



## PSYC 85. Higher-level Cognition

|                          |                           |                             |
|--------------------------|---------------------------|-----------------------------|
| <b>When &amp; Where:</b> | Days & Time:              | Tu, Th; 2 pm – 3:50 pm      |
|                          | X-hour:                   | Wed 4:15 pm – 5:05 pm       |
|                          | Location:                 | Moore Hall, Room 150        |
| <b>Instructor:</b>       | Prof. Jerald (Jay) Kralik |                             |
| <b>How to find me:</b>   | E-mail:                   | Jerald.Kralik@Dartmouth.edu |
|                          | Office:                   | Moore 259                   |
|                          | Phone:                    | 6-0610                      |
|                          | Office Hour:              | Tuesday, 6-7 pm             |

**Course Description:** “What a piece of work is a man, how noble in reason, how infinite in faculty?” To answer Shakespeare’s question is to understand higher-level cognition. Cognition balances our instincts with thoughtfulness and tempers impulsivity with patience. Cognition allows us to plan over long time horizons, to solve novel and seemingly intractable problems, and to rise above the concrete experiences of our daily lives to thrive in a world of analogy, metaphor and imagination. In this course, we study problem-solving, planning, reasoning, insight, decision-making, and symbolic processing. We explore whether these are distinct processes, what they allow us to accomplish, and how they may interact with other brain functions, such as emotions, to create nobility in reason and infinity in faculty.

**Our Goal:** To understand the prevailing and latest ideas about higher-level cognition, and to generate our own ideas and experimental hypotheses about these important cognitive processes and their underlying neural substrates.

**Grading:**

- 15% Participation 1: Leading discussion
- 35% Participation 2: Not leading discussion
- 10% First Presentation
- 15% Final Presentation
- 25% Final Paper

**Participation:** 50% of your grade will come from participation. It will be based on how well you lead and participate in the daily discussions (as well as attendance). We will assign discussion leaders once the course begins. In addition, everyone will generate four discussion questions per class period, two for each half of the meeting time. The questions should be forwarded to the discussion leader (and cc:ed to me) before we meet.

**Presentations:** Each student will give two presentations, each with the current version of your model of higher-level cognition in the mind/brain. I will say more about this in class.

**Paper:** There will be one Final Paper for the course. It should be a longer version of the topic of your presentation. Final paper lengths should be ~20 pages (double spaced, regular margins, 12-point font).

The final paper must be sent to me electronically on the day and time it is due (TBA). The final paper must be turned in on time; grades on late papers will be substantially reduced over time with no exceptions.

**Readings:**

1. *Thinking, Fast and Slow (TFS)* by Daniel Kahneman
2. Everything else will be provided via Blackboard

**Accommodations for Disabilities:** Any student with a documented disability needing accommodations or academic adjustments is requested to speak to me and give me a copy of your accommodations form by the end of the second week of the term. All discussions will remain confidential, although the Director of Student Disabilities may be consulted if necessary.

**Honor Principle:** Although this should go without saying, activities in this class, as throughout Dartmouth (and life), are governed by the honor principle. The presentations and papers should be in your own words.

**Religious Observances:** Please let me know during the first week of the term if you will be unable to attend any class meetings as a consequence of religious observances.

**See Below for Meeting Dates, Topics, Readings, & Presenters:**

| <b>Date</b>      | <b>Discussion Leader</b>                                                                                    | <b>Readings</b>                                     |
|------------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| 1. Tues—Jan 7    | Introduction & Course Overview                                                                              |                                                     |
| 2. Thur— Jan 9   | 1 <sup>st</sup> : Prof. Kralik: Evolution tutorial<br>2 <sup>nd</sup> : Prof. Kralik: Neuroscience tutorial | Start reading TFS<br>Background neuro chap          |
| 3. Tues— Jan 14  | 1 <sup>st</sup> : Prof. Kralik<br>2 <sup>nd</sup> : TBA                                                     | TFS Intro, Chaps 1-4<br>TFS Chaps 5-9               |
| 4. Thur— Jan 16  | 1 <sup>st</sup> : TBA<br>2 <sup>nd</sup> : TBA                                                              | TFS Chaps 10-14<br>TFS Chaps 15-19                  |
| 5. Tues— Jan 21  | 1 <sup>st</sup> : TBA<br>2 <sup>nd</sup> : TBA                                                              | TFS Chaps 20-24<br>TFS Chaps 25-29                  |
| 6. Thur— Jan 23  | 1 <sup>st</sup> : TBA<br>2 <sup>nd</sup> : TBA                                                              | TFS Chaps 30-33<br>Stanovich reading: On Blackboard |
| 7. Tues— Jan 28  | 1 <sup>st</sup> : TBA<br>2 <sup>nd</sup> : TBA                                                              | Evans & Stanovich reading: On Blackboard<br>TBA     |
| 8. Thur— Jan 30  | 1 <sup>st</sup> : Prof. Kralik's model<br>2 <sup>nd</sup> : Prof. Kralik's model                            | TBA<br>TBA                                          |
| 9. Tues—Feb 4    | 1 <sup>st</sup> : Student presentations 1<br>2 <sup>nd</sup> : Student presentations 2                      |                                                     |
| 10. Thur— Feb 6  | 1 <sup>st</sup> : Student presentations 3<br>2 <sup>nd</sup> : Student presentations 4                      |                                                     |
| 11. Tues— Feb 11 | 1 <sup>st</sup> : TBA<br>2 <sup>nd</sup> : TBA                                                              | TBA<br>TBA                                          |
| 12. Thur— Feb 13 | 1 <sup>st</sup> : TBA<br>2 <sup>nd</sup> : TBA                                                              | TBA<br>TBA                                          |
| 13. Tues— Feb 18 | 1 <sup>st</sup> : TBA<br>2 <sup>nd</sup> : TBA                                                              | TBA<br>TBA                                          |
| 14. Thur— Feb 20 | 1 <sup>st</sup> : TBA<br>2 <sup>nd</sup> : TBA                                                              | TBA<br>TBA                                          |
| 15. Tues— Feb 25 | 1 <sup>st</sup> : TBA<br>2 <sup>nd</sup> : TBA                                                              | TBA<br>TBA                                          |
| 16. Thur— Feb 27 | 1 <sup>st</sup> : TBA<br>2 <sup>nd</sup> : TBA                                                              | TBA<br>TBA                                          |
| 17. Tues—Mar 4   | 1 <sup>st</sup> : Final student presentations 1<br>2 <sup>nd</sup> : Final student presentations 2          |                                                     |
| 18. Thur— Mar 6  | 1 <sup>st</sup> : Final student presentations 3<br>2 <sup>nd</sup> : Final student presentations 4          |                                                     |
| 19. TBA          | <b>Final Paper due</b>                                                                                      |                                                     |