

Course Description (v1a)
2260.03 A (S1-2017-18) Cognitive Processes

Section: 2260.03A S1 Time: Tues. & Thurs, 7:00 PM-10:00 PM Rm: Ross S103	<table border="0"> <tr> <td>Course Director:</td><td>Prof. Vinod Goel</td></tr> <tr> <td>Office:</td><td>Lab: BSB 037</td></tr> <tr> <td>Tel:</td><td>Lab Ext. 30400</td></tr> <tr> <td>Email:</td><td>vgoel@yorku.ca</td></tr> <tr> <td>Office Hrs:</td><td>Tues. 5:45pm</td></tr> <tr> <td>TA:</td><td></td></tr> <tr> <td>TA contact info:</td><td></td></tr> <tr> <td>Office Hrs:</td><td>Thurs. 5:45 – 6:45pm</td></tr> </table>	Course Director:	Prof. Vinod Goel	Office:	Lab: BSB 037	Tel:	Lab Ext. 30400	Email:	vgoel@yorku.ca	Office Hrs:	Tues. 5:45pm	TA:		TA contact info:		Office Hrs:	Thurs. 5:45 – 6:45pm
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Course Prerequisites: Psych 1010 with a minimum C grade.

Drop Date: June 18, 2018.

Important Note regarding E-Mail/Internet Use: I suffer from severe pains in my arms. This prevents me from doing any significant typing. Therefore, please do not send me e-mail, except to make an appointment to meet in person. I will not be able to read and respond to it in a timely manner. I'm happy to answer your questions in class, during the tutorial, during my office hours, or make an appointment to meet with you. I will also stay at the end of each lecture to answer individual questions.

Course website: <https://moodle.yorku.ca/moodle/course/view.php?id=88209#section-0>

General Description: This will be a basic course in the cognitive structures & processes involved in perception, memory, language, thinking, reasoning, & problem solving. We will motivate & explicate the cognitive paradigm, discuss data from the various domains, and examine the models that have been advanced to account for the data. The section will have a cognitive science bias. The objective of the course is to give you an overview of the field of cognitive psychology.

Class Format: Lecture.

Learning Outcomes

Upon completion of this course, students should be able to:

1. Demonstrate in-depth knowledge in cognition.
2. Articulate trends in cognitive psychology.
3. Express knowledge of cognitive psychology in written form.
4. Describe and explain limits to generalizability of research findings in cognitive psychology.
5. Demonstrate ability to relate information about cognitive psychology to own and others' life experiences.

Specific Learning Objectives

Your immediate learning objectives should be to use the course content and exercises to develop reading, writing, and critical evaluation skills.

Requirements & Assessment:

- 1) One assignment (20% of grade)
 - Details attached below.
- 2) Participation in question answering exercises (20% of grade)
 - Details attached below.
- 3) Two tests (60% of grade)
 - Details attached below.

Readings (available on Moodle)

- 1a. Fodor, J. A. (1981). The Mind-Body Problem. *Scientific American*, 244(1), 114-123.
- 1b. Searle, J. R. (1984). *Minds, Brains and Science (Chapter 1, Mind-Body Problem)*. Cambridge, Mass.: Harvard University Press.
- 1c. Friedenberg, J. & Sliverman, G. 2006. Introduction. *Cognitive Science*. London: Sage.
2. Goel, V. (1995). *Sketches of Thought* (Chapter 2: From Mental Representation to Computation). MIT Press.
- 3a. Friedenberg, J. & Sliverman, G. 2006. Perception Chapter. *Cognitive Science*. London: Sage.
- 3b. Zimbardo, P. & Gerrig R J. 1996. Perception Chapter. *Psychology and Life*, 14th ed. (New York: HarperCollins, 1996), 258–302.
- 4a. Wittgenstein, L. 1999. Philosophical Investigations, Sections 65-78. *Concepts: Core Readings*, ed. E. Margolis and S. Laurence (Cambridge, MA: MIT Press, 1999), 171–174.
- 4b. Rosch, E. 1999. Principles of Categorization. In Rosch, Eleanor and Lloyd, Barbara B. (eds), *Cognition and categorization* 27-48. Hillsdale, NJ: Lawrence Erlbaum.
5. Memory
- 6a. Anderson, J. Chapter 12: Language. *Cognitive Psychology (8th Edition)*. Worth Publishers.
- 6b. Chomsky, N. (1981). On Cognitive Capacity. In N. Block (Ed.), *Readings in Philosophy of Psychology, Vol. 2* (pp. 305-323). London: Methuen.
8. Ollinger, M. & Goel, V. (2010). Problem-Solving. In B. Glatzeder, V. Goel, & a von Müller (Eds), *Towards a Theory of Thinking*. Springer.
9. Goel, V. & Waechter, R. (2017). Inductive and Deductive Reasoning.
10. Tversky, A. & Kahneman, D. 1974. Judgment under Uncertainty: Heuristics and Biases. *Science*, Vol. 185, pp.1124-1131.
- 11a. Gazzaniga, MS, Ivry, RB, Mangun, GR. (2014). Chapter 3: CNS Methods. *Biology of the Mind* (4th ed.). NY: Norton.
- 11b. Goel, V. (2007). Anatomy of Reason. *Trends in Cognitive Sciences*. Vol. 11 (10).

Readings must be completed and associated questions answered prior to the relevant class.

Assignment (20%):

Reasoning Expt.: You will be given data collected in class and be required to write up the results. Some classroom time has been set aside for the exercise. Details to follow.

The paper will be graded not only for content, but also your ability to organize and express your thoughts in a structured, systematic, coherent fashion, using grammatical English sentences organized into paragraphs and sections. Papers may be submitted to Turnitin or Google to check for plagiarism.

Late Assignments: Assignments are due at the beginning of class on the day(s) indicated on the attached Schedule. Late assignments will be penalized ONE point per calendar day. As you will always have at least 2-3 weeks to complete an assignment, a doctor's note indicating illness will usually not suffice to waive the penalty. To be considered, a doctor's note must indicate that you

were incapable of working for at least half the number of days between the handing out the assignment and the due date. No assignments will be accepted after the last day of class.

Tests (60%):

There will be two in-class tests on the dates indicated on the schedule. Each test will have a duration of two hours and will consist primarily of written essay questions. (There may be some multiple choice questions, but don't count on it.) The grade value of each test is indicated on the weekly schedule. The test material will be based on the lectures and the indicated readings. The best way to study for the test is to attend lectures, do the readings, and ANSWER THE QUESTIONS ASSOCIATED WITH EACH READING.

Makeup Tests: Students are expected to write each test on the dates specified. **If you miss a mandatory piece of course work for no acceptable documented reasons, you will receive a grade of zero.** If you have a legitimate reason (e.g., death in the family, severe illness, etc.) for being excused from a test/exam, and have documentation to verify your absence, you may write a make-up test, in lieu of the missed test/exam, on the date specified on the schedule. You MUST keep this date and time open as it will be the only chance to write a makeup if you miss a scheduled test. *Please note that one consequence of missing the first scheduled test will be that you will not receive the usual grade feedback by the drop date. Furthermore, given the limited number of multiple-choice questions available, there may be fewer or no multiple-choice questions on the makeup tests. The makeup tests will consist largely or exclusively of written essay and short answer questions.* There is no makeup test for the makeup test.

Grades Appeal/Correction: Any questions or concerns regarding grades on tests and assignments must be raised with the instructor within 10 days of the posting of the grade.

Participation Grade (20%):

Each week you will receive questions to guide you through the weekly readings. You will submit written answers to these questions by the specified dates. Once you have submitted your answers through Moodle, you will be able to see the answers submitted by other students. We will indicate some of the good answers to the questions prior to the tests. *These questions are very similar to the short answer questions that you will see on the tests.* Answering these questions will get you participation grades and help you study for the tests. The 20 participation points are evenly divided over the question sets.

Grades and Entitlements:

You are entitled only to the grade that you **earn** in this course. Nothing else. I will **not** increase your grade just because "you need at least a x grade to graduate; or you need a y grade to get into some other program; or you need a z grade to maintain your scholarship;" etc.. It is not fair to other students. If you need a certain grade in this course, please do the required work.

Plagiarism is the passing off of someone else's words and ideas as you own. This is a very serious academic offense. Do your own assignments and acknowledge all your sources. Turnitin software may be used to check for plagiarism on written work. The penalty for plagiarism will be in accordance with the Senate Policy on Academic Honesty which can be found at the following URLs, along with resources to help you avoid plagiarism:

- [Information about the Senate Policy on Academic Honesty](#)
- [Online Tutorial on Academic Integrity](#)
- [Information for Students on Text-Matching Software: Turnitin.com](#)
- [Beware! Says who? A pamphlet on how to avoid plagiarism](#)

- [Resources for students to help improve their writing and research skill](#)

Student Feedback: I welcome constructive comments on course organization, lectures (content, style, presentation), assignments, etc.

Office Hours: Make use of the office hours. They are for your benefit.

2260.03A Cognitive Processes
S1 2017-18, Tues & Thurs, 7:00 PM-10:00 PM
Proposed Schedule

Topic	Date	Lecture Topics	Readings	Assignments
1	May 22	Historical introduction to Cognitive Psychology	Articles 1a-1c	
2	May 24	Cognition & Computation	Articles 2	
3	May 29	Perception/ Visual	Articles 3a-3b	Reasoning experiment in class
4	May 31	Categorization	Articles 4a-4b	
5	June 5	Memory	Articles 5	
6	June 7	Language	Articles 6a-6b	
7	June 12	Test 1 (35%)		
8	June 14	Problem solving	Articles 8	
9	June 19	Reasoning	Articles 9	Test 1 grades posted
10	June 21	Decision Making	Articles 10	Reasoning experiment due
11	June 26	Neuropsychology of Reasoning	Articles 11a-11b	
12	June 28	Test 2 (25%)		
	July 3	Makeup Test		

Note: Readings must be completed prior to the relevant class.