

Prof. Rebecca Compton  
rcompton@haverford.edu

**Course Description:**

Examines the neural basis of higher mental functions, including brain systems supporting vision, object recognition, attention, memory, spatial functions, language, emotion and decision-making. Major themes include mind/brain relationships, localization of function, and plasticity of the brain. Material will include studies of people with focal brain damage as well as neuroimaging studies of neurologically normal people. Cognitive neuroscience approaches to clinical conditions will also be explored. Prerequisite: one semester of introductory psychology.

**Main Text:**

Banich, M.T., & Compton, R.J. (2011). *Cognitive Neuroscience, 3rd Ed.* Wadsworth.  
-- Available for purchase and on reserve at Science Library.  
-- Additional readings available on Moodle.

**Course Requirements:**

100 pts Exam I—take-home; complete between 2/24 and 2/27  
150 pts Exam II – self-scheduled during exam period  
100 pts Paper – due in class on 4/11  
30 pts Responses to journal articles—due by 5pm the day before article discussions  
20 pts Attendance/participation  
TOTAL: 400 points

**Please note:** Haverford College is committed to supporting the learning process for all students. Please contact me as soon as possible if you are having difficulties in the course. There are also many resources on campus available to you as a student, including the Office of Academic Resources (<https://www.haverford.edu/oar/>) and the Office of Access and Disability Services (<https://www.haverford.edu/access-and-disability-services/>). If you think you may need accommodations because of a disability, you should contact Access and Disability Services at [hc-ads@haverford.edu](mailto:hc-ads@haverford.edu). If you have already been approved to receive academic accommodations and would like to request accommodations in this course because of a disability, please meet with me privately at the beginning of the semester (ideally within the first two weeks) with your verification letter.

## Course Schedule

<b>Date</b>	<b>Topic</b>	<b>Assignment</b>
Jan. 17	Introduction to course	
Jan. 19	Methods & anatomy	B&C skim Ch. 1, 2, 3
Jan. 24	Vision: From retina to cortex	B&C Ch. 6, pp. 146-165
Jan. 26	Vision: Color perception	Snowden
Jan. 31	Vision: Object recognition	B&C Ch. 7, pp. 179-195
Feb. 2	Vision: Face recognition	B&C Ch. 7, pp. 195- 201
Feb. 7	<b><i>Journal Article Discussion #1</i></b>	Bate article; <b><i>DQ responses due by 5pm on 2/6</i></b>
Feb. 9	Spatial cognition	B&C Ch. 8
Feb. 14	Auditory perception	B&C Ch. 6, pp. 165-173
Feb. 17	Auditory & multimodal perception	B&C Ch. 6, pp. 173-175
Feb. 21	Plasticity in sensory systems	
Feb. 23	<i>Exam Review;</i> <b><i>Exam I self-scheduled Feb. 24-27</i></b>	
Feb. 28	Motor control—guest lecture <i>Neurologist Dr. Jeff Ratliff, HC '06</i>	B&C Ch. 5
Mar. 2	Hemispheric specialization	B&C Ch. 4; Ogden Ch. 18

### SPRING BREAK

Mar. 14	Language: Spoken	B&C Ch. 9, pp. 232-248; Ogden Ch. 5
Mar. 16	Language: Written	B&C Ch. 9, pp. 248-263
Mar. 21	Memory	B&C Ch. 10, pp. 266- 287; Ogden Ch. 3
Mar. 23	Memory	B&C Ch. 10, pp. 287-299
Mar. 28	<b><i>Journal Article Discussion #2</i></b>	Hassabis article; <b><i>DQ due by 5pm on 3/27</i></b>
Mar. 30	Attention	B&C Ch. 11
Apr. 4	Executive functions	B&C Ch. 12
Apr. 6	Executive functions	B&C Ch. 12
Apr. 11	Emotion	B&C Ch. 13, pp. 366-389 <b><i>paper due</i></b>
Apr. 13	Social Cognition	B&C Ch. 13, pp. 389-393
Apr. 18	<b><i>Journal Article Discussion #3</i></b>	Ruff article; <b><i>DQ due by 5pm on 4/17</i></b>
Apr. 20	Psychopathology	B&C Ch. 14
Apr. 25	Cognitive neuroscience and society	B&C new chapter
Apr. 27	Exam review	

***Exam II self-scheduled during final exam period***