

Introduction to Neuroscience

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Psychological science has old roots. Early philosophers speculated about human nature from personal observation and introspection. But the experimental study of human psychology is recent. This course introduces students to psychological science by tracing the history of theory and practice in the science. The course surveys current knowledge about several aspects of human psychology (e.g., social, physiological, behavioral, cognitive, developmental, and emotional).

Readings

Students are required to complete all of the readings before class each week. At the end of each week, the instructor will provide notes that summarize the readings. The Introduction to Psychology textbook by Gleitman is the only required text to rent or purchase. The instructor will provide additional readings, which include classic texts and empirical research articles.

Response to readings

The readings each week include an old paper and a new paper. Students will write a brief response to the papers (1 single-spaced page). The response should first summarize both papers, then describe how an advancement (technological, empirical, or both) shifted the ideas from the old paper to the new paper, and finally propose a novel idea that extends or refutes the ideas.

Final term paper

The course requires a final term paper. Students will choose a topic in psychological science, conduct a literature review (10 papers), summarize the literature, and propose an experiment to test a specific question in the literature. Students will briefly present their paper in class.

Schedule

Week	Topic	Reading
1	Introduction and history	Gleitman ch. 1, Descartes, James, Wundt
2	Social	ch. 10-11, McDougall, Lewin, Asch
3	Experimental design and statistics	Meehl, Kruschke, McElreath
4	Physiology (neuroscience)	ch. 2-3, Luria, Pribam, Fuster
5	Sensation and perception	ch. 5-6, Helmholtz, Posner
6	Behaviorism (learning)	ch. 4, Pavlov, Skinner, Tolman
7	Memory and intelligence	ch. 7, Tulving, Miller, Cattell
8	Cognitive	ch. 8, Simon, Rumelhart, Tenenbaum
9	Language	ch. 9, Chomsky, Clark, Goodman
10	Development	ch. 12-13, Piaget, Ainsworth, Baillargeon
11	Personality and emotions	ch. 15, Eysenck, Schachter, Panksepp
12	Clinical	ch. 16-17, Freud, Rogers, Adler
13	Morals	Maslow, Kohlberg, Greene
14	Research ethics and reproducibility	Nosek, Frank
15	Student presentations	Snow, Cajal