

## **Course Description**

### **3260.03 A (S1) Cognitive Processes**

<b>Section: 3260.03A S1 2014</b> <b>Time: Tuesday, 7:00 PM-10:00 PM</b> <b>Thursday, 7:00 PM-10:00 PM</b> <b>Rm: CLH K</b>	<b>Course Director:</b> Prof. Vinod Goel <b>Office:</b> Lab: BSB 037 <b>Tel:</b> Lab Ext. 30400 <b>Email:</b> vgoel@yorku.ca <b>Office Hrs:</b> TBA  <b>TA:</b> Saeid Chavoshi <b>TA contact info:</b> <a href="mailto:chavoshi@yorku.ca">chavoshi@yorku.ca</a>  <b>Office Hrs:</b>
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**Course Prerequisites:** Psych 1010 with a minimum C grade.

**Drop Date:** May 30, 2014.

**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.

**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.

**Requirements:**

- 1) One assignment (20% of grade)
  - Details attached below.
- 2) Participation in question answering exercises (10% of grade)
  - Details attached below.
- 3) Three tests (70% of grade)
  - Details attached below.

**Text And Articles** Required:

Kathleen Galotti et al. 2009. *Cognitive Psychology; In and Out Of the Laboratory*. 1<sup>st</sup> Canadian edition. Nelson. (Copy on Reserve in Library)

[Using older editions of the textbook: there are often used copies of older editions of textbooks available. They contain 95% of information found in the new edition. You may use older editions if you wish. However, before doing so, consider whether you are capable of reading the scheduled lecture topics on the course outline and the table of contents in the textbook and matching them up. If you are capable of doing this and then using an older edition will serve you fine. If you are not capable of doing this on your own, stick to the specified edition.]

**Articles (available on Moodle)**

1. Fodor, J. A. (1981). The Mind-Body Problem. *Scientific American*, 244(1), 114-123.
2. Searle, J. R. (1984). *Minds, Brains and Science (Chapter 1, Mind-Body Problem)*. Cambridge, Mass.: Harvard University Press.
3. Skinner, B. F. (1980). Selection from Science and Human Behavior. In N. Block (Ed.), *Readings in Philosophy of Psychology, Vol.1* (pp. 37-47). London: Methuen.
4. Chomsky, N. (1980). A Review of B. F. Skinner's Verbal Behavior. In N. Block (Ed.), *Readings in Philosophy of Psychology, Vol. 1* (pp. 48-63). London: Methuen.
5. Goel, V. (1995). *Sketches of Thought* (Chapter 2: From Mental Representation to Computation). MIT Press.
6. Chomsky, N. (1981). On Cognitive Capacity. In N. Block (Ed.), *Readings in Philosophy of Psychology, Vol. 2* (pp. 305-323). London: Methuen.
7. Ollinger, M. & Goel, V. (2010). Problem-Solving. In B. Glatzeder, V. Goel, & a von Müller (Eds), *Towards a Theory of Thinking*. Springer.
8. Goel, V. & Waechter, R. (in review). Inductive and Deductive Reasoning.
9. Goel, V. (2007). Anatomy of Reason. *Trends in Cognitive Sciences*. Vol. 11 (10).
10. Goel, V. (2009). Cognitive Neuroscience of Thinking. In G. Berntson & John T. Cacioppo (Eds.), *Handbook of Neuroscience for the Behavioral Sciences*. Wiley.

*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.

**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 (70%):**

There will be three in-class tests on the dates indicated on the schedule. Each test will have a duration of two hours and will consist of multiple choice questions and written essay questions. The ratio of multiple-choice to written essay questions will not be known in advance. Please do not ask. The tests will be cumulative. The grade value of each test is indicated on the weekly schedule. The test material will be based on the lectures, the textbook, and the indicated articles.

**Makeup Tests:** Students are expected to write each test on the dates specified. **If you miss a mandatory piece of course work for no 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 (10%):**

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 10 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. 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 your own. This is a very serious academic offense. Do your own assignments and acknowledge all your sources. The penalty for plagiarism will be in accordance with the Senate Policy on Academic Honesty which can be found at the following URL:

<http://www.yorku.ca/secretariat/policies/document.php?document=69>

**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.

**3260.03A Cognitive Processes**  
**S1/2014, Tuesday & Thursday, 7:00 PM-10:00 PM**  
**Proposed Schedule**

Topic	Date	Lecture Topics	Readings	Assignments
1	May 6	Historical introduction to Cognitive Psychology	Chapter 1 Articles 1-5	
2	May 8	Cognition & Computation	Chapter 1 Articles 1-5	
3	May 13	Perception/ Visual	Chapter 3	Reasoning experiment in class
4	May 15	Test 1 (25%)		
5	May 20	Categorization	Chapter 7	
6	May 22	Memory	Chapters 5, 6, 8	
7	May 27	Language	Chapter 9 Articles 6	Test 1 grades posted
8	May 29	Test 2 (25%)		
9	June 3	Problem solving	Chapter 10 Article 7, 10	
10	June 5	Reasoning	Chapter 10 Articles 8, 9, 10	Reasoning experiment due
11	June 10	Neuropsychology of Reasoning	Chapters 2, 10 Articles 8, 9, 10	
12	June 12	Test 3 (20%)		
	<b>June 17 @ 2-5pm (location to be announced)</b>	<b>Make up tests</b>		

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