
LIN/PHL/PSY 463: Introduction to Cognitive Science
Spring 2017

Instructor/TA Info:

Instructor
Karthik Durvasula
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Meetings:
by Regular Off. hours:
 Wed, 9:30am – 11:40am
(or) by appointment

[NOTE: It's best to email me a day or two BEFORE you meet with me so that I can let you know if I am free at the time you plan to come.]

Class Schedule / Location

Tuesday/Thursday 2:40 – 4:00pm Wells Hall A336

COURSE GOALS:

This course is intended to introduce students to the basic concepts, principles and methods of Cognitive Science. You will gain an understanding of how the “mind” works, and how it “learns” information. By the end of the course, you will be able to reflect on other behaviour, and you will be able to analyze what you observe and discuss it in a meaningful way.

This course will discuss many different aspects of cognition– vision, language, insect navigation, reasoning, and consciousness. We will try to also frame the questions in terms of theories/models of human cognition – computationalism, associationism, connectionism. At each stage, we will try to synthesise different perspectives to form a unified view, if possible, and raise questions for future inquiry. We will also consider the perils and problems we should be very aware of when studying Cognitive Science. By studying these issues, the hope is that you will gain insight, perspective and understanding into what it is to be a modern cognitive scientist.

REQUIRED TEXT:

Required reading will be given to you in one of the following ways:

- a) distributed in class, b) posted on the course website on D2L, and/or c) placed on reserve in the library.

NOTE: You are responsible for all material in the assigned chapters and supplemental readings, even if we do not discuss it in class (unless you are given information to the contrary). You are also responsible for all material covered that is not in the book (unless you are given information to the contrary).

COURSE REQUIREMENTS:

- Attendance

Students are expected to attend all classes. It is important to attend all classes since materials that are not covered in the textbook/readings maybe be presented. Please be sure to get the notes from any class you may miss. Some materials maybe be sent via email, but you should also check with me or a classmate regarding material you may have missed.

- Readings

Students are expected do all the assigned readings. It is best to read each reading by the day a particular topic begins.

- Participation

Students are expected to attend all classes and participate in group work and the discussions. If you know that you cannot attend a class for a legitimate reason (e.g. illness), and you let me know IN ADVANCE, points will not be deducted from your participation grade. If you do not show up, you will receive 0% for participation.

- Quizzes

If you are not able to attend class on a quiz day, you must contact me IN ADVANCE; if you do not do this, you will automatically receive 0% for it.

If you are absent, we may be able to set-up a make up quiz, as long as your excuse is legitimate.

- Exams

There will be 2 Tests.

NO MAKE-UPS WILL BE GIVEN, except in the case of an excuse officially recognized by the Dean's office.

GRADING WEIGHTS:

Test 1	20%
Test 2	20%
Quizzes	55%
Participation	<u>5%</u>
	100%

GRADING SCALE:

4.0	-	93% or higher
3.5	-	85% - 92.9%
3.0	-	77% - 84.9%
2.5	-	69% - 76.9%
2.0	-	61% - 68.9%
1.5	-	53% - 60.9%
1.0	-	45% - 52.9%
0.0	-	44.9% or lower

If you cannot come to a scheduled test, you must discuss this with me at least ONE CLASS PERIOD BEFORE the test. If there is an emergency after this, and you cannot contact anyone in person, send me an e-mail explaining the nature of the emergency and how you can be contacted to discuss the matter.

COURSE SCHEDULE:

This schedule is subject to slight variation, so if you miss a class, be sure to check with me or a classmate. It is most helpful to do the readings for a given topic BEFORE the first class dealing with that topic. This will make the lectures easier to follow, and you will be in a better position to ask questions about things that might not be clear to you.

Homework will be emailed or handed out in class.

WEEK	DATE	TOPIC
1	10 th Jan	Course organization;
	12 th Jan	Studying the human brain, and what it can tell us?
2	17 th Jan	How to be a Cognitive Scientist? Marr, Pylyshyn...
	19 th Jan	Computationalism: Representations and Computation, Turing vs Searle <i>Quiz 1</i>
3	24 th Jan	Modularity: Fodor, Carruthers
	26 th Jan	Innateness
4	31 st Feb	Vision: Basics
	2 nd Feb	Vision: Computational view of vision <i>Quiz 2</i>
5	7 th Feb	Language: Basics – Chomsky (Aspects)?
	9 th Feb	Language: contd.
6	14 th Feb	Language: Aphasias and Neurolinguistics <i>Quiz 3</i>
	16 th Feb	Insect Navigation: Basics
7	21 st Feb	Insect Navigation: continued
	23 rd Feb	TBD <i>Quiz 4</i>
8	28 th Feb	Review for Test 1
	2 nd March	<i>Test 1</i>
9	7 th March	<i>Spring Break; No Classes</i>
	9 th March	<i>Spring Break; No Classes</i>
10	14 th March	Connectionism: Basics
	16 th March	Connectionism: Arguments against (Fodor and Pylyshyn, Prince & Pinker)
11	21 st March	Connectionism: Synthesis with what we learnt earlier (Marcus Chapter) <i>Quiz 5</i>
	23 rd March	Learning: Classical Conditioning, Operant Conditioning (Associationism)

12	28 th March	Learning: Problems with the standard Associationist view; New ideas. Synthesis with the modular view.
	30 th March	Gallistel and King conjecture <i>Quiz 6</i>
13	4 th April	Reasoning
	6 th April	Reasoning: contd.
14	11 th April	Consciousness: Basics
	13 th April	Consciousness: contd. - Talk by Alan Beretta <i>Quiz 7</i>
15	18 th April	Evolution of Cognition: Ideas and Problems
	20 th April	Problems: “Weird” Psychology
16	25 th April	Problems: Problems with fMRI – dead fish; reproducibility and problems with reverse inference. <i>Quiz 8</i>
	27 th April	Review for Test 2
17	2 nd May (Tuesday) Finals Week	Test 2 (12:45-2:45pm; in your regular classroom)