

# Psych 4090 - Introduction to Cognitive Neuroscience

*The Brain is wider than the sky,  
For, put them side by side,  
The one the other will include  
With ease, and you beside.*

*The Brain is deeper than the sea,  
For, hold them, blue to blue,  
The one the other will absorb,  
As sponges, buckets do.*

*The Brain is just the weight of God,  
For, lift them, pound for pound,  
And they will differ, if they do,  
As syllable from sound.*

– Emily Dickenson

Time: Tuesday and Thursday 9:30 – 11:00 AM  
Place: D.M. Smith 11

Professor: Eric H. Schumacher  
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Teaching Assistant: Brian Roberts [brob914@gmail.com](mailto:brob914@gmail.com)  
Office Hours: by appointment

Textbook: *Principles of Cognitive Neuroscience*  
Purves, Brannon, Cabeza, Huettel, LaBar, Platt & Woldorff  
Copy of textbook is on reserve in Library

Other Readings: Electronic downloads of articles handouts, and lecture slides will be available on [tsquare.gatech.edu](http://tsquare.gatech.edu).

## Important dates

Exam 1: Tuesday, February 28<sup>th</sup> in class  
Exam 2: Tuesday, April 17<sup>th</sup> in class  
**Final Exam: Thursday, May 3<sup>rd</sup> 8:00 – 10:50**

## Course grading

The exams and paper will be weighted as follows:

Exam 1:	25%
Exam 2:	25%
Final Exam:	30%
Activities/Participation:	15%
Final Project:	5%

Grades will be determined based on the following scale:

90% – 100%	=	A
80 %– 89%	=	B
70% – 79%	=	C
60% – 69%	=	D
< 60%	=	F

Incompletes will be given for medical reasons only.

## Exams

There will be two in-class exams. Each exam will include some combination of fill-in-the-blank, short answer, and/or essay questions. The final exam will include essay questions and will be **cumulative**. It will emphasize a synthesis of the general principles of Cognitive Neuroscience. Make-up exams will not be given. In extreme circumstances, you must speak to me prior to missing the exam.

## Activities/Participation

Participation is valued in this class. All voices are necessary. Fifteen percent of your grade will be based on attendance, participation, and in-class assignments on readings. Frequent absences may affect your grade “off-scale.” Students are expected to read the articles to be discussed **before** class and to be prepared to discuss them. In-class assignments and quizzes will encourage this behavior.

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## Case Study Project

The last week and a half of the course will be spent working on a final project. Most of this work will be done in class. More information on the project will be given later in the semester.

## Extra Credit

Up to 2.5% extra credit can be earned by participating in Subject Pool experiments. You will earn 0.5% extra credit for each hour volunteered (5 hours maximum). Sign up for experiments through the Experimentrix website (<https://experimentrix2.com/GATech/>). Experimental “no shows” will subtract from your extra credit (0% minimum). See me outside of class for alternate assignment, if necessary.

## Academic Honor Code

<http://www.honor.gatech.edu/>

### Article II: Section 3. Student Responsibilities

Students are expected to act according to the highest ethical standards. The immediate objective of an Academic Honor Code is to prevent any Students from gaining an unfair advantage over other Students through academic misconduct.

The following clarification of academic misconduct is taken from Section XIX Student Code of Conduct, of the Rules and Regulations section of the Georgia Institute of Technology General Catalog: Academic misconduct is any act that does or could improperly distort Student grades or other Student academic records. Such acts include but need not be limited to the following:

- Possessing, using or exchanging improperly acquired written or verbal information in the preparation of any essay, laboratory report, examination, or other assignment included in an academic course;
- Substitution for, or unauthorized collaboration with, a Student in the commission of academic requirements;
- Submission of material that is wholly or substantially identical to that created or published by another person or persons, without adequate credit notations indicating authorship (plagiarism);
- False claims of performance or work that has been submitted by the claimant;
- Alteration or insertion of any academic grade or rating so as to obtain unearned academic credit;
- Deliberate falsification of a written or verbal statement of fact to a member of the Faculty so as to obtain unearned academic credit;
- Forgery, alteration or misuse of any Institute document relating to the academic status of the Student.

While these acts constitute assured instances of academic misconduct, other acts of academic misconduct may be defined by the professor. Students must sign the Honor Agreement affirming their commitment to uphold the Academic Honor Code before becoming a part of the Georgia Tech community. The Honor Agreement may reappear on exams and other assignments to remind Students of their responsibilities under the Georgia Institute of Technology Academic Honor Code.

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Course Schedule	Week	Class	Day	Date	Textbook Reading	Lecture
Principles of Cognitive Neuroscience	1	1	Tuesday	10-Jan	Chapters 1 - 3	Lecture 1
		2	Thursday	12-Jan		Lecture 2
	2	3	Tuesday	17-Jan		Lecture 3
		4	Thursday	19-Jan		Activity
Principles of Sensory Processing	3	5	Tuesday	24-Jan	Chapters 4 - 5	Lecture 4
		6	Thursday	26-Jan		Lecture 5
	4	7	Tuesday	31-Jan		Activity
Principles of Motor Processing		8	Thursday	2-Feb	Chapters 8 - 9	Lecture 6
	5	9	Tuesday	7-Feb		Lecture 7
		10	Thursday	9-Feb		Activity
Principles of Attention	6	11	Tuesday	14-Feb	Chapters 10 - 12	Lecture 8
		12	Thursday	16-Feb		Lecture 9
	7	13	Tuesday	21-Feb		Activity
Principles of Memory		14	Thursday	23-Feb	Chapters 13 - 15	Lecture 10
EXAM 1	8	15	Tuesday	28-Feb	EXAM 1	
		16	Thursday	1-Mar		Lecture 11
	9	17	Tuesday	6-Mar		Activity
Principles of Emotion		18	Thursday	8-Mar	Chapters 17 - 18	Lecture 12
	10	19	Tuesday	13-Mar		Lecture 13
		20	Thursday	15-Mar		Activity
Spring Break	11	21	Tuesday	20-Mar	NO CLASS	
Spring Break		22	Thursday	22-Mar	NO CLASS	
Principles of Symbolic Representation	12	23	Tuesday	27-Mar	Chapters 20 - 21	Lecture 14
		24	Thursday	29-Mar		Lecture 15
	13	25	Tuesday	3-Apr		Activity
Principles of Executive Processing		26	Thursday	5-Apr	Chapters 16, 23 - 24	Lecture 16
	14	27	Tuesday	10-Apr		Lecture 17
		28	Thursday	12-Apr		Activity
EXAM 2	15	29	Tuesday	17-Apr	EXAM 2	
Case Study Project		30	Thursday	19-Apr		Project 1
	16	31	Tuesday	24-Apr		Project 2
		32	Thursday	26-Apr		Project 3
FINAL EXAM			Thursday	3-May	8:00AM-10:50AM	