Sensation and Perception  
Summer 2011

Instructor:
Sean Stevens

E-mail:
stevesss@rci.rutgers.edu

Class Location:
Tillett Hall RM 204
Monday through Thursday, 1220 – 215pm.

Office:
Tillett Hall Room 423

Office Hours:
Tuesday: 3 to 4 pm or by appointment.

Text:

Course Description:

How do we perceive the world? How are all of our sensory experiences tied together into a coherent whole? What makes such processes possible? Can we trust our senses? These are examples of the types of questions we will be covering in this course. Our main focus will be on the visual system, as it the most studied and well understood of all the senses. We will also cover attention, audition, and touch and pain.

Grade Breakdown:

Exams – 80% (4 total).

Summaries – 15% (4 total).

Attendance – 5% (No more than 3 absences).

You are expected to attend every class. Attendance will be taken at every class through a sign in sheet. **You cannot sign in for other people who are not in class. If I find you doing this, you will receive a 0 for that day as well as one additional day. This means that if you had perfect attendance (12 out of 12) and you were caught signing in for someone else, your attendance grade will become 83% (10 out of 12)
Course Outline:

May 31 – Ch. 1 Introduction, Philosophical Background, Consciousness, and Attention (not in text)

June 1 – Psychophysics (Ch 2. Research Methods)

June 2 – Signal Detection Theory (Ch 2. Research Methods), Error Management Theory (assigned article)

June 6 – Ch 14. Perceptual Development, Exam Review

June 7 – EXAM 1

June 8 – Structure and Function of the Eye (Ch 3. The Visual System)

June 9 – The Visual Brain, Disorders of Visual Perception (Ch 3. The Visual System)

June 13 – Basic Visual Functions (Ch 4.)

June 14 – Shape and Pattern Perception, Gestalt Psychology, Face Perception (Ch 5. Visual Pattern Perception)

June 15 – Exam Review (if necessary finish lecture from June 14)

June 16 – EXAM 2

June 20 – Perceiving a Three-Dimensional World (Ch 6. Distance and Size Perception)

June 21 – Theories of Color Perception (Ch 7. Color)

June 22 – Individual Differences in Color Vision, Color Phenomena (Ch 7. Color)

June 23 – Motion (Ch 8.)*

June 27 – EXAM 3

June 28 – The Auditory System (Ch. 9)

June 29 – Basic Auditory Functions (Ch 10.)

June 30 – Auditory Pattern Perception (Ch 11.)

July 4 – NO CLASS

July 5 – Touch and Pain (Ch. 12 The Skin Senses)

July 6 – EXAM 4

July 7 – NO CLASS

* = Guest Lecture: Elio Santos and Nick Ross.
Summaries and Due Dates:


Articles can be found in the Resources section of the course Sakai site.

Summaries are due at the start of class each Monday. If you cannot attend you may email them before the start of class.

Summaries will be graded on a 3 point scale (0 = not turned in; 1 = turned in; 2 = well written summary).

Late summaries will have a point deducted and must be turned in within 24 hours of the due date.

Exams:

Exams will consist of 50 multiple choice questions and short answer/essay.

Each exam will be worth 75 points.

Make ups will only be given in extreme circumstances with required documentation.
Sensation and Perception Lab
01:830:302:H6 Summer 2011
Busch Psychology Building, Room 105
Monday/Wednesday 18:00 – 21:40

Instructor: Gaurav Kharkwal
E-mail: kharkwal@rci.rutgers.edu
Office Hours: Monday 17:00 – 18:00, Busch Psychology Building, Room 115.

General goals for the course:

1. To provide an opportunity to experience perceptual phenomena first hand.
2. To learn how to design, conduct, analyze, and write-up experiments.
3. To learn how to use software tools to analyze and plot data.

This laboratory class is meant to serve as a companion to the lecture class PSYCH-301. The conceptual and theoretical basis for the exercises and demonstrations are developed in lecture. For this reason, concurrent or past registration in PSYCH-301 is required.

Grading:

Your final grade will be based on three things:

1. Attendance (see Attendance Policy below)
2. Weekly lab assignments
3. An original project report completed during the last several class meetings

Every assignment will count towards your grade. There are no tests or quizzes planned. Grades for this course will not be curved or scaled.

The criteria for grading your work will be:

- Effort and class participation
- Demonstration of progress in understanding and using software tools
- Clarity of graphs
- Clarity of writing
- Demonstration of understanding basic perceptual concepts introduced in the labs
Final Project:

The final project is the writing of a full laboratory report based on an original experiment carried out in class during the final weeks of the semester. These reports will be given a letter grade (A, B+, B, C+, C, D, F).

Weekly Assignments:

We will be working on labs at each class meeting. After each lab is completed (data collection and analysis), you will be assigned a write-up of the lab which will be due at the beginning of the next class. Write-ups will often consist of brief (1-2 page) reports on methods, raw data, data analysis (graphs, charts, statistical tests, etc.), results and conclusions.

Students who hand in the assignment on time and receive a failing grade will be given the option of handing in one revised version within one week of receipt of the graded assignment. The revised report will then be graded. No revisions of a failed assignment will be accepted after this one-week delay, and no subsequent revisions will be accepted after the first revision, although I will be available to meet with you to discuss the material and your performance. You may not revise a P grade to receive a P+.

The weekly assignments will be graded on the "P" scale:

- **P+**: Excellent work
- **P**: Good, pass
- **P-**: Minor problems, needs improvement
- **F**: Fail, requires redo

Scores on these weekly assignments will be used to adjust the grade given on the final project. A half letter grade will be added for 3 P+’s accumulated during the semester. A half letter grade will be subtracted for 3 P-’s accumulated during the semester. If an F is not redone, it will also cause a half letter grade deduction.

- 3 P+’s: Add one-half letter grade
- P: No points added or deducted
- 3 P-’s: Deduct one-half letter grade
- F: Deduct one-half letter grade if left uncorrected

All laboratory assignments and reports must be completed by the individual student. Collaborative reports will be given an F grade. Please see Academic Dishonesty Policy below.
Attendance Policy:

If you miss a lab meeting for a legitimate reason (e.g. illness, religious holiday) you must bring an official excuse note (e.g. doctor's note). This will excuse you from performing that part of the assignment. Missed assignments that are not excused will be given a failing grade. **You must arrive on time to class.** Excessive lateness prevents you from learning about the goals and content of the lab projects. If you are more than 20 minutes late you will not be allowed to enter and participate that day and your absence will be counted as an unexcused absence.

Schedule of Labs:

The following is a rough schedule of the course. Changes and amendments may be made as the course progresses.

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 11</td>
<td>Introduction to the course</td>
</tr>
<tr>
<td></td>
<td>Lab 1: Perception of line length (Graphs &amp; Tables)</td>
</tr>
<tr>
<td>July 13</td>
<td>Lab 2: Pitch discrimination (Method, Results)</td>
</tr>
<tr>
<td>July 18</td>
<td>Lab 3: Center of gravity (Introduction)</td>
</tr>
<tr>
<td>July 20</td>
<td>Lab 4: Prism Adaptation (Method)</td>
</tr>
<tr>
<td>July 25</td>
<td>Lab 5: Extrapolation of Motion (Results)</td>
</tr>
<tr>
<td>July 27</td>
<td>Lab 6: Attention Shift (Discussion)</td>
</tr>
<tr>
<td>August 1</td>
<td>Lab 7: Crowding (Results)</td>
</tr>
<tr>
<td>August 3</td>
<td>Lab 8: P-illusion (Title Page, Abstract, and Discussion)</td>
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<tr>
<td>August 8</td>
<td>Lab 9: Design final project, abstract, title</td>
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<tr>
<td>August 10</td>
<td>Data collection for final projects</td>
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<tr>
<td>August 15</td>
<td>Data analysis for final projects</td>
</tr>
<tr>
<td>August 17</td>
<td>Turn in final projects</td>
</tr>
</tbody>
</table>

Academic Dishonesty Policy:

In science, there is absolutely no room for fraud or untruth. Our job as scientists is to search out facts, not just for ourselves but for society as a whole. Consequently, you should be very clear that, just as I expect you to learn about the topic matter, I also expect you to learn about scientific honesty. In the work that you present to me, falsifying, plagiarism, or copying without attribution will not be tolerated. Intentional ethical violations will result in failure for the material in question. Please check the school guidelines for further clarification of violations.
All course materials can be found on http://sakai.rutgers.edu after you log in. It is expected that you print out ALL materials before class. The printer in the classroom is for printing out SPSS/PASW output and data-related materials ONLY.

If you decide to stay enrolled in this class after receiving this syllabus, I will assume you have read the entire syllabus and have agreed to all the policies outlined.
Syllabus

*830:303:01 Memory Summer 2010*

*Instructor:* Arnold Glass, Office hours by appointment, 120 Psychology Building, Busch; aglass@rutgers.edu

*Time and Location:* M, W 6:00-10:00

*Book and Clicker:* The only clickers that work in this course are Turning Point clickers. You can buy the clicker at New Jersey Books or online. There should be clickers floating around from previous semesters. But you use an old clicker at your own risk! No book is required. However, Cognition by Arnold Glass will be very useful and is available from New Jersey books and elsewhere.

*As soon as you buy your clicker*, you should log onto the course web site on Sakai and take the Clicker ID quiz. Enter your clicker ID in answer to the one question. Your clicker ID is the hexadecimal number on the back of the clicker below the bar code. It is six characters and may be either all numbers or a combination of numbers and letters.

You are responsible for bringing your clicker to all classes and to the final exam. If you do not purchase a new clicker then the first time you bring your clicker to class you must set the channel by pressing GO 41 GO. When you click GO the first time, the clicker should start blinking red-green. When click 41 and then Go the second time, the clicker should turn yellow, then green, and then go off. If you only use the clicker in this class then you never have to set the channel again. But if you use the clicker in a different class that uses a different channel then you will have to reset the channel every time that you come to class.

When you use the clicker to answer a question, its response light should turn green, to indicate that your response was recorded. If this is not happening then your clicker is not working.

After every class, clicker grades will be posted on the Sakai course site. It is your responsibility to check the gradebook to make sure that your clicker responses were recorded.

If your clicker does not work, there is nothing that I can do about it. The most common cause of clicker failure is battery failure. It is your responsibility to obtain a new battery or a new clicker.

*Class Preparation:* Two days before each class or exam, a quiz will be available at Tests & Quizzes. In order to benefit from the class structure, you should perform the following assignments in the following order:

First, you should do the assigned reading. Most of the readings are in the textbook, but there are additional readings posted on the Resources page and listed in the syllabus. Especially for the second and third lectures, these are important. Resource readings are designated with an R on the syllabus, in contrast to the textbook readings, list the chapter.

Second, you should take the timed retrieval quiz. Do not click on it until you are ready to proceed with the entire quiz. *You will only be able to take the timed assessment once.* Hence, once you open it you must answer all of the questions and submit it for grading. Otherwise, you will not receive credit. You cannot begin it, close it, and come back and complete it later.

Third, you should take notice of the feedback for any questions you get wrong. Each question will refer to specific paragraphs in the Cognition text. The page and paragraph reference is next to the question number and part of the feedback. For example, 17.3-18.1 means read from the third paragraph on page 17 to the end of the first paragraph on page 18. To find the target paragraphs, begin with the first paragraph on the page, even if it begins on the preceding page. Also, if the target paragraph is the last paragraph on a page, you have to continue
to the next page if it is continued there.

Fourth, you should come to class, on time, with a working clicker, and answer all the clicker questions. The information you must learn from this course is encoded in about 120 4-question sets. All four questions in each set are about the same fact-statement. So knowing the answer to one question in the set implies knowing the answer to them all. Let us call four questions in the same set: Q1, Q2, Q3, and Q4. Q1 will appear on the online quiz before class. Q2 will appear in class and Q3 will appear on an online quiz after class. Q4 will appear on an exam. So if you take all the quizzes and participate in all the classes, you should get 90% correct on the exam. If you get 90% correct on the exam then you will get an A in the course.

Students are strongly urged to first read the assignment and then take the quiz, taking notice of the correct answers for those questions gotten wrong. Every practice quiz question is similar or identical to a question that will appear in class and on an exam. Hence, there is no better way of preparing for class and the exams than by doing the reading and taking the practice quizzes.

Each student will receive a quiz grade for each third of the course. If the quiz grade is higher than the class participation grade then it will be averaged with the class participation grade. Otherwise, it will not count. Hence, a quiz grade can raise but cannot lower your class participation grade. There is no way to gain access to or make up a quiz that you miss.

*Class Participation:* Clicker responders will be used to make class participation possible despite the large size of the class. Each student will receive a class participation grade for each third of the course. If the class participation grade is higher than the exam grade then it will be averaged with the exam grade for that third of the course. Otherwise, it will not count. Hence, class participation can raise but cannot lower your exam grade. You do not get credit for disrupting class by arriving late or leaving early. *So if you do not respond to the first and last question of a class then you will receive a participation grade of 0 for the entire class. Also, anyone found to have two clickers will receive an F in the course. Also, anyone whose clicker shows up in class without him or her will receive an F in the course. Also, anyone using a camera, camera phone, or any other unauthorized recording device will receive an F in the course.*

*Lecture Notes:* The Power Point slides used in class are available on line. Just click on the appropriate links on the syllabus on the Resource page. There may be slight differences in the slides I use in class because I am always updating and revising my notes.

Grades will be posted on the Sakai grade book. You have one week from the day of the exam to challenge the grade on the exam. You may do so by making an appointment to go over your exam in person. If you do not challenge your grade within the week then it will be final and you will have no further opportunity to see or go over your exam.

*Exams:* There will be final exam of about 60 questions during the final class.

*If you are found to have a cell phone or any other communication or recording device, e.g., camera, during an exam then you will receive an F in the course.*

*If you are found to have in your possession any notes or other unauthorized materials during the exam then you will receive an F in the course.*

The final exam will consist of clicker questions similar or identical to the questions presented throughout the course.
*Attendance and Classroom Decorum:* You should not arrive late or leave early. Cell phones should be off. You should dress appropriately and *you should not put your feet on the seat in front of you.*

If you arrive before class begins then **do not** sit in the last two rows. *If you arrive after class begins or plan to leave early then please sit in the last two rows so that you do not disturb your classmates.*

*Grading:* Final grades will be determined by the following point system: 90%-A, 80%-B, 70%-C. Plus grades will be determined by the distribution of scores.

*Movie:* You are responsible for renting and watching the movie *Memento* before the second exam.

*You are responsible for knowing the material on this syllabus. If you email me or ask me a question that is answered on this syllabus then I will answer it, but I will also deduct a point from your final grade.*

**Syllabus:**

**Wednesday June 2 Ch. 1**

Introduction <https://sakai.rutgers.edu/access/content/group/a945ae0c-1d10-4b83-b4d7-6a01c603f008/01_Intro.ppt>

R02 <https://sakai.rutgers.edu/access/content/group/a945ae0c-1d10-4b83-b4d7-6a01c603f008/Evolution%20of%20Learning%20%20Memory.doc>

Evolution of Learning 1
<https://sakai.rutgers.edu/access/content/group/a945ae0c-1d10-4b83-b4d7-6a01c603f008/02.1_Operant%20Conditioning.ppt>

R02 <https://sakai.rutgers.edu/access/content/group/a945ae0c-1d10-4b83-b4d7-6a01c603f008/Evolution%20of%20Learning%20%20Memory.doc>;

**Ch. 7, pp. 190**

Evolution of Learning 2
<https://sakai.rutgers.edu/access/content/group/a945ae0c-1d10-4b83-b4d7-6a01c603f008/10.1_Serial%20Learning.ppt>

**Monday June 7**

**Ch 2, pp. 16-18, 32-38**

Skill Learning <https://sakai.rutgers.edu/access/content/group/a945ae0c-1d10-4b83-b4d7-6a01c603f008/02_MotorSystem.ppt>
Ch. 7, pp. 175-178

Declarative & Serial Learning
<https://sakai.rutgers.edu/access/content/group/a945ae0c-1d10-4b83-b4d7-6a01c603f008/12_Serial%20Learning.doc>

Wednesday, June 9 Ch. 3, pp. 45-46, pp. 53-68

Visual ID <https://sakai.rutgers.edu/access/content/group/a945ae0c-1d10-4b83-b4d7-6a01c603f008/04_Visual%20Recognition%20%20Agnosia.ppt>

Ch. 5, 118 -129

Scene & Word ID <https://sakai.rutgers.edu/access/content/group/a945ae0c-1d10-4b83-b4d7-6a01c603f008/05.3_Semantic%20Priming.ppt>

Monday June 14

Ch. 5, pp. 131-151

Language Processing
<https://sakai.rutgers.edu/access/content/group/a945ae0c-1d10-4b83-b4d7-6a01c603f008/06_Language%20Origin.ppt>

Wednesday June 16

Ch. 6, pp. 153-161

Infant Learning <https://sakai.rutgers.edu/access/content/group/a945ae0c-1d10-4b83-b4d7-6a01c603f008/Temp.ppt>

Ch. 6, pp. 161-174

Language Learning <https://sakai.rutgers.edu/access/content/group/a945ae0c-1d10-4b83-b4d7-6a01c603f008/09B_LanguageLearning.ppt>

Monday, June 21

Ch. 8, pp. 199-209; Ch. 12, pp. 318 -319
Savant Learning <https://sakai.rutgers.edu/access/content/group/a945ae0c-1d10-4b83-b4d7-6a01c603f008/10_Savant%20Learning.ppt> & Categorization

Ch. 7, pp. 180 -185

Rehearsal <https://sakai.rutgers.edu/access/content/group/a945ae0c-1d10-4b83-b4d7-6a01c603f008/12_Rehearsal.ppt>

Wednesday, June 23

Ch. 7, pp. 186-188

Elaboration <https://sakai.rutgers.edu/access/content/group/a945ae0c-1d10-4b83-b4d7-6a01c603f008/10_Savant%20Learning.ppt>

Ch. 7, pp. 179-180, Ch. 8, 209-217

Mnemonics <https://sakai.rutgers.edu/access/content/group/a945ae0c-1d10-4b83-b4d7-6a01c603f008/14_Mnemonics-1.ppt>

Monday, June 28

Ch. 7, pp. 191-197

Medial Temporal Amnesia <https://sakai.rutgers.edu/access/content/group/a945ae0c-1d10-4b83-b4d7-6a01c603f008/15_Anterograde.ppt>

Ch. 7, pp. 191-197

Cortical & Frontal Amnesia <https://sakai.rutgers.edu/access/content/group/a945ae0c-1d10-4b83-b4d7-6a01c603f008/16_Anterograde.ppt>

Wednesday, June 30

Ch. 9, pp. 225-228

Short-term <https://sakai.rutgers.edu/access/content/group/3be3576e-3a68-4a35-9e6e-4b0b3db468ca/17_Short-term%20Retrieval-1.ppt>,

Ch. 9, pp. 219-225, 228-235

Recognition 1, <https://sakai.rutgers.edu/access/content/group/3be3576e-3a68-4a35-9e6e-4b0b3db468ca/18_RecognitionJudgments-1.ppt>

Recognition 2 <https://sakai.rutgers.edu/access/content/group/a945ae0c-1d10-4b83-b4d7-6a01c603f008/19_Recognition%20Abilities.ppt>
Monday, July 5

Ch. 9, pp. 235-252

Recall <https://sakai.rutgers.edu/access/content/group/3be3576e-3a68-4a35-9e6e-4b0b3db468ca/20_Recall.ppt>

<https://sakai.rutgers.edu/access/content/group/a945ae0c-1d10-4b83-b4d7-6a01c603f008/19_Reognition%20Abilities.ppt>

Wednesday, July 7

Ch. 9, pp. 235-252

Recall <https://sakai.rutgers.edu/access/content/group/3be3576e-3a68-4a35-9e6e-4b0b3db468ca/20_Recall.ppt>

Reich <http://slate.msn.com/?id=2447>.

Ch. 10, p. 253-267

Autobio 1 <https://sakai.rutgers.edu/access/content/group/a945ae0c-1d10-4b83-b4d7-6a01c603f008/21_Autobiographical%20Memory.ppt>,

Autobio 2 <https://sakai.rutgers.edu/access/content/group/a945ae0c-1d10-4b83-b4d7-6a01c603f008/22_Long-term%20Autobiographical%20Retention.ppt>

Monday, July 12

Ch. 10, p. 267

False Memories <https://sakai.rutgers.edu/access/content/group/3be3576e-3a68-4a35-9e6e-4b0b3db468ca/23_FalseMemories.ppt>

Ch. 10, pp. 268-272

Retrograde Amnesia <https://sakai.rutgers.edu/access/content/group/3be3576e-3a68-4a35-9e6e-4b0b3db468ca/24_Retrograde.ppt>
Learning Goals

1. Student will learn to show up on time and stay until the end of the class.

2. Student will learn not to put feet on furniture.

3. Student will learn to remain silent during class.

4. Student will learn how to use a row letter and seat number to find a seat during an exam.

5. Student will understand over 100 facts about how people learn and remember and will be able to apply those facts to examples to which they are relevant.

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Arnold Glass
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Phone: 908 208 7848
Fax: 732 445 2263
01:30:30:B6  
Cognition  
TTh 6 – 9:30 pm  
TIL-116, Livingston

Instructor: Lu Wang, M.S.  
Office hours: Thursday 3:30-5:00 pm, or by appointment, in Psychology rm 131, Busch Campus  
Contact: via email at luwan@rci.rutgers.edu

Grading

Grades are calculated from a total of 100 points:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90-100</td>
</tr>
<tr>
<td>B+</td>
<td>85-89</td>
</tr>
<tr>
<td>B</td>
<td>80-84</td>
</tr>
<tr>
<td>C+</td>
<td>75-79</td>
</tr>
<tr>
<td>C</td>
<td>70-74</td>
</tr>
<tr>
<td>D</td>
<td>60-69</td>
</tr>
<tr>
<td>F</td>
<td>59 and below</td>
</tr>
</tbody>
</table>

Exams

There will be three in-class exams (15 points each, 45 points in total) composed of some combination of multiple choice and fill-in-the-blank questions. On an exam day, the first hour of the class will be allotted for the exam, the rest of the class will be lecture on new material. No make-up exams will be allowed. The lowest points will be dropped, and the highest one will be counted twice for your final grades. Therefore, you could choose to drop one of the exams, at most.

A cumulative final exam (30 points) will be given at the end of the course. It is not possible to drop this grade! The exam will cover material from the entire class and will be composed of multiple choice and fill-in-the-blank questions.

Group report

At the end of the course, we’ll talk about the current topics of cognitive psychology. You will work in groups and find a recent article on a topic you are interested in, and present that to the whole class. A summery of the article (5-6 pages) and an in-class presentation (30 minutes) are required (15 points).

In-class Assignments and Participations

Throughout the course we will be doing some in-class exercises and discussions, for a total of 10 points. Some examples of in-class assignments and participations:

- Discuss in class, or write up a 2-3 pages essay on the topic we discussed.
- Read one journal articles related to a topic that we discussed in class and summarize the articles in 2-3 pages.

Revised May 17th, 2011
Participation in Experiments: bonus points

Optional: you could participate in any experiments related to Cognition (5 points). Throughout the semester I will let you know about opportunities.

Each meeting includes two topics, one hour and twenty minutes for each topic. You’ll have 10 minutes break in-between. There is a 10-minutes discussion session at the end of each meeting.

Schedule

Note: this schedule is subject to change

<table>
<thead>
<tr>
<th>Time</th>
<th>Contents</th>
<th>In Class Discussion</th>
<th>Reading</th>
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</thead>
<tbody>
<tr>
<td>5/31 T</td>
<td>History of Cognition</td>
<td>Behavioral vs. Cognitive Psychology</td>
<td>TBA</td>
</tr>
<tr>
<td></td>
<td>Structure of the Brain</td>
<td></td>
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</tr>
<tr>
<td>6/2 Th</td>
<td>Vision &amp; Perception</td>
<td>Guest Lecture: Melissa Kibbe</td>
<td>TBA</td>
</tr>
<tr>
<td>6/7 T</td>
<td>Attention</td>
<td>Review for Exam 1</td>
<td>TBA</td>
</tr>
<tr>
<td>6/9 Th</td>
<td>Language</td>
<td>Guest Lecture: Nora Isacoff</td>
<td>TBA</td>
</tr>
<tr>
<td></td>
<td>Exam 1: Perception &amp; Attention</td>
<td></td>
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<tr>
<td>6/14 T</td>
<td>Memory &amp; Development of Working Memory</td>
<td>Pros &amp; Cons of VOE paradigm</td>
<td>TBA</td>
</tr>
<tr>
<td>6/16 Th</td>
<td>Reasoning &amp; Decision Making</td>
<td>Review for Exam 2</td>
<td>TBA</td>
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<tr>
<td>6/21 T</td>
<td>Cognitive Neuroscience</td>
<td>Guest Lecture: Peter Pantellis</td>
<td>TBA</td>
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<tr>
<td></td>
<td>Exam 2: Memory, Decision Making &amp; Language</td>
<td></td>
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</tr>
<tr>
<td>6/23 Th</td>
<td>Philosophy of Cognition</td>
<td>Guest Lecture: Derek Anderson</td>
<td>TBA</td>
</tr>
<tr>
<td>6/30 Th</td>
<td>Exam 3: Cognitive Development</td>
<td>Group report 1 (Send me the article by 6/23)</td>
<td>TBA</td>
</tr>
<tr>
<td></td>
<td>Current topics in Cognitive Psychology 1</td>
<td></td>
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</tr>
<tr>
<td>7/5 T</td>
<td>Current topics in Cognitive Psychology 2</td>
<td>Group report 2 (Send me the article by 6/28)</td>
<td>TBA</td>
</tr>
<tr>
<td></td>
<td>Review for Final</td>
<td></td>
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</tr>
<tr>
<td>7/7 Th</td>
<td>Final Exam</td>
<td></td>
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</tr>
</tbody>
</table>

Academic Integrity
Plagiarism will not be tolerated. Any student who attempts to pass off someone else’s words as his or her own will receive a zero for the assignment and will be reported to the Dean of his or her College. Students are expected to adhere to the University Policy on Academic Integrity: http://cat.rutgers.edu/integrity/policy.html.

Revised May 17th, 2011
Cognition Lab (Section H6)
01:830.206:H6 Summer 2010
Tuesday and Thursday 6:00 PM – 9:55 PM
Busch Psychology Building, Room 105

Instructor:
John Wilder
E-mail: jdwilder@ruccs.rutgers.edu

Office Hours: By Appointment.

Goal: The aim of this course is to provide hands-on experience and training in the experimental designs and analytical methods that are common in research in cognitive psychology. The course will be devoted to running in-class experiments, analyzing the data, interpreting the results, and writing lab reports.

Text: There is no text book. Students will have access to handouts each week on the course Sakai page in the resources section.

Exams: There are no exams.

Attendance: Attendance is mandatory because the class depends on the hands-on experience of running the experiments. Attendance is taken at the start of each class. If you miss a class, you must return appropriate documents (i.e. an official excuse note from the Dean’s office to authenticate an absence) to be excused. There are NO make-ups.

Schedule: The lab class follows a two-week cycle.
- The first week of each lab
  o The theoretical background and motivation of the week’s experiment are explained.
  o Students act as subjects in the experiment.
- The second week
  o The analysis methods for the experiment, including statistical methods, are explained.
  o Students analyze and interpret their results from the experiment of the first week.
  o Students complete the lab write-up.

The schedule of topics and assignment is as follows (amendments will be made as necessary).

<table>
<thead>
<tr>
<th>Date</th>
<th>Lab</th>
<th>Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/13</td>
<td>Categorization and Typicality 1</td>
<td>Abstract</td>
</tr>
<tr>
<td>7/15</td>
<td>Mental Rotation 1</td>
<td></td>
</tr>
<tr>
<td>7/20</td>
<td>Mental Rotation 2</td>
<td>Introduction</td>
</tr>
<tr>
<td>7/22</td>
<td>Numerical Estimation 1</td>
<td>Methods</td>
</tr>
<tr>
<td>7/27</td>
<td>Numerical Estimation 2</td>
<td></td>
</tr>
<tr>
<td>7/29</td>
<td>Category Learning 1</td>
<td></td>
</tr>
<tr>
<td>8/3</td>
<td>Category Learning 2</td>
<td>Discussion</td>
</tr>
<tr>
<td>8/5</td>
<td>Decision Making 1</td>
<td></td>
</tr>
<tr>
<td>8/10</td>
<td>Decision Making 2</td>
<td>Results</td>
</tr>
<tr>
<td>8/12</td>
<td>Working Memory 1</td>
<td></td>
</tr>
<tr>
<td>8/17</td>
<td>Working Memory 2</td>
<td>Complete Report</td>
</tr>
</tbody>
</table>
Assignment:
- After each lab, a partial section of a lab report (i.e. and abstract, an introduction, a methods sections, etc.) will be completed. For the last lab, students are asked to write a complete lab report that enables students to integrate the skills learned in previous labs.
- Assignments should be typed in 12 pt font and double spaced.
- Assignments should be turned in on Sakai. Students will complete the assignment in class; they are required to stay in class until the lab session ends or until the assignment is completed or attendance points will be lost. If a student is unable to complete a lab assignment during class time, they will have until noon on Monday to complete the report. After this time one point will be lost, and an additional point will be lost each day until the assignment is completed.
- All written assignments that students turn in must be done on their own. Students should not work collaboratively on the written assignments. Copied assignments result in failing the course. Any outside sources must be appropriately referenced. Plagiarism is NOT tolerated. See Rutgers’ policy on Academic Integrity at http://academicintegrity.rutgers.edu/integrity.shtml

<table>
<thead>
<tr>
<th>Grading:</th>
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<tbody>
<tr>
<td>Introduction</td>
<td>15 pts</td>
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<tr>
<td>Methods</td>
<td>15 pts</td>
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<tr>
<td>Results</td>
<td>15 pts</td>
</tr>
<tr>
<td>Discussion</td>
<td>15 pts</td>
</tr>
<tr>
<td>Abstract</td>
<td>15 pts</td>
</tr>
<tr>
<td>Complete Lab Report</td>
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<table>
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<tr>
<th>Final Grade:</th>
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<tbody>
<tr>
<td>Points</td>
<td>Letter Grade</td>
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<tr>
<td>90</td>
<td>A</td>
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<tr>
<td>80</td>
<td>B</td>
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<td>70</td>
<td>C</td>
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<tr>
<td>60</td>
<td>D</td>
</tr>
<tr>
<td>Below 60</td>
<td>F</td>
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</tbody>
</table>

Plus grades (B+, C+, ...) will be determined by the distribution of scores.

Classroom Decorum: Arriving late will result in losing points from that week's assignment. Cell phones should be turned off. The computers should not be used to surf the internet; if other instructors walk by the classroom and they see you using the internet for sites unrelated to the course they will enter the lab and ask you to stop.
Syllabus: Neuropsychology, Summer 2010

NEUROPSYCHOLOGY 830:310 SUMMER 2010
JUNE 1 – JULY 9

Instructor: Alexander W. Kusnecov, Ph.D.
Address: Room 233a, Psychology Bldg., Busch Campus
Office Hours: By Appointment or After Each Class
Contact Information: Phone: (732) 445 3473
Email: kusnecov@rci.rutgers.edu

Course Description

Neuropsychology is the study of brain-behavior relationships in which the focus is entirely on the human brain. It is a branch of neuroscience that traditionally has relied more on clinical case studies as a source of information for identifying the functional significance of various regions of the brain, than basic laboratory research using animal models, which in and of themselves have provided (and continue to provide) a wealth of information that has been extrapolated to human brain function. In recent years, the ascendancy of cognitive neuroscience, a branch of cognitive science that correlates brain activity with normal psychological processes in healthy, unimpaired human and non-human primate subjects, has served to extend the domain of neuropsychological investigation. In essence, whether it’s called neuropsychology, behavioral neurology, or cognitive neuroscience, the ultimate goal is prediction and understanding of what parts of the brain serve as the basic substrates for measureable ongoing behavior. And as such, this information serves to aid the diagnosis and treatment of many different behavioral disorders ranging from acquired or inherited deficits in language and cognition, to severe neuropsychiatric conditions such as Alzheimer’s dementia and schizophrenia. The course will provide the basis for appreciating the many different ways in which behavior has been related to specific regions of the human brain, and will cover basic neuroanatomy, neuropsychological testing, the newer methodologies used by cognitive neuroscience, such as neuroimaging, and proceed to a more detailed description of how the brain allows for the expression and processing of emotion, language, thought, and memory.

Learning Goals

After taking this course, students should be familiar with:
1. Methods for assessing normal and abnormal brain function at the structural and physiological level in human and non-human primates
2. Neuropsychological approaches to assessing the consequences of brain damage
3. The functional properties of of the cerebral cortex in human and non-human primates
4. Functional differences between the left and right cerebral hemispheres
5. The relationship of neuropsychology to cognitive neuroscience approaches to understanding
   a. Sensation and Perception
   b. Goal-directed actions
   c. Attention
   d. Learning and memory
   e. Emotion
   f. Language
6. The neurocognitive basis of psychiatric disorders
Syllabus: Neuropsychology, Summer 2010

Assessment

There will be three exams. Each exam will be a mixture of written and multiple choice questions. The first exam will account for 25% of the total grade. Exam 2 will account for 35% of the total grade. The Final Exam (or 3rd Exam) will be worth 40% of the total grade, and will involve knowledge of the required reading (Phantoms in the Brain – see section on required reading).

Makeups: If an exam is missed for a legitimate and verifiable reason, the student must sit for the makeup within three weekdays of the scheduled date for the missed exam. Written and signed documentation will be required, and since the makeup will allow for more study time, the written component of the exam will look for evidence of greater and more precise understanding. Rutgers athletic obligations, religious events, weddings etc that are going to interfere with taking the scheduled exams will require that you take the exam earlier than scheduled. It is up to you to anticipate the conflict, and let me know about these upcoming events so I can administer the exam earlier.

Required Reading


The above book should be read by students in order to appreciate certain clinical aspects of neurological disorders. It is an award-winning book, and based on feedback, universally “loved” by hundreds of students who have taken Neuropsychology with Professor Kusnecov. (NOTE: Ramachandran has a BBC documentary on the book, which you can watch on YouTube – just go to the site and type in the name of the book). The book does not provide a formal, textbook style description of how neuropsychology as a discipline is conducted. However, it does leave the reader appreciative of the intriguing nature of the brain, as well as being knowledgeable of some clinical conditions that will be covered in class.

Note: Take-home questions will be provided to help prepare students for questions in the Final Exam based on the book. Material in the book that is not addressed in lecture will be the student’s responsibility (but the take-home questions should not leave you stranded thinking “what do I need to know?”).

Optional Reading

Purchase of a formal textbook on neuropsychology is not required, since the lectures and lecture outlines (posted on sakai) will be sufficient to get through the course. There is a wealth of information on the internet, such that a student merely needs to type in a keyword (eg., ataxia or apraxia) to get a host of links defining these terms.

However, if a student wants to know more about specific terms encountered in the course, she/he may benefit from having a copy of the following:

Further, if a student definitely must have a textbook on neuropsychology (and few fit my approach), then the following is worth purchasing (there is a more expensive 6th edition out now, but not necessary if you are purchasing to obtain a secondary source to the lectures):
Syllabus: Neuropsychology, Summer 2010

Finally, any textbook (completely optional) on physiological psychology or biological psychology should alleviate concerns about understanding the neurobiology (e.g., that used for Physiological Psychology [830:313] at Rutgers is *Physiology of Behavior* by Neil Carlson; this book will be placed on reserve at the library, since it covers the neuroanatomy and some other physiological aspects that students may find difficult; many used copies are available through your favorite vendor, and 8th through 10th editions of the book will be fine).

**Outline of Course Lectures and Dates of Exams**

**Section I: History, Neuroanatomy and Methodology**

<table>
<thead>
<tr>
<th>Lecture #</th>
<th>Date</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tue 1-June</td>
<td>Overview and Introduction</td>
</tr>
<tr>
<td>2</td>
<td>Wed 2-June</td>
<td>History of Neuropsychology: Localization of function vs Integrative Function</td>
</tr>
<tr>
<td>3</td>
<td>Thur 3-June</td>
<td>The Nervous System: Central vs Peripheral Nervous System</td>
</tr>
<tr>
<td>4</td>
<td>Mon 7-June</td>
<td>Brain Structure and Anatomy</td>
</tr>
<tr>
<td>5</td>
<td>Tue 8-June</td>
<td>Methodology: Clinical Conditions (e.g., Strokes, Infection, Trauma)</td>
</tr>
<tr>
<td>6</td>
<td>Wed 9-June</td>
<td>Methodology: Measurement of Brain Function (e.g., Neuroimaging; EEG)</td>
</tr>
<tr>
<td>7</td>
<td>Thur 10-June</td>
<td>Methodology: Neuropsychological Assessment</td>
</tr>
<tr>
<td>8</td>
<td>Mon 14-June</td>
<td>EXAM 1 (25% of total grade)</td>
</tr>
</tbody>
</table>

**Section II: Cognitive, Perceptual and Motor Functions of the Cerebral Cortex**

This section will address each of the four lobes of the cerebral cortex and discuss their unique and overlapping functional properties. It will become apparent, that discussion of the various lobes of the cerebral cortex is a matter of convenience, revealing that all forms of behavior are a product of interactions between different regions of the brain. This is the basis of 'systems neuroscience.'

Specific behavioral topics that will be covered in this section will include: Disorders of sensation and perception; epilepsy; hallucinations; phantom limbs; impulsivity and response inhibition; planning & judgement; attention; empathy and social perception.

<table>
<thead>
<tr>
<th>Lecture #</th>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>9</td>
<td>Tue 15-June</td>
<td>The Occipital Lobe</td>
</tr>
<tr>
<td>10</td>
<td>Wed 16-June</td>
<td>The Occipital Lobe/Parietal Lobe</td>
</tr>
<tr>
<td>11</td>
<td>Thur 17-June</td>
<td>Parietal Lobe</td>
</tr>
<tr>
<td>12</td>
<td>Mon 21-June</td>
<td>Parietal Lobe/Temporal Lobe</td>
</tr>
</tbody>
</table>
Syllabus: Neuropsychology, Summer 2010

13 Tue 22-June Temporal Lobe
14 Wed 23-June Temporal Lobe/Frontal Lobe
15 Thur 24-June Frontal Lobe

Exam Mon 28-June Exam 2 – 35% (up to and including the Temporal Lobe)

Section III: Special Topics in Neuropsychology
In this section, information gathered about the various functions of the cerebral cortical lobes is integrated in the context of discussing specific topics relevant to cognitive neuroscience and psychiatry

Lecture # Topic
16 Tue 29-June Learning and Memory
17 Wed 30-June Film: Alzheimer’s Dementia
18 Thur 1-July Dementia
19 Mon 5-July Attention
20 Tue 6-July Executive Functions and Schizophrenia
21 Wed 7-July Hemispheric Specialization

Exam Thur 8-July Exam 3 – 40% (from Frontal Lobes to Hemispheric Specialization)
Physiological Psychology 830:313
Summer 2009
MTWTH 10 – 11:50am
WL-Aud

Instructor: Jennifer Czerniawski, M.S.
Office hours: By appointment, 322 Busch Psych. Bldg.
Contact Info: jenyczern@eden.rutgers.edu

Required Text: Physiology of Behavior, N Carlson, 9th Edition

Course objectives: This course will focus on the complex relationship between the brain and behavior. We will touch on areas of research involving neuroanatomy, neurochemistry, and electrophysiology and the neural mechanisms that mediate various behaviors.

Exams: There will be 3 multiple choice exams. No makeup exams will be given without prior approval and/or a note from your doctor explicitly stating that you are too ill to come to class.

Grading Scale: A: > 90
               B+: 85-89
               B: 80-84
               C+: 75-79
               C: 70-74
               D: 60-69
               F: < 60

General Policy: Attendance is mandatory as there will often be information presented in the lectures that is not in the book. Class will start promptly and students are expected to be on time. Reading assignments must be completed, preferably before each class. The brain-behavior relationship is very complex – please do not hesitate to contact me with any questions. The course syllabus is subject to change. Any changes will be announced in class.
**Physiological Psychology Syllabus Summer 2008:**

<table>
<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Topic</th>
<th>Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tues</td>
<td>5/26</td>
<td>Introduction</td>
<td>Ch 1</td>
</tr>
<tr>
<td>Wed</td>
<td>5/27</td>
<td>Neuron Structure and Function</td>
<td>Ch 2</td>
</tr>
<tr>
<td>Thurs</td>
<td>5/28</td>
<td>Neural Communication</td>
<td>Ch 2</td>
</tr>
<tr>
<td>Mon</td>
<td>6/1</td>
<td>Central and Peripheral Nervous Systems</td>
<td>Ch 3</td>
</tr>
<tr>
<td>Tues</td>
<td>6/2</td>
<td>Psychopharmacology</td>
<td>Ch 4</td>
</tr>
<tr>
<td>Wed</td>
<td>6/3</td>
<td>Psychopharmacology</td>
<td></td>
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<tr>
<td>Thurs</td>
<td>6/4</td>
<td>Review</td>
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<tr>
<td>Mon</td>
<td>6/8</td>
<td><strong>Exam 1</strong></td>
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</tr>
<tr>
<td>Tues</td>
<td>6/9</td>
<td>Vision</td>
<td>Ch 6</td>
</tr>
<tr>
<td>Wed</td>
<td>6/10</td>
<td>Audition</td>
<td>Ch 7</td>
</tr>
<tr>
<td>Thurs</td>
<td>6/11</td>
<td>Somatosensation, Olfaction, Gustation</td>
<td>Ch 7</td>
</tr>
<tr>
<td>Mon</td>
<td>6/15</td>
<td>Movement</td>
<td>Ch 8</td>
</tr>
<tr>
<td>Tues</td>
<td>6/16</td>
<td>Neural Plasticity</td>
<td></td>
</tr>
<tr>
<td>Wed</td>
<td>6/17</td>
<td>Review</td>
<td>Readings</td>
</tr>
<tr>
<td>Thurs</td>
<td>6/18</td>
<td><strong>Exam 2</strong></td>
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</tr>
<tr>
<td>Mon</td>
<td>6/22</td>
<td>Sleep and Biological Rhythms</td>
<td>Ch 9</td>
</tr>
<tr>
<td>Tues</td>
<td>6/23</td>
<td>Emotion</td>
<td>Ch 11</td>
</tr>
<tr>
<td>Wed</td>
<td>6/24</td>
<td>Learning and Memory</td>
<td>Ch 13</td>
</tr>
<tr>
<td>Thurs</td>
<td>6/25</td>
<td>Learning and Memory</td>
<td>Ch 13</td>
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<tr>
<td>Mon</td>
<td>6/29</td>
<td>Schizophrenia and Affective Disorders</td>
<td>Ch 16</td>
</tr>
<tr>
<td>Tues</td>
<td>7/30</td>
<td>TBD</td>
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<tr>
<td>Wed</td>
<td>7/1</td>
<td>Review</td>
<td></td>
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<tr>
<td>Thurs</td>
<td>7/2</td>
<td><strong>Exam 3</strong></td>
<td></td>
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</table>
Syllabus for 830:311

Title: Conditioning and Learning

Course Description: Introduction to the major experimental findings that contributed to our understanding of learning, with a special focus on classical and operant conditioning.

Instructor: Stathis Papachristos

Office: B409 Nelson Biological Laboratories

Office hours: By appointment (email: papachst@eden.rutgers.edu)

Lecture Times and Place: M,T,W,Th 10:15-12:05 ARC 105


Grading:

First Exam: 25
Second Exam: 25
Final Exam: 30
5 best quizzes: 20
Total: 100

Exams: Multiple choice, short answer, and (possibly) small essay questions. Failure to take an exam generates a 0 (and almost guarantees flunking the course). Make-up exams will NOT be given except under very unusual and well documented circumstances. For example, unless you are hospitalized, you are not too sick to take the exam. A note from the Dean’s office, even though necessary, will not suffice to excuse your absence.

Attendance: I will not monitor attendance, but strongly advise you to observe it. You are responsible for any information you missed in class, whether contained in the textbook or not. Note that there will be 6 quizzes administered throughout the course, which like the exams, cannot be made up for, except for similarly unusual circumstances.

Apologetic note: The instructor apologizes for the unpleasant tone of the above notes, but doubtful excuses for missing exams proliferate, causing big headaches in the fair administration of large courses.

Schedule of Lectures and Readings

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Lecture Topic</th>
<th>Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/30</td>
<td>T</td>
<td>Introduction</td>
<td>Ch 1</td>
</tr>
<tr>
<td>5/31</td>
<td>W</td>
<td>Habituation</td>
<td>Ch 2</td>
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<tr>
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<tbody>
<tr>
<td>6/1</td>
<td>Th</td>
<td>Habituation</td>
<td>Ch 2</td>
</tr>
<tr>
<td>6/5</td>
<td>M</td>
<td>Drug tolerance</td>
<td>Ch 3</td>
</tr>
<tr>
<td>6/6</td>
<td>T</td>
<td>Classical conditioning</td>
<td>Ch 4</td>
</tr>
<tr>
<td>6/7</td>
<td>W</td>
<td>Cue competition</td>
<td>Ch 4</td>
</tr>
<tr>
<td>6/8</td>
<td>Th</td>
<td>The Rescorla-Wagner model</td>
<td>Ch 4</td>
</tr>
<tr>
<td>6/12</td>
<td>M</td>
<td>Alternatives to R-W theory – Review</td>
<td>Ch 4</td>
</tr>
<tr>
<td>6/13</td>
<td>T</td>
<td>First Exam</td>
<td>Ch 5, 6</td>
</tr>
<tr>
<td>6/14</td>
<td>W</td>
<td>Operant conditioning</td>
<td>Ch 6</td>
</tr>
<tr>
<td>6/15</td>
<td>Th</td>
<td>Schedules of reinforcement</td>
<td>Ch 6</td>
</tr>
<tr>
<td>6/19</td>
<td>M</td>
<td>Matching</td>
<td>Ch 9</td>
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<tr>
<td>6/20</td>
<td>T</td>
<td>Extinction</td>
<td>Ch 9</td>
</tr>
<tr>
<td>6/21</td>
<td>W</td>
<td>Avoidance and Punishment</td>
<td>Ch 10</td>
</tr>
<tr>
<td>6/22</td>
<td>Th</td>
<td>Review</td>
<td>Ch 10</td>
</tr>
<tr>
<td>6/26</td>
<td>M</td>
<td>Second Exam</td>
<td>Ch 10</td>
</tr>
<tr>
<td>6/27</td>
<td>T</td>
<td>Temporal learning; Circadian phase</td>
<td>Ch 12</td>
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<tr>
<td>6/28</td>
<td>W</td>
<td>Temporal learning: Intervals</td>
<td>Ch 12</td>
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<tr>
<td>6/29</td>
<td>Th</td>
<td>Spatial learning</td>
<td>Ch 11, 12</td>
</tr>
<tr>
<td>7/3</td>
<td>M</td>
<td>Numerical learning</td>
<td></td>
</tr>
<tr>
<td>7/4</td>
<td>T</td>
<td>Learning rates of reinforcements</td>
<td></td>
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<tr>
<td>7/5</td>
<td>W</td>
<td>*** No Class: Independence Day***</td>
<td></td>
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<tr>
<td>7/6</td>
<td>Th</td>
<td>Review</td>
<td></td>
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<td></td>
<td></td>
<td>Final Exam</td>
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</tr>
</tbody>
</table>

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Syllabus

Conditioning & Learning Laboratory
Summer, 2006
Rutgers College Course # 830:312
Tuesday & Thursday 6:00
Psychology Building, Room A361

Instructor: Helene Sisti
E-mail: hsi31@rci.rutgers.edu
Office Hours: By Appointment
Reading Materials: Online "www.libraries.rutgers.edu" and on reserve at LSM.

Course Description:

The goal of this course is to: (1) give you an appreciation of some basic learning principles observed in both animals and humans (2) give you an opportunity to do hands-on research in a psychology laboratory. As a class, we will conduct 2 (if time permits, 3) experiments in animal behavior and learning. On your own, you will read and summarize 5 articles, and write 2 papers. Quizzes will be based on lectures and readings.

Grades will be determined as follows:

- Lab Report 1: 15
- Lab Report 2: 30
- Participation: 10
- 3 Quizzes: 30
- Article Summary Sheets: 15
- Total: 100

Because the experiments are conducted as a class, your classmates depend on your attendance for collecting data; therefore, attendance is mandatory. Absenteeism will result in grade reductions.

Assigned readings will be placed on reserve in the Library of Science and Medicine either on-line (www.libraries.rutgers.edu) or in printed format under the name "Rovee-Collier."
Readings for Habituation

Short-term and long-term habituation of exploration in rats, hamsters, and gerbils

Analyses of habituation in *Caenorhabditis elegans*

Newborn infants' memory for speech sounds retained over 24 hours

Readings for Partial Reinforcement Extinction Effect

The partial-reinforcement extinction effect in 4-5 day old guinea pigs

Effects of reward and nonreward on frustration and attention in attention deficit disorder

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<th>Date</th>
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<tr>
<td>May 30,</td>
<td>Introduction to Research</td>
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<tr>
<td>TUES</td>
<td>in the Laboratory</td>
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<td></td>
<td>Animal Care Forms</td>
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<td>June 1,</td>
<td>Principles of Learning</td>
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<tr>
<td>THURS</td>
<td>Habitation Papers</td>
<td>QUIZ 1</td>
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<td>June 6,</td>
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<tr>
<td>TUES</td>
<td>Begin Handling Animals</td>
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<td></td>
<td>Experiment 1: Acclimation</td>
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<td>June 8,</td>
<td>Experiment 1: Collect Data</td>
<td>Article Summary #1 DUE</td>
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<tr>
<td>THURS</td>
<td>Format for scientific paper</td>
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</table>
June 13,       Results from Experiment 1
TUES            Operant Conditioning; Shaping
                Schedules of Reinforcement

June 15,       Experiment 2: Collect Data: Shaping
THURS          Partial Reinforcement Extinction Effect
                Papers
June 20,       Experiment 2: Collect Data; Extinction
                and Reacquisition
TUES

June 22,       Results from Experiment 2
THURS
June 27,       If time allows, Experiment 3: Social
TUES            Reinforcement of Food Preference

June 29,       Meet Sniffy the Virtual Rat
THURS
(Last Class)

For questions or comments about this site, contact WebMaster
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Physiological Psychology
01:830:313:B1
Summer Session I (6/1/10-7/09/10); 2010
MTWTH 10:10-12:05 PM
WL-AUD

Instructor: Elyse Mallimo, M.S.
Office Hours: By appointment, Busch Campus Psychology Building, room 232
Contact Information: emallimo@rci.rutgers.edu
Sakai Site: https://sakai.rutgers.edu
  • ISBN-10: 0-205-66627-2

Course Description and Learning Goals:

The aim of this course is to develop an understanding of the biological processes that underlie behavior. Therefore, our focus will be on the brain. We will begin with an introduction to the structure of the nervous system and how it functions at the neurochemical and electrophysiological level. Later in the course we will discuss how information from our environment is detected by our sensory systems (visual, auditory, olfactory, somatosensory, and gustatory) and how this information is sent to the brain. We will also examine how the brain uses the information that it obtains from our environment in order to generate useful and adaptive behaviors that are executed by our motor system. Finally, we will end the class with a discussion about various disease states (neurodegenerative diseases, affective disorders, anxiety disorders, schizophrenia, etc.) that can result from disruptions to neural communication and changes in the brain circuitry that underlie behavior.

General Course Structure and Requirements:

• Lectures will adhere closely to the contents of the textbook. The topics for each lecture and corresponding reading assignment are outlined in the syllabus. This schedule is subject to change and any changes (regarding lecture material, exams, etc.) will be announced in class or will be posted on sakai.

• Attendance is mandatory as there will at times be information presented in the lecture that is not in the book. It is strongly suggested that you complete each reading assignment and come to me with any questions you may have regarding the material in the book or that is presented in lecture.

• My contact information is at the top of this page so feel free to shoot me an email or come to me after class. Office hours are by appointment only and can be scheduled via email or in person. However, please note that if we arrange to meet outside of class and, for whatever reason, you are unable to make it to our
scheduled appointment you must notify me in advance. Similarly, if I have to cancel office hours (or class) I will notify you in advance.

- I have added each of you to the class sakai site and any notifications that I have regarding the course will be posted there (see link at top of page). Also, slides for each lecture can be found under the Resources tab. I will try and post each lecture at least 1 day prior to class, as I realize it can be frustrating if the notes are not posted far enough in advance.

Exams and Grading Scale:

- There will be 3 non-cumulative exams for this course. Exam dates are listed in the syllabus below. Exams will consist of multiple-choice questions but may also include short answer essays, labeling of diagrams, and/or construction of diagrams. I emphasize the phrase 'short answer' for a reason because students often write more than is necessary when responding to short answer essays. Helpful Hint: if you are having difficulty with a short answer question do not hesitate to draw a diagram! In fact, some short answer questions may require just that; a diagram.

- Regarding make up exams: No makeup exams will be given without prior approval and/or a note from your doctor explicitly stating that you are too ill to attend class. Makeup exams will follow the same format as regular exams; however, they will not be the same questions as those used for the original test. Also, makeup exams must be taken within one week of the missed exam.

- The grading scale is as follows: Each exam is worth a total of 100 points. There are 3 exams which means that you can earn a total of 300 points. To calculate your grade at the end of the course, simply add up the total amount of points you have earned on each exam and refer to the chart below.

  A: ≥ 270 points
  B+: 255-267 points
  B: 240-252 points
  C+: 225-237 points
  C: 210-222 points
  D: 180-207 points
  F: ≤ 177 points

- Grades will not be curved and there will not be any extra credit. However, there will be opportunities in class to earn extra points. Specifically, I will be giving short quizzes throughout the course at the beginning of class. Each quiz will test your knowledge of the material that was discussed in previous lectures, and for completing each quiz you will receive 1 point. In total, there will be 6 quizzes which means that you can earn up to 6 extra points. These
points will be added to your final grade at the end of the course. While this may seem silly short quizzes will allow me to assess your level of understanding of the material as well as my effectiveness as an instructor. Therefore, these quizzes cannot hurt your grade, they can only help! Think of them as extra credit.

- All grades (quizzes and tests) will be posted on SAS gradebook. Please click on the following link to access your grades.

  https://secure.fas.rutgers.edu/apps/gradebook/

- One final note: Remember when taking an exam to include your **Name AND Student ID** on both the **test form AND scantron**.

*Current Academic Integrity Policy:*

Students are expected to follow the Rutgers Academic Integrity Code. Anyone who is caught cheating will get a zero for the exam and the Dean's office will be notified. Please make sure that all notes, books, and electronic devices (i.e., computers, cell phones, ipods, ipads, etc, etc.) are put away prior to the start of each exam.
### Lecture Topics & Reading Assignments (with page numbers if applicable)

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<td>Tuesday</td>
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<td>Wednesday</td>
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<td>Neuron Structure &amp; Function</td>
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<td>Vision</td>
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<td>Wednesday</td>
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<td><strong>Thursday</strong></td>
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<td>Monday</td>
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<td>6/26/10</td>
<td>Stress, the HPA Axis &amp; Anxiety Disorders</td>
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<td>Wednesday</td>
<td>6/27/10</td>
<td>Schizophrenia &amp; Affective Disorders</td>
<td>Ch 16; pgs. 556-580</td>
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<td>Thursday</td>
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<td>Learning &amp; Memory</td>
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Monday 7/5/10  Neurodegenerative & Autoimmune Diseases  Ch 15; pgs. 537-550

Tuesday 7/6/10  Psychoneuroimmunology (PNI)  Ch 17; 608-611

Wednesday 7/7/10  Review

Thursday 7/8/10  EXAM 3; COVERS CH 9, 13, 15, 16, 17 & PNI

Enjoy the rest of your summer!