This reading list gives the reading assignments and also serves as a general guide to the course content. There will be substantial overlap between different subsections of this course as you can tell from the classes listed next to each major heading.

**Required readings: The required readings are listed directly after the major headings (those giving class numbers) in the list below.**

Most of the required readings are from the textbook, which is *Psychology* by Peter Gray (Fourth Edition. Worth: NY. 2002) A small amount of other required reading may be added to this list at a later date. This is not the sort of material that you can just read through once and look over before the exam. This is the sort of material that requires extensive studying to understand and to remember.

Exception to last statement: where you are told to "skim" below, you are meant to only read once through (rather quickly, you needn't study). You should probably pace your reading in order to read much of the relevant material before each lecture. But you may wish to study the material in detail after the relevant lectures. Don't forget to read the figures and figure legends -- they contain a good deal of information.

The textbook by Gray that we use (and also the textbook by Henry Gleitman) are useful general references to the current state of psychology. You may wish to keep the textbook after the course is over. If so, you should probably write in the margins while studying (e.g. questions, summaries, ideas).

For those of you who eventually take the psychology GRE: The textbooks by Gray and Gleitman are reputed to be very good for studying for the psychology GRE. A study guide to the Gray textbook is also available. Some students find it useful. Others don't.

**Optional readings: Subheadings are given under the major headings. Most of the subheadings give special topics that may be discussed in class.** The readings listed under these subheadings are optional and are listed for those who wish to pursue some of the topics further and/or as references for material given in the lecture but not in the text. Some of the references for special topics are primary journal articles and may be quite difficult to understand. If you also do some suitable background reading, however, these references ought to be useful to you.

The books and journal articles ought to be available in the psychology library. If you have difficulty finding any of the references, I would be happy to lend you my copy to xerox -- if I still have a copy to lend. Some of the newspaper and magazine articles listed below -- as well as some others -- will be posted on the bulletin board outside my office during the appropriate weeks of the course. (If you come visit me, you can read my bulletin boards too!)

**General note. Current Directions in Psychological Science, Trends in Neurosciences, and Trends in Cognitive Sciences** are journals meant to introduce current topics in neuroscience and psychology to non-experts in the topic. Each month they present many mini-reviews of currently-interesting topics.

**This list is tentative.** Changes may occur. There will certainly be some changes in what special topics are discussed. (If any of the topics listed or some related topics are of special interest to you, you are welcome to tell me so, and then I will make a particular effort to include them this year.) There may some modifications in the reading assignments.

*The organization of this course is, roughly, from the little to the big. It begins with single molecules & cells -- then goes on to systems within a single individual -- then to the whole person -- then to groups of persons. It ends with the topic of Health and Illness, which depends on all the previous levels, from the littlest to the biggest.*

**•INTRODUCTION TO THE SCIENCE OF PSYCHOLOGY (CLASSES 1-2)**

**Required reading:**

All handouts, especially handout #2 on Course Requirements. You can skim this handout (the Reading List) for now except this first page and the material for classes 1-2 which you should read carefully. The rest you can read as we go along.

From Gray's text, read:  (a) **The Preface;** (b) "To The Student" (which comes immediately after the preface); (c) Ch.1 (**The History and Scope of Psychology**). (d) Ch.2 (**Methods of Psychology**). Can skim statistics pp. 38-41. It will be assigned later. (e) pp. 340-346 of Ch. 9
Encoding Information into Long-Term Memory, for study hints -- we will read this again later; Reading schedule: Please read much of this before class 2, and all before class 3.

Possible lecture topics and optional reading:
More about studying, especially about reading: A web page that might be worth your while looking at if you find the textbook reading daunting is: Dewey, R. (1997, February 12) The "6 hour D" and how to avoid it. Online at http://www.psychwww.com/discuss/chap00/6hourd.htm

More about research methods: To Know A Fly. Dethier, V. (1962) This short book is a delightful illustration of scientific research -- how it proceeds, its pitfalls, its joys.

More about graphs: If you are not very experienced with graphs, you might find this short book useful: Graph it. How to make, read, and interpret graphs. (1992) Bowen, R.

•NEURON AND BRAIN (CLASSES 2-6)

Required reading:
All handouts unless otherwise stated.
From Gray textbook: (a) read Ch. 5 (The Nervous System). You can skim p. 165-8 on the action potential. You can also skim p. 171-176 on learning now -- it will be assigned later. (b) Read pp. 233-253 of Ch. 7 (Overview of sensory systems, The chemical senses, Pain). You can skim the part on "Pain".

Suggestions for reading schedule: For class 3, read Ch. 5 (nervous system overall). For class 4, review it and start Ch. 7 (sensory systems). For class 5, finish Ch. 7. Also there are many places later in the book referring to concepts we will present in the lectures during this section. You might find these pages useful. You can find the pages in the index.

Possible lecture topics and optional reading: 
***GENERAL REFERENCES FOR NEUROSCIENCE - useful throughout course.***
Large, but cheap as books go. Is a widely-used text.

Neural transmitters and diseases like Parkinson's & Schizophrenia
Video: More than a Movie (about the post-encephalitic Parkinson's patients shown in Awakenings )

Localization of function -- hemispheric differences and more
The February 1998 issue of Current Directions in Psychological Science contains many articles on lateralization of function (right/left hemispheric differences).
The Man Who Mistook His Wife for a Hat. Sacks, Oliver (1985) A set of essays on a number of interesting brain-damaged patients.
Videotape demos: excerpts from NOVA's: Left Brain, Right Brain.

Dyslexia
"To see but not to see: the magnocellular theory of dyslexia." By J. Stein and V. Walsh Trends in Neurosciences, 1997, Vol. 20, #4, p. 147-152.
Also see reference under Neural Networks under Learning and Memory.

•SEEING, HEARING, AND PERCEIVING (CLASSES 5-9)

Required reading:
All handouts unless otherwise stated.
In Gray's textbook read: (a) The rest of Ch. 7 (pp. 253-273 on Hearing and Psychophysics. You can skim the part on psychophysics.) (b) All of Ch. 8 (Vision).

Suggestions for reading schedule: For class 5, you should have finished reading Ch. 7. For class 6, start reading Ch. 8. For class 7, finish reading Ch. 8. For class 8 read genetics and evolution (listed in next subsection of reading list).
Possible lecture topics and optional reading:

**General references for sensation and perception**

Ratliff, F. (1965) *Mach Bands: Quantitative Studies on Neural Networks in the Retina.* A wonderful account of how an astronomer's puzzlement and the eye of the horseshoe crab led to some insights about neural networks' action in visual perception.


Sekuler, R. and Blake, R. *Perception.* (several editions)


**Localization of function -- visual pathways in the brain**

"Object recognition: You may mistake your wife for a hat, but not for a word" by M. Farah (pp 164-169 of Oct. 1992 *Current Directions in Psychological Science*). Summarizes her book.


**Proximal versus distal stimuli. Constancies and ambiguities. Why does vision require so much (25-40%) of the cerebral cortex?**


**Analysis: Color vision (additive vs. subtractive color mixture, opponent-color theory)**


Ratliff, F. (1992) *Paul Signac and Color in Neo-Impression*

**Analysis: Low-level analyzers of visual & auditory stimuli (sinusoids, Fourier analysis)**


**Synthesis: Putting things back together again into perceptions (representation of distal stimuli).**


Video Demo: Stranger in the Mirror. About two patients who can not recognize themselves in the mirror, one because (simplistically) he cannot "see" the object there at all, and the other because he just sees a generalized "face" and can't match it with his own in memory.

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**GENETICS, EVOLUTION (CLASSES 8-12)**

**Required reading:**

All handouts unless otherwise stated.

In Ch. 3 (*Genetic and Evolutionary Foundations of Behavior*), read from beginning of chapter to middle p.78, read p. 80 and read p. 89-90. Can skim rest (will be assigned later in course).

**Suggestion:** Do reading by class 8; start motivation reading (next subsection) for class 9.

**Possible lecture topics and optional reading:**

**Overview**

August 1997 issue of *Current Directions in Psychological Science* is a special issue on Behavioral Genetics. Contains articles on genetics and psychopathology, cognitive functioning, development, electrophysiology, personality.

**Color Blindness**


**Why analysis into color, into auditory sines, into visual sines, etc.?**

What is evolutionary advantage to organisms of such analyses at low levels of sensory systems?

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**MOTIVATION AT THE LEVEL OF A SINGLE INDIVIDUAL: E.G. SLEEP, HUNGER, THIRST (CLASSES 9-12)**

**Required reading:**

All handouts unless otherwise stated.
In textbook Ch. 6 (Mechanisms of Motivation, Sleep, and Emotion), read pp. 187-192 (Drives), skim pp. 192-199 (hunger), read pp. 206-8 (reward), read 208-220 (sleep), and read 228-9 (concl). Suggestion: Finish reading by class 10.

Possible lecture topics and optional reading:

**Drive versus incentive theories**

**Sleeping and dreaming, circadian rhythms and timing**
Video Demo: Clock and Stopwatch. Rae Silver and John Gibbon (of Columbia. Barnard, and P&S) narrate this video on circadian rhythms ("clock") and our timing ability ("stopwatch")

**LEARNING, ESPECIALLY CLASSICAL AND OPERANT CONDITIONING (CLASSES 11-13)**

Required reading:
All handouts unless otherwise stated.
Ch. 4 of textbook (Basic Processes of Learning).

Possible lecture topics and optional reading:

**General references for this section**

**Classical (Pavlovian) conditioning, old vs. new interpretations**

**Behavior therapy**

**LEARNING AND MEMORY IN HUMANS (CLASSES 12-15)**

Required reading:
All handouts unless otherwise stated.
In textbook, (a) Read all of Ch. 9 (Memory and Consciousness). (b) In Ch. 5, read pp 171-176 (Modification of neural connections as a basis of learning)

Possible lecture topics and optional reading:

**Chunking, Neural Networks (see also Neural Substrate of Language)**

**Eyewitness testimony, False memories (Constructive memory)**

**Consolidation and forgetting (massed vs. distributed practice)**

### SOME STATISTICS, TESTING & MEASUREMENT (AS PARTS OF CLASSES 15-23)

**Required reading for classes 16-19 (standard deviations, confidence limits):**

**Required reading for classes 19-22 (correlations):**

**Possible lecture topics and optional reading:**
- **Means and standard deviations, the central limit theorem and the normal distribution, the effect of sample size**
- **Confidence limits (mean +/- standard error)-- an alternative to hypothesis testing**
- **Correlation, reliability, and validity in intelligence and personality tests**
- **Heritability of I.Q., personality, etc.**

### MEMORY, LANGUAGE, AND THOUGHT (CLASSES 15-19)

**Required reading:**
All handouts unless otherwise stated.
(a) In Ch. 9, review p. 346-355 (*Retrieving information from longterm memory*). (b) Read all of Ch. 10 (*Intelligence and Reasoning*); (c) Start Ch. 11 (*The Development of Thought and Language*). You might start with the sections on language, especially p. 435-end. (Also don't forget required reading in statistics subsection above.)

**Possible lecture topics and optional reading:**
- **General references for language**
  - Gleitman's textbook is particularly good and detailed on language.
  - Pinker, S. (199x) *The Language Instinct*. Written for a wide audience and many like it.
- **Also see Rules in Language Use in Infancy and Childhood section**
- **Concepts (definitional versus family-resemblance meaning, concept learning)**
- **Metaphor**
- **Non-verbal gestures, Language of non-human animals**
  - Why do we gesture when we speak? By Robert M. Krauss. In *Current Directions in Psychological Science*, Vol. 17, No. 2, April 1998, pp. 54-60. (One Answer: To help us remember the words we need!)
  - Videotape: *NOVA: Signs of the Apes, Songs of the Whales*.
- **Neural substrate of language and thought**
INFANCY AND CHILDHOOD: DEVELOPMENTAL PSYCHOLOGY (CLASSES 18-21)

Required reading:
All handouts unless otherwise specified.
(a) Finish Ch. 11 (Development of Thought and Language).
(b) Re-read Ch. 5 p. 171-176 (Modification of Neural Connections as a Basis for Learning).
(c) In Ch. 12 read p. 451-475 (Social Development in infancy & childhood).

Possible lecture topics and optional reading:
Rules in language use (language learning, sign language, gender & cultural differences)

Neural development (prenatal, infant, & aging)

Delay of Gratification
Mischel, Walter. Columbia University. Various publications over several decades. Recently:

The evolutionary functional question
Also see Dyslexia subsection in Neuron and Brain section.

PERSONALITY, EMOTION, AND MOTIVATION AT THE INTERPERSONAL LEVEL (CLASSES 20-24)

Required reading:
All handouts unless otherwise stated.
(a) In Ch. 3, read pp. 72-end (Evolution of emotion & of motivation at interpersonal level-some was assigned before). (b) In Ch. 6, read pp. 199-205 (sex) and pp. 220-229 (emotions).
(c) Read rest of Ch. 12, that is, p. 476 to end (Social Development in Adolescence and Adulthood). (d) Read all of Ch. 15 (Personality). (Notes: There is also material in Chs. 13, 14, 16, and 17 on emotions, but this is explicitly assigned in the next subsections. Also don't forget required reading in statistics section above.)

Possible lecture topics and optional reading:
Hormones, reproductive, parental, and aggressive behavior (animal models)
Movie Demo: Research in laboratory of Prof. Rae Silver (of Barnard & Columbia)

Putting the feeling back into (theories of) emotion

Emotions, personality, and biochemistry
Good and Bad Humors: Biochemical Bases of Personality and Its Disorders. (A general article) By Zuckerman, M. Psychological Science, Nov. 1995, Vol. 6, No. 6, pp. 325-332.
Rejection sensitivity and Delay of gratification as predictors of, e.g., aggression, interpersonal interactions, feelings of self worth

**Personality tests (Machiavellianism, Perceived Locus of Control).**

**The unconscious -- modern perspectives**
June 1992 issue of *American Psychologist* contains section of 8 articles.

**Social cognition and achievement motivation**

Intrinsic interest versus reward as motivation?

**SOCIAL COGNITION AND INTERPERSONAL INFLUENCES: SOCIAL PSYCHOLOGY (CLASSES 23-26)**

Required reading:
All handouts unless otherwise stated.
(a) Read Chapter 13 (*Social Perception and Attitudes*). (b) Read Chapter 14 (*Social Influences on Behavior*).

Possible lecture topics and optional reading:
Group influence, conformity, group decision-making (and expected utility theory)

Compliance and obedience
Movie Demo: *Obedience* (Milgram's work on the strength of situational pressures)

Considering human society as an example of a complex system

**HEALTH AND ILLNESS: ABNORMAL PSYCHOLOGY (CLASSES 25-28)**

Required reading:
All handouts unless otherwise stated.
(a) Read Chap. 16 (*Mental Disorders*). (b) Read Chap. 17 (*Treatment*). (c) Reread pp. 177-184 of Ch.5 (*neurotransmission, drugs, and hormones*). (d) Also reread previous sections including information on autism ( pp.44-45 of Ch. 2, and 432-434 of Ch. 11)

Possible lecture topics and optional reading:
Avoiding problems caused by mind-body dualism

Specific attitudes and specific ("psychosomatic") diseases
Specific attitudes in initial interviews with patients having different "psychosomatic diseases.

**Infectious diseases, Immunity**


**Autism and behavioral therapy**

*Behavioral Treatment of Autistic Children* (Video demo- Lovaas’s work)


Commentaries (pro and con) by others follow this article, pp. 373-387.


Is integer arithmetic fundamental to mental processing?: the mind's secret arithmetic. By Snyder, A.W. and Mitchell, D.J. *Proc. of Royal Soc: Biological Sciences*, Vol. 266, #1419 (22 March 1999), pp. 587-592. (A provocative hypothesis based to some extent on autistic savants.)

**Schizophrenia**


**Depression**

