PROFESSORS

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YOU, YOUR BRAIN, YOUR BODY
KEYS TO SUCCESS IN THE COURSE

ATTENDANCE

ATTITUDE
Text

Biopsychology, 9th Edition
John P.J. Pinel

Available at the bookstore and a copy will be placed on reserve at the library
COURSE OVERVIEW

- Four exams given
  - 3 exams in class, one during finals week
  - No make-up exams

- Exams will be multiple choice with some short answer questions

- One paper: Biopsychology and the Media

- In class assignments
COURSE OVERVIEW

- Policies as stated on the course syllabus:
  - All exams will count towards your final grade
  - No make-up exams (unless serious documented circumstance)
  - There will be no extra credit of any kind
The overall course mean grade will represent the lowest possible score to obtain a B in the course, e.g. 80%. If the mean is 80% or higher, then traditional cutoffs (100-90; 89-80, 79-70…etc. for A, B, C…etc, respectively) will be used.
 COURSE OVERVIEW

- Blackboard
  - Every effort will be made to post lecture slides on blackboard by 5 p.m. the day before lecture
  
  - Everything will be posted under the Course Documents heading
  
  - Important to note that not all information will appear on slides
    
    - Sometimes an experiment will be discussed in class where only the results will be shown on the slide. Without the context and description of the experiment covered in lecture, the results would be meaningless
FIRST HALF OF COURSE: NUTS AND BOLTS
ZOOMING IN ON THE BRAIN
SENSING THE BRAIN
SECOND HALF OF COURSE:
LEARNING, MEMORY AND AMNESIA

5 million Americans - someone you know?
DRUG ADDICTION

20.4 million Americans – someone you know?
DEPRESSION

14.8 million Americans – someone you know?

Serotonin is deactivated in the synapse by reuptake into the presynaptic neuron. Prozac blocks the reuptake of serotonin, thus increasing the activation of serotonin receptors.
ANXIETY: PTSD

5.2 million Americans – someone you know?
Format as stated on the course syllabus:

- 3-4 pages
- Apply your new knowledge of behavioral neuroscience to a piece from a media publication of your choice
- Examples: treatments for Alzheimer's disease, how exercise affects the brain, drug addiction, recovery of brain function following stroke
- Plagiarism will not be tolerated
COURSE OVERVIEW:
BIOPSYCHOLOGY AND THE MEDIA

http://well.blogs.nytimes.com/2015/08/20/candy-brain/?_r=0


Sticking to a diet requires self-control and a willingness to forgo present pleasures for future benefits. Not surprisingly, almost everyone yields to temptation at least sometimes, opting for the cookie instead of the apple. Wondering why we so often override our resolve, scientists at the Laboratory for Social and Neural Systems Research at the University of Zurich recently considered the role of stress, which is linked to a variety of health problems, including weight gain. (There’s something to the rom-com cliché of the jilted lover eating ice cream directly from the carton.) But just how stress might drive us to sweets has not been altogether clear. It turns out that even mild stress may immediately alter the workings of our brains in ways that undermine willpower.

For their study, published this month in Neuron, researchers recruited 51 young men who said they were trying to maintain a healthy diet and lifestyle. The men were divided into two groups, one of which served as a control, and then all were asked to skim through images of different kinds of food on a computer screen, rating them for taste and healthfulness.
COURSE OVERVIEW: BIOLOGY AND THE MEDIA

Missing My Memory: Life With a Traumatic Brain Injury

I used to have the most amazing memory. I had friend’s phone numbers memorized, as well as all my credit card numbers, and my driver’s license number. I could watch a movie once and recite all the one-liners on command. I could read an entire book in a day, or over the weekend (depending how long it was). I could multi-task like a mad woman, juggling five things at once. It was easy for me, it was my normal.

All of that changed when I slipped on a patch of ice one cold, February morning. I landed full-force on the back of my skull and sustained a traumatic brain injury (TBI), along with numerous other physical injuries. I had no idea the journey that I was about to begin, and the struggles that I would endure.

The most immediately apparent effects were short term memory loss, cognitive functioning, and aphasia (not being able to recall words, or using the wrong word). I was originally told I had a severe concussion and that most of my symptoms would resolve themselves in a few weeks.

How Your Sleep Position Could Affect Your Brain

By Neha Kashyap, dailyRx News Reporter

Researchers from Stony Brook University found that side sleeping, compared to back or stomach sleeping, may more effectively remove brain waste and reduce the risk of Alzheimer's, Parkinson's and other neurological diseases.

At this time, the research has been conducted only in mice.

HOW CAN I DO WELL IN THIS COURSE? MOST IMPORTANTLY, COME TO CLASS!

- Best predictor of success in class is attendance
  - Of course, this doesn’t guarantee a good grade but it can’t hurt

**Abstract.** A study of three hundred undergraduates enrolled in a general education course at a large midwestern state university revealed, as expected, a strong negative correlation between absences and final grades. Although the complex equation for academic success involves many more variables than attendance alone, some of which are also considered in this article, attendance should be one of the easiest variables for students to control. Students who wish to succeed academically should attend class, and instructors should likewise encourage class attendance.

Source: College Teaching, 2005
HOW CAN I DO WELL IN THIS COURSE?
MOST IMPORTANTLY, COME TO CLASS!

- Best predictor of success in class is attendance
  - Of course, this doesn’t guarantee a good grade but it can’t hurt

### TABLE 1. Introduction to Japanese Culture Average Student Absences by Final Grade (Fall 2001 through Spring 2003 semesters)

<table>
<thead>
<tr>
<th>Grade</th>
<th>Fall 2001</th>
<th>Spring 2002</th>
<th>Fall 2002</th>
<th>Spring 2003</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Average absences</td>
<td>N</td>
<td>Average absences</td>
<td>N</td>
</tr>
<tr>
<td>A</td>
<td>20</td>
<td>0.50</td>
<td>34</td>
<td>0.75</td>
<td>29</td>
</tr>
<tr>
<td>B</td>
<td>19</td>
<td>0.89</td>
<td>34</td>
<td>1.71</td>
<td>45</td>
</tr>
<tr>
<td>C</td>
<td>9</td>
<td>2.44</td>
<td>8</td>
<td>3.25</td>
<td>18</td>
</tr>
<tr>
<td>D</td>
<td>3</td>
<td>7.67</td>
<td>1</td>
<td>6.00</td>
<td>3</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
<td>—</td>
<td>2</td>
<td>12.00</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>51</td>
<td>1.41</td>
<td>79</td>
<td>1.50</td>
<td>95</td>
</tr>
</tbody>
</table>

*aDoes not include the two students with F grades; including them, the average rises to 1.77.
*bDoes not include the two students with F grades; including them, the average rises to 1.29.
COURSE OVERVIEW:
BIOPSYCHOLOGY AND THE MEDIA

Do Men Have A Better Sense Of Direction? The Science Behind The Stereotype, Explained

The term sense of direction is made up of a lot of different components. If you've got a good sense of direction — as men are often rumored to — you never get lost or turned around in a foreign place, can remember exactly where you are in relation to other stuff, know the correct direction to walk in...
COURSE OVERVIEW:
BIOPSYCHOLOGY AND THE MEDIA

Women are more at risk of Alzheimer’s
Christian George Acedo Jul 28, 2015 07:04 PM EDT

Women are more likely vulnerable to suffer from mental decline faster than men when Alzheimer’s start to take their toll, a study shows. Another study reveals that women who undergo surgery and take anesthesia are also at risk of suffering from faster cognitive decline than men. A third study suggested that the progression of Alzheimer’s disease is triggered by abnormal protein that accumulates faster in women’s brains than in men’s.