PSY – 204: Cognitive Psychology (3 CHs)

Pre-requisite: None

Course Description:

To understand the contributions made to the understanding of human thought processes by cognitive psychologists. To become familiar with the basic subjects of cognitive study including perception, attention, consciousness, memory, imagery, comprehension, categorization, problem-solving and language. To develop a view of human learning and cognition that is grounded in research. To develop each student's skills in analytical and synthetic thinking and research methods.

Course Objectives:

This course will facilitate students to:

● Understand basic concepts of cognitive psychology.
● Learn how perception and cognition develop.
● Develop problem solving skills and critical thinking.

Course Learning Outcomes:

After the completion of the course, the students will be able to:

● Recognize and explain various ways through which information is processed, stored and retrieved and be aware of human reasoning and problem-solving process.
● Describe how these cognitive processes are relevant and can be applied in general life.

Course Contents:

● Introduction
● The Brain and Cognition
● The Neuron
● Neural representation of the brain
● Organization of the Brain
● Localization of the Brain

- Theories on Cognitive Development
- Cognitive Distortions
- Cognitive Disabilities
- Cognitive Psychology
- Cognition and Intelligence
- Mind and Brain
  - Visual Perception
  - Approaches to Perception: How Do We Make Sense of What We See?
  - Perception of Objects and Forms
  - The Environment Helps You See
  - Deficit in Perception
- Attention and Consciousness
  - The Nature of Attention and Consciousness
  - When Our Attention Fails Us
  - Dealing with an Overwhelming World—Habituation and Adaptation
  - Automatic and Controlled Processes in Attention
  - Consciousness
  - Disorders (Brief description)
- Memory: Models and Research Methods
  - Tasks Used for Measuring Memory
  - Models of Memory
  - Exceptional Memory and Neuropsychology
- Memory Processes
  - Encoding and Transfer of Information
  - Retrieval
  - Processes of Forgetting and Memory Distortion
  - The Constructive Nature of Memory
  - The Landscape of Memory: Mental Images, Maps, and Propositions
- The Organization of Knowledge in the Mind
  - Declarative versus Procedural Knowledge
  - Organization of Declarative Knowledge
  - Representations of How We Do Things: Procedural Knowledge
  - Integrative Models for Representing Declarative and Nondeclarative

Knowledge

- Problem Solving and Creativity
  - The Problem-Solving Cycle
  - Types of Problems
  - Obstacles and Aids to Problem Solving
  - Expertise: Knowledge and Problem Solving
  - Creativity
- Decision Making and Reasoning
  - Judgment and Decision Making
  - Deductive Reasoning
  - Inductive Reasoning
- Language
  - Introduction
  - Psychology and linguistics
  - Discourse level
  - Language in context
  - Language disorders (Brief)
- Computational Models of Cognition
  - Theories of Cognition
  - Paradigms and Frameworks
  - Cognition as computation
  - Artificial intelligence, psychology and cognitive sciences
  - Symbol-based system
  - Symbols and computers
  - knowledge representation
  - Shortcomings of the symbolic approach
  - Connection system
  - Witness Interviews and crime investigation

Textbooks:

- Sternberg, Sternberg, & Mio, (2012). Cognitive Psychology (6th Edition), Wardsworth: US

- Groome, D. et. (2005). An Introduction to Cognitive Psychology Processes and disorders. Taylor and Fransic: London and New York
- Goldstein, E. B. (2012). Cognitive Psychology: Connecting Mind, Research, and Everyday Experience (3rd Ed).

Reference Book

Eysenck, M. W., & Keane, M. T. (2005). *Cognitive psychology: A student's handbook*. Taylor & Francis.