Objective

This course introduces the basic concepts and theoretical development in the area of attention, perception and memory.

Unit I
Introduction: Origin and Current Status of Cognitive Psychology
Attentional Process: Selective Attention and Its Theories; Divided Attention and Resource Allocation.

Unit II
Memory: Models of Memory Structural and Levels of Processing Models, Tulving’s Episodic, Autobiographical and Procedural Models; Mc Clelland’s PDP Approach;
Sensory Memory: Iconic and Echoic Memories. Short-Term Memory; Long-Term Memory; Flash Back Memories; Memory Improvement.

Unit III

Unit IV

Readings

Psy-02

BIOLOGICAL PROCESSES

SECTION–A  PHYSIOLOGY AND BEHAVIOR

Unit I

Psychophysiological Measurements and Techniques: Reasons for measuring Physiological Variables; Methods of Measurement. Techniques- Neuroanatomical Neurophysiological; Neurochemical; Neuroelectrical.
The Neuron: Glial Cells, Membranes. How the Neuron Works, Charges and Ions; Intercellular Communications

Unit II

The Nervous System: Central Nervous System; Autonomous Nervous System Arousal, Attention, Consciousness and Sleep. Biorhythms- Orienting and Attention; Selective Attention; Sleep; Altered States of Consciousness, Function of Consciousness.

SECTION-B GENETICS AND BEHAVIOR

Unit III

Role and Process of Genetics:
Principles of Genetics: Chemical and Physical Structure of Nucleic Acids; Protein Synthesis. Mendel’s Laws, Linkage and Crossing Over; Population Genetics (Selection; Drift, Migration, Mutation, Isolating Mechanisms); Extra Nuclear Inheritance.
Methods: Human Behaviour Genetic Analysis (Family and Twin Methods)

Unit IV

Behavior Genetics: Learnability, Temperament, Intelligence, Mental Retardation; Psychopathology.

Reading

- C. P. Leventhal (1966). Introduction to Physiological Psychology 3rd Ed. Printice, Hall of India, New Delhi
- Steen, R.G 1(966) DNA and Destiny: Nature and Nurture in Human Behavior, Plenum

Psy-03

APPLIED STATISTICS

Unit I

Probability: Concepts of Probability; Laws of Probability; Binomial and Normal Distribution. Regression: Linear Regression; Method of Least Square
Unit II

**Hypothesis Testing:** Nature of Hypothesis Testing; ‘t’ Test; Chi-Square Test of Independence. Non-Parametric Statistics: Mann-Whitney ‘U’; Wilcoxon Signed Rank; Spearman’s Rank Correlation Coefficient; Kendall Rank Correlation Coefficient; Kolmogrov Simirlnov Test; Wald Wolfowitz Runs Test

Unit III

Experimental Designs: Concept and Types. Analysis of Variance: One-Way; Two Way ANOVA; Post Hoc Tests, Kruskal- Wallis and Friedmans Tests. MANOVA

Unit IV

Repeated Measurement and Other Experimental Design: One–Factor Repeated; Randomized Block Design: Latin Square; Nested Factor Design. Factor Analysis **Introduction to Computer Analysis:** SPSS and MINITAB

Reading

Objective

This course is aimed at familiarizing the student primarily with the history of psychology that includes the comprehensive Schools and systems and specific theories of learning and personality.

Unit I

Associationism: S-R Association; Ebbinghaus; Pavlov; Thorndike
Structuralism: Antecedents; Titchner’s Contribution; Criticism and Fate of Structuralism.

Unit II

Functionalism: Antecedents; Contributions of S. Hall, Dewy, Angell; Behaviorism; Early Trends; Watson’s Contribution.

Unit III

Gestalt Psychology; Antecedents, Concepts of Field and Isomorphism; Empirical Statements; Evaluation and Status. Psychoanalysis: Antecedents; Freud; Adler; Jung; Criticism and Evaluation. Self Theories.

Unit IV

S-R Theories; Hull-Spence School; (Skinner) Guthrie, Miller And Mowrer. Field Theories; Lewin’s Vector Field Theory; Tolman’s Cognitive Field Theory.

Reading

E.G. Boring. History of Experimental Psychology, Times of India Press, Bombay
Psy-05

PRACTICALS

(A minimum of 07 Practical to be completed)

1. To Study Depth Perception Through Monocular and Binocular Vision
2. To Study The Phenomenon of Size Constancy
3. To Study The Phenomenon of Shape Constancy
4. Individual Differences in Perception By Spiral After Effects
5. To Study The Phenomenon of Reminiscence Using Pursuit Rotor
6. Effect of Completed and Uncompleted Tasks on Retention
7. Effect of Coding on Memory
8. To Study the Position Effect in Serial Learning
9. Schedules of Reinforcement and Learning
10. Chunking of Items and Effectiveness in Recall
11. Level of Arousal and Performance on Vigilance Tasks
12. Identification of Conjunctive and Disjunctive Concepts
13. Assessment of Concentration and Attention Using
   a. Knox Cube Imitation Test
   b. Color and Number Cancellation Tests
14. Assessment Of Memory Using PGI Memory Scale
15. To Determine the Visual Acuity Using Snellen Chart
16. To Detect Color Blindness Using Ishihara Color Blindness Tests