11/29	Student presentations	
12/6	Student presentations	
12/13	Student presentations	