

PSY 478 • WEDNESDAYS & FRIDAYS • 1:00 – 2:20 • LSP 130**Prof:** Geoffrey S. Holtzman • **Phone:** (717) 358-6051 • **E-mail:** geoff.holtzman@fandm.edu**Office Hours:** Wednesday & Thursdays, 2:30-4:00 in LSP 132D**COURSE DESCRIPTION**

Where do mistaken psychological claims come from, why are they so commonly believed, and how can we combat them? To understand how these myths originate, we'll study the structure, sociology, and statistical strategies of psychological science. To understand how they become so popular, we'll look at ways the media, educators, and other actors spread them. And to understand how to fight these misconceptions, we'll discuss psychologists' newfound focus on replication, reproducibility, and open science. In the process, we'll discuss many myths and misconceptions about the mind.

GRADING

Your grade will be based on your engagement with the reading material and in the classroom, and on your deeper reflection upon the material and classes. Grading will be mastery of the material in both the assigned readings *and* classroom lectures and discussions. You will be expected to understand a number of concepts and know a number of definitions that will be covered in the classroom but will not be discussed explicitly in any text we read. Grades will be calculated as follows:

Attendance & participation: 20%

Exam (Feb. 13): 25%

Class moderation: 25%

Podcast (due Apr. 31): 30% (This can be replaced with a paper at the instructor's discretion)

POLICIES

Grading: All papers must be submitted through Canvas. Papers submitted any time after the time at which they are due will be considered at least one full day late. Late papers will be penalized a fraction of a letter grade for every day they are late. An 'A' paper handed in one day late becomes an 'A-'; after two days, it becomes a 'B+'; etc.

Disability & Health Accommodations: Students with mental or physical disabilities, or with chronic or acute health issues that may impact their ability to excel in class, should feel free to contact me and/or the Office of Disability Services to arrange accommodations. Through the Office of Disability Services or the Student Wellness Center, students may arrange accommodations without disclosure of their condition to me.

Plagiarism

Papers will be checked for plagiarism with the assistance of online tools. If any part of an assignment is not the student's own work, I reserve the right to give the entire assignment an F. The official stance of the College is that "Ignorance of the standards is not an excuse and intent is not a factor in determining responsibility for misconduct" (<https://www.fandm.edu/catalog/academic-honesty>).

Electronics

The use of cell phones, tablets, and laptops in this class will count against your participation grade unless I have provided specific guidance otherwise. If you feel that you need electronic devices to keep notes, you may speak to me privately about this, or have documentation sent to me by the Office of Disability Services. No audio or video recording is permitted in this class.

READINGS

All readings will be posted on Canvas. It is your responsibility to complete all readings before the classes for which they are assigned. **There probably will be changes to the reading schedule.**

FOUNDATIONS: These readings provide the tools and background for the rest of the course.

- 1/16 No reading
- 1/18 Chambers Ch. 1, "The Sin of Bias"
- 1/23 Chambers Ch. 2, "The Sin of Hidden Flexibility"
Simmons et al. 2011, "False-Positive Psychology"
- 1/25 Goodman 2008, "A Dirty Dozen: Twelve p-Value Misconceptions"
- 1/30 Chambers Ch. 3, "The Sin of Unreliability," pp. 47-60
Makel et al. 2012, "Replications in Psychology: How Often Do They Really Occur?"
- 2/1 Cohen, "Statistical Power Analysis for the Behavioral Sciences," Ch. 1
- 2/6 Chambers Ch. 4, "The Sin of Data Hoarding"
Simonsohn et al. 2014, "P-Curve: A Key to the File Drawer."
- 2/8 Chambers Ch. 5, "The Sin of Corruptibility"
- 2/13 Exam
John et al. 2012, "Measuring the Prevalence of Questionable Research Practices"

FLEXIBLE TOPICS: I will set topics for these classes in the near future based on student interest. Readings will be set by students, and assigned at least one full week before the day they are to be completed.

- 2/15 Crime
- 2/20 Illegal drugs
- 2/22 Legal drugs
- 2/27 Neuroendocrinology
- 3/1 Neuromyths
- 3/6 Folklore
- 3/20 Psychiatric etiologies
- 3/22 Clinical issues
- 3/27 Development
- 3/29 Education
- 4/3 Memory
- 4/5 Commerce
- 4/10 Sports
- 4/12 The Classics
- 4/17 Open Science Collaboration
- 4/19 Many Labs 2
- 4/24 **FOUNDATIONS:** Chambers Ch. 8, "Redemption"

CLASS MODERATION

Below is a list topics on which myths and misconceptions about the mind exist, broken down into loose categories. Each student will lead one day of class, covering topics within some category. **(1)** Categories can be covered on a different date from their current listing, by permission of the instructor. **(2)** You can cover as many or as few topics in any one category as you'd like. **(3)** The categories are flexible. E.g., if you'd like to cover prenatal cocaine exposure (PCE) as an issue in crime or development (as opposed to illegal drugs), that's cool. **(4)** You should coordinate with the instructor and your peer(s) if you plan to cover topics from other categories. I.e., if you want cover PCE in a class on development, you will be expected to discuss that with both the instructor and the student who is teaching the class on illegal drugs. **(5)** You can make up your own category, but must receive the permission of the instructor if you plan to do so. **(6)** You must request the instructor's approval for a category by 2/1. **(7)** You can cover topics that are not listed below, so long as the instructor approves their inclusion in your lesson. **(8)** You must let the instructor know what topics you plan to cover at least one week ahead of your class. **(9)** You must update the instructor on the topics you plan to cover by the class before yours. **(10)** You must assign at least one reading for the class you lead and all readings must be uploaded to Canvas at least one week before they are to be discussed. **(11) It is highly recommended that you meet the instructor during office hours at least once to discuss your plans for the class you will lead.**

2/15 Crime

1. Polygraph lie detectors
2. fMRI lie detectors
3. fMRI pain detection
4. Media violence & violent behavior
5. "The Warrior Gene"
6. Broken windows theory
7. Hungry judges
8. Heat waves & crime waves

2/20 Illegal drugs

9. Cannamyths
10. Driving under the influence(s)
11. Racial stereotypes
12. Gateway theory
13. Reefer madness & schizophrenia
14. "Crack babies"
15. Birth defects & developmental delays
16. D.A.R.E.

2/22 Legal drugs

17. Alcohol
18. Caffeine
19. Adderall
20. SSRIs
21. Placebos
22. Sugar
23. Alcoholics Anonymous

2/27 Neuroendocrinology

24. Dopamine
25. Serotonin
26. Oxytocin
27. Endorphines
28. Adrenaline
29. Testosterone
30. Estrogen
31. Birth control

3/1 Neuromyths

32. fMRI measures brain activity
33. Modularity
34. Hemispheric dominance
35. Exercise and cognitive function
36. The 10% myth
37. Energy usage
38. Libet
39. Bigger is better (plus race & gender)
40. ADHD is a developmental delay
41. Neuroplasticity
42. The _____ Center of the Brain

3/6 Folklore

43. Gut instincts
44. The psychic staring effect
45. A liar's eyes
46. Chemical imbalances

3/20 Psychiatric etiologies

47. Who attempts suicide?
48. Who becomes a serial killer?
49. Who becomes a child abuser?
50. Who becomes obese?
51. Who becomes a genius?
52. Who gets ulcers?
53. Who gets anxiety disorders?

3/22 Clinical issues

54. Mental health spikes near the holidays
55. Stages of grief
56. Depression myths
57. Shock therapy
58. Dream interpretation
59. Rorschach tests
60. The Freudian subconscious
61. Suppressing vs. expressing emotions

3/27 Development

62. Critical periods & language acquisition
63. The Mozart effect
64. Vaccines and autism
65. The autism epidemic
66. The ADHD epidemic
67. Sugar makes kids hyper
68. Stimulus-rich environments
69. Nature vs. nurture

3/29 Education

70. Learning in your sleep
71. Learning styles
72. Multitasking
73. Dyslexia
74. The 10,000 hour rule
75. Speedreading
76. Sticking with your first guess
77. Breakfast in schools

4/3 Memory

78. Amnesia
79. Accuracy
80. Flashbulbs
81. The video camera view
82. Remembering helps solidify details
83. Repressed memories
84. Hypnosis
85. The magical number 7

4/5 Commerce

86. Smart pills
87. Smart drinks
88. Cognitive enhancement
89. Brain training programs
90. Subliminal messages in advertising

3/22 Sports

91. Hot hands
92. The yips
93. Superstitions
94. Home field advantage
95. Race, QBs, and coaches
96. Clutch
97. Choke
98. Concussions, mTBI, and CTE

4/5 The classics

99. Ego depletion
100. The value of free will
101. Power posing
102. The Florida effect
103. Implicit bias training
104. Stereotype threat
105. Moral disgust & cleanliness

4/12 Open Science Collaboration**4/17 Many Labs 2**

106. Warmth priming
107. Moral cleansing
108. SMS & wellbeing
109. Position & power
110. Affect & risk

4/19 Choose-your-own-adventure

111. Politics
112. Morality
113. Religion
114. Gender & sex
115. Race & ethnicity
116. Culture
117. Emotion & reason
118. Judgment & decision making
119. Evolutionary psychology
120. Comparative psychology
121. Parapsychology, ESP, and psi
122. Famous fraud

