**Cognition: Basic Processes**

**UN2210**

**3 points**

**Nora Isacoff, PhD (ni2237@columbia.edu)**

**Monday & Wednesday 1:10 – 2:25**

**Location TBD**

**Bulletin Description**

An introduction to basic concepts in cognitive psychology. Topics include theories and phenomena in areas such as attention, memory, concepts and categories, language, reasoning, decision making, and consciousness.

**Prerequisitites**

PSYC UN1001 The Science of Psychology, or an equivalent introductory course in psychology.

**Note:** This class overlaps substantially with PSYC 2821 – Cognition in Context and also with COGS1001- Introduction to Cognitive Science. Therefore, students cannot receive major credit for both classes.

**Aims of this class**

The topic of this class is the human mind. In addition to exploring some of the most current theories about how we perceive, remember, speak, and reason (among other abilities), we’ll learn about how psychologists investigate these elusive processes. Students will develop an understanding of how psychologists translate a grand theoretical question like “how does our memory work?” into empirical questions that can actually be tested and measured. As we proceed through our survey of the mind, we will look carefully at the data supporting our claims and also consider alternative explanations for results in the literature. These will be invaluable tools in other psychology classes, classes in other disciplines, and throughout life. A final aim is for you to develop a fascination with the peculiarities of the human mind. As I’ll explain the first class, by “pulling back the curtain,” I believe we can get a little closer to the magic.

**Textbook:** Cognition: Exploring the Science of the Mind, by Daniel Reisberg, 8th Edition. ISBN: 0393921778; ISBN13: 9780393921779. Alternative versions of the text are okay, but please make sure the chapter themes align with those in the syllabus.

Additional readings will be available on Canvas.

**Class format**

The majority of classes will consist of 2 parts.

 **Part 1 (45 minutes): Lecture/slides**

I will post all of my slides to Canvas so you have access to them, but I will go into greater detail in my lecture. You are encouraged to ask questions and to contribute to class discussions throughout the lecture.

 **Part 2 (30 minutes): Group Classwork**

We will divide into small groups to work on answering questions related to the lecture topic. These questions will include simple comprehension questions, questions applying the material in new ways, your thoughts about how the material relates to other topics and to real-world situations, etc. During each classwork, we will also practice evaluating the relationship between a key experiment’s theoretical questions (what the authors want to know) and the experiment’s empirical questions (what they measure). This will help you gain a deeper understanding of the topic of the day, give you a chance for rich conversations with your classmates, and prepare you for the midterm paper and final group presentation.

During classwork, at least one TA and I will be available to answer all questions and to help you think through the material. I will also be available for discussion about extensions of the topic that go beyond the scope of the class. You may use any resources you like when doing classwork.

Classwork is designed to be finished by the end of each class period, but you can have until noon the day after class (Tuesdays for Monday classes; Thursdays for Wednesday classes) if necessary. Only one person from each group should upload and submit an assignment, with all group members’ names on it.

The lowest 2 classwork scores will be dropped from the final grade. Up to 2 missing classworks will count as lowest scores to be dropped. Any additional missing classworks will count as zeros.

**Grading**

There are 600 total possible points for the semester.

* Classwork sums to 400 points.
* The midterm essay is worth 100 points.
* The final group presentation is worth 100 points.

**Midterm Essay**

* You should work alone (not in a group) for the essay.
* For this essay, you will choose any peer-reviewed, empirical journal article relating to cognition that you find on your own. You should *not* choose an article describing an experiment that we have analyzed together in class and should *not* choose an article posted on Canvas.
* The goal of the essay is to analyze the relationship between the theoretical and empirical questions in this article, which is a skill we’ll practice throughout the semester.
* The essay should be approximately 1000 words.
* More details will be available in the *Essay Guidelines* posted on Canvas.

**Final Group Presentation**

Groups of approximately 5 students will collaborate to further explore one of the topics covered throughout the semester and give a group presentation of approximately 10 minutes. More details to follow early in the semester.

**Extra Credit Policy**

Please note that because all of the assignments are open-notes/open-book and you have the opportunity to work with other students, I will *not* be offering extra credit opportunities. If you truly put in the effort throughout the semester and keep good attendance, you should be able to do well in this class.

**Attendance Policy**

Students are strongly encouraged to attend class. If you are sick or have some other legitimate reason for needing to miss class, please email me as soon as you are able, and we can arrange a deadline for you to make up the missed classwork, or you may choose not to submit up to do classworks (see classwork policy above).

**Late Policy**

You should be able to complete all classwork during class. For this reason, late work will not be accepted. If there is some reason you truly need an extension, please reach out to me as early as possible, and we can discuss. I trust that you won’t ask for an extension unless there is a true extenuating circumstance.

**Academic integrity.** As a member of the academic community, one of your responsibilities is to uphold principles of honesty and integrity. This means that you can only present your own work on assignments and presentations — plagiarism is strictly prohibited, as is presenting work as your own when it was done by someone else. Doing so compromises your academic integrity and potentially your academic standing. If you are falling behind, don’t understand the material, or are not confident about your writing or presentation, talk to me as soon as possible instead of taking measures that go against principles of academic integrity. [Columbia’s Honor Code in Columbia’s Guide to Academic Integrity(http://www.college.columbia.edu/academics/academicintegrity)].

**Students with disabilities**. If you are a student with special needs and require accommodation, meet me before the first class to discuss your needs. You must also contact Disability Services before the first class to register for specific accommodations (https://health.columbia.edu/disability-services).

**Schedule**

Chapter numbers refer to the Reisberg textbook. Other readings will be available on Canvas.

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| --- | --- |
| 1/18 | Introductions |
| 1/23 | The Rise of Cognitive Psychology  | Ch 1 |
| 1/25 | Research Methods in Cognitive Psychology | Firestone  |
| 1/30 | Perception  | Ch 3 |
| 2/1 | Physical Reasoning | Wang et al |
| 2/6 | Attention | Ch. 5 |
| 2/8 | Attention in Consumer Psychology  | Janiszewski et al |
| 2/13 | Executive Functioning | Calarco  |
| 2/15 | Memory | Ch. 6  |
| 2/20 | Memory in Social Cognition  | Greene et al |
| 2/22 | Neurodiversity  | Krcek  |
| 2/27 | Theory of Mind | Barrett et al  |
| 3/1 | Symbolic Development & Pretend Play | Sheehan & Uttal |
| **3/6** | **No Class (Columbia Midterms)** |
| **Midterm Paper Due This Week (Will Insert Exact Date)** |
| 3/8 | Reading  | Hanford |
| **3/13 & 3/15 Spring Recess**  |
| 3/20 | Concepts & Categories Part 1 | Ch. 9 |
| 3/22 | Concepts & Categories Part 2 | Leslie  |
| 3/27 | Language Part 1 | Ch. 10 |
| 3/29 | Language Part 2 | Wolff & Holmes |
| 4/3 | Reasoning & Decision Making Part 1 | Ch. 12 |
| 4/5 | TBD | TBD  |
| 4/10 | Reasoning & Decision Making Part 2 | Dorin et al |
| 4/12 | Moral Cognition Part 1 | Haidt |
| 4/17 | Moral Cognition Part 2 | Awad et al |
| 4/19 | Consciousness  | Ch. 15  |
| 4/24 | Group Final Presentations |
| 4/26 | Group Final Presentations |
| 5/1 | Group Final Presentations |

**Full reading list in order**

Primary textbook: Cognition: Exploring the Science of the Mind, by Daniel Reisberg, 8th Edition

**Firestone**, C. (2020). Performance vs. competence in human–machine comparisons. *Proceedings of the National Academy of Sciences, 117*, 26562–26571.

**Wang**, S., Zhang, Y., & Baillergeon, R. (2016). Young infants view physically possible support events as unexpected: New evidence for rule learning. *Cognition*, 157, 1 – 5.

**Janiszewski,** C., Kuo, A., & Tavassoli, N. T. (2013). The influence of selective attention and inattention to products on subsequent choice. *Journal of Consumer Research, 39*(6), 1258–1274.

**Calarco**, J.M. (2018). https://www.theatlantic.com/family/archive/2018/06/marshmallow-test/561779/

**Greene**, C.M., Nash, R.A. & Murphy, G. (2021) Misremembering Brexit: partisan bias and individual predictors of false memories for fake news stories among Brexit voters, *Memory, 29:5*, 587-604.

**Krcek**, T.E. (2012). Deconstructing disability and neurodiversity: Controversial issues for autism and implications for social work. *Journal of Progressive Human Services, 24*(1), 4-22.

**Barrett,** H.C. et al. (2013). Early false belief understanding in traditional non-Western societies. *Proceedings of the Royal Society: Biological Sciences*, 280, 1-7.

**Sheehan**, K.J. & **Uttal**, D.H. (2016). Children’s learning from touchscreens: *A dual representation perspective*. Frontiers in Psychology, 1-5.

**Hanford**, E. (2019). https://www.apmreports.org/episode/2019/08/22/whats-wrong-how-schools-teach-reading

**Leslie**, S.J. (2012). Generics articulate default generalizations. *Recherches Linguistiques de*

*Vincennes: New Perspectives on Genericity at the Interfaces (A. Mari, ed.), 41,* 25-45.

**Wolff,** P. & **Holmes**, K. Linguistic Relativity. (2011). WIREs Cognitive Science, 2, 253-265.

**Dorin**, C., Hainguerlot, M., Huber-Yahi, H., Vergnaud, J., & de Gardelle, V. (2021). How economic success shapes redistribution: The role of self-serving beliefs, in-group bias, and justice principles*. Judgment and Decision Making, 16(4),* 932-949.

**Haidt**, J. (2001). The emotional dog and its rational tail: a social intuitionist approach to moral judgment. *Psychological review,* 108(4), 814-834.

**Awad**, E., Levine, S., Kleiman-Weiner, M., Dsouza, S., Tenenbaum, J., Shariff, A., Bonnefon, J.F., Rahwan, I. (2019). Drivers are blamed more than their automated cars when both make mistakes. *Nature: Human Behavior*.