PSY 210 : INTRODUCTION TO COGNITIVE PSYCHOLOGY

Transcript title
Intro to Cognitive Psychology

Credits
4

Grading mode
Standard letter grades

Total contact hours
40

Lecture hours
40

Recommended preparation
WR 060 or minimum placement Wr/Comm Level 5.

Course Description
Introduces cognitive psychology, a sub-discipline within psychology that focuses on the mental structures and processes that make sensation, perception, attention, memory, learning, language, problem solving and decision making possible. Gain fundamental knowledge that is applicable to every area of modern psychology.

Course learning outcomes
1. Connect the history of cognitive psychology to its influence on other fields of psychology.
2. Explain how evidence from scientific research is used to address issues in the field of cognitive psychology.
3. Describe neural bases of mental processes and the theories and physiological processes of memory encoding, storage and retrieval, language and language development.
4. Demonstrate the processes of sensation, perception, problem solving, object recognition and attention.
5. Apply the concepts of memory, encoding, storage, retrieval language and neural bases of mental processes to examples in everyday life and or to controversial topics.

Content outline
1. Introduction to cognitive psychology.
    a. Defining cog psychology and what makes it different from other areas
    b. Philosophical origins
    c. Psychological origins
    d. Scientific progress
        i. Gestalt psychology
        ii. Early role of cognitive neuroscience
        iii. Technology
    e. Research methods
    f. Pragmatism
    g. Fundamental ideas
    h. Key themes
2. Cognitive neuroscience
    a. Cognition and the brain
    b. Cerebral cortex and localization of functions
    c. Neuronal structure and function
    d. Viewing the structures
    e. Brain disorders
    f. Brain tumors/TBI
3. Visual perceptions
    a. Beyond sensation/perception
    b. Visual systems
    c. How to perceive the what and where
    d. The Ganzfeld Effect
    e. Bottom-up Theories
    f. Top-Down Theories
    g. Deficits in perception
4. Attention and Consciousness
    a. Attention/Decision making
    b. Nature of attention/consciousness
    c. Dividing attention
    d. When attentions fails
    e. Automatic and controlled processing
    f. Automatization
    g. Consciousness of mental processes
    h. Preconscious processing
5. Memory
    a. Measuring memory
    b. Working memory
    c. Neuroscience and memory
    d. Multiple memory systems
    e. Connectionism
    f. Exceptional memory and neuropsychology
    g. Mnemonists
    h. Deficient memory
6. Processes of memory
    a. Encoding
    b. Transferring
    c. Retrieval
    d. Processes of forgetting and memory distortion
    e. Decay theory
    f. Constructive nature of memory
    g. Memory context
7. Mental images and Propositions
    a. Mental representations
    b. Storing of images
    c. Dual coding
    d. Propositional theory
    e. Imagery
    f. Mental imagery
    g. Mental rotations
    h. Spatial cognition and cognitive mapping
8. Organization of Knowledge in the Mind

a. Declarative and procedural knowledge
b. Organization of declarative knowledge
c. Concepts and categories
d. Priming
e. Procedural knowledge
f. Nondeclarative knowledge
g. Parallel processing
h. Connectionism

9. Language
    a. What us language
    b. Properties of language
    c. Components of words and sentences
    d. Comprehension
    e. Semantics
    f. Syntax
    g. Reading
        i. Perceptual processes in reading
        ii. Lexical processes in reading
    h. Known/Unknown words
    i. Deriving meanings
    j. Propositional representations
    k. Context and perspectives
10. Problem solving and creativity
    a. Problem solving cycle
    b. Types of problems
    c. Structured problems and insight
    d. Obstacles and aids of problem solving
        i. Mental sets and fixation
    e. Negative and positive transfer
    f. Problems involving transfer
    g. Incubation
    h. Neuroscience and problem solving
    i. Organization of knowledge
11. Decision making and reasoning
    a. Conjunction fallacy
    b. Classical decision theory
    c. Heuristics and biases
    d. Framing effects
    e. Fallacies
    f. Opportunity costs
    g. Naturalistic decision making
    h. Group decision making
    i. Neuroscience and decision making
    j. Deductive reasoning
    k. Conditional reasoning
    l. Syllogistic reasoning
    m. Aids and obstacles to deductive reasoning
    n. Inductive reasoning
    o. Neuroscience and reasoning
12. Human intelligence
    a. Measures and structures of intelligence
    b. Informational processing and intelligence
    c. Biological bases of intelligence
    d. Working memory
    e. Intelligence and culture
    f. Teaching intelligence
    g. Artificial intelligence
    h. Cognitive styles

Required materials

Required textbook.

General education/Related instruction lists

- Social Science