



# IGNOU MAPC 1st Year Complete Detailed Syllabus Breakdown

## Course Structure Overview

The IGNOU Master of Arts in Psychology (MAPC) First Year consists of **7 courses totaling 32 credits**. Here is the comprehensive breakdown of every single topic, subtopic, chapter, unit, and block across all subjects:

## MPC-001: Cognitive Psychology, Learning and Memory (4 Credits)

### Block 1: Information Processing

#### Unit 1: Cognitive Psychology<sup>[1]</sup> <sup>[2]</sup>

- **Definition and Nature of Cognitive Psychology**
  - Historical overview and evolution
  - Domains of cognitive psychology (12 key domains)
  - Cognitive neuroscience foundations
  - Pattern recognition processes
  - Attention mechanisms
  - Consciousness studies
  - Knowledge representation systems
  - Imagery and spatial processing
- **Relationship with Other Disciplines**
  - Cognitive science connections
  - Neuroscience integration
  - Computer science applications
- **Research Methods in Cognitive Psychology**
  - Experimental paradigms
  - Neuroimaging techniques
  - Computational modeling

## Unit 2: Information Processing in Learning and Memory<sup>[3]</sup> <sup>[2]</sup> <sup>[1]</sup>

- **Cognitive Information Processing Model (CIP)**

- Input-process-output framework
- Serial vs. parallel processing
- Information flow principles

- **Principles of Information Processing**

- Encoding mechanisms
- Storage systems
- Retrieval processes

- **Memory Systems Architecture**

- Iconic memory characteristics
- Haptic memory functions
- Short-term memory properties
- Long-term memory organization

## Unit 3: Neuropsychological Basis of Learning and Memory<sup>[2]</sup> <sup>[1]</sup>

- **Brain Structures and Memory**

- Hippocampus role in new memory formation
- Amygdala and emotional memory
- Prefrontal cortex functions

- **Cellular Basis of Learning and Memory**

- Synaptic plasticity mechanisms
- Long-term potentiation (LTP)
- Long-term depression (LTD)
- Neurotransmitter systems

- **Animal Models of Memory**

- Conditioning paradigms
- Coding and retrieval mechanisms
- Memory consolidation processes

- **Memory Disorders**

- Alzheimer's disease pathology
- Amnesia types and characteristics
- Age-related memory decline

## **Unit 4: Models of Information Processing**<sup>[4]</sup> <sup>[1]</sup> <sup>[3]</sup> <sup>[2]</sup>

- **Waugh and Norman's Model**
  - Primary memory concepts
  - Decay vs. interference theories
  - Experimental validations
- **Atkinson-Shiffrin Stage Model**
  - Sensory register characteristics
  - Short-term memory limitations
  - Long-term memory properties
  - Rehearsal mechanisms
- **Craik and Lockhart's Levels of Processing**
  - Structural processing level
  - Phonetic processing level
  - Semantic processing level
  - Depth of processing effects
- **Parallel Distributed Processing (PDP) Model**
  - Network architecture
  - Content-addressable memory
  - Distributed representation
  - Learning algorithms

## **Block 2: Intelligence and Creativity**

### **Unit 1: Theories of Intelligence (G and S Factor and the Model of JP Das)**<sup>[5]</sup> <sup>[6]</sup> <sup>[1]</sup>

- **Spearman's Two-Factor Theory**
  - General intelligence (g) factor
  - Specific abilities (s) factors
  - Factor analysis methodology
  - Critical appraisal and limitations
- **JP Das PASS Theory**
  - Planning processes
  - Attention mechanisms
  - Simultaneous processing
  - Successive processing
  - Neuropsychological foundations

## Unit 2: Theories of Multiple Intelligence<sup>[7]</sup> <sup>[1]</sup> <sup>[2]</sup>

- **Guilford's Structure of Intellect Theory**

- Operations dimension (5 types)
- Contents dimension (4 types)
- Products dimension (6 types)
- 180-factor model

- **Howard Gardner's Multiple Intelligences**

- Linguistic intelligence
- Logical-mathematical intelligence
- Musical intelligence
- Bodily-kinesthetic intelligence
- Spatial intelligence
- Interpersonal intelligence
- Intrapersonal intelligence
- Naturalistic intelligence
- Existential intelligence

- **Sternberg's Triarchic Theory**

- Analytical intelligence
- Creative intelligence
- Practical intelligence
- Metacomponents
- Performance components
- Knowledge-acquisition components

## Unit 3: Measurement of Intelligence<sup>[1]</sup> <sup>[2]</sup>

- **Historical Development**

- Alfred Binet's contributions
- IQ concept evolution
- Stanford-Binet scales

- **Intelligence Testing Principles**

- Test construction methods
- Standardization procedures
- Reliability and validity issues

- **Modern Intelligence Tests**

- WISC and WAIS batteries

- Culture-fair testing
- Computer-based assessments

## **Unit 4: Creativity and Problem Solving**<sup>[2]</sup> <sup>[1]</sup>

- **Nature of Creativity**
  - Definitions and concepts
  - Creative process stages
  - Divergent vs. convergent thinking
- **Investment and Confluence Theory**
  - Intellectual resources
  - Knowledge bases
  - Thinking styles
  - Personality factors
  - Motivation components
  - Environmental contexts
- **Creativity Assessment**
  - Torrance Tests of Creative Thinking
  - Alternative assessment methods
  - Reliability and validity issues
- **Relationship Between Creativity and Problem Solving**
  - Creative problem-solving models
  - Brainstorming techniques
  - Lateral thinking approaches

## **Block 3: Language**

### **Unit 1: Language Acquisition (Cognitive Theory)**<sup>[1]</sup> <sup>[2]</sup>

- **Theoretical Approaches**
  - Behavioristic theory (Skinner)
  - Innateness theory (Chomsky)
  - Social interaction theory (Vygotsky)
  - Cognitive developmental theory (Piaget)
- **Language Development Stages**
  - Pre-linguistic communication
  - First words emergence

- Two-word stage
- Grammatical development
- Metalinguistic awareness
- **Critical Period Hypothesis**
  - Evidence for critical periods
  - Second language acquisition implications
  - Neuroplasticity considerations

## **Unit 2: Language Processing (Comprehension and Language Expression)** <sup>[2]</sup> <sup>[1]</sup>

- **Models of Language Processing**
  - Serial processing models
  - Parallel processing models
  - Interactive activation models
- **Speech Comprehension**
  - Phoneme recognition
  - Word recognition processes
  - Sentence parsing mechanisms
  - Discourse comprehension
- **Language Production**
  - Conceptualization stage
  - Formulation processes
  - Articulation mechanisms
  - Self-monitoring systems
- **Surface vs. Deep Structure**
  - Chomskyan linguistics
  - Transformational grammar
  - Meaning representation

## **Unit 3: Multilingualism and Cognition** <sup>[1]</sup> <sup>[2]</sup>

- **Bilingual Language Processing**
  - Single vs. dual system hypotheses
  - Language switching mechanisms
  - Interference effects
- **Cognitive Effects of Multilingualism**
  - Executive control enhancement

- Metalinguistic awareness
- Cultural cognition impacts
- **Multilingualism and Thinking**
  - Linguistic relativity hypothesis
  - Code-switching phenomena
  - Cultural frame switching

## **Unit 4: Language and Speech Disorders**<sup>[2]</sup> <sup>[1]</sup>

- **Types of Aphasia**
  - Broca's aphasia characteristics
  - Wernicke's aphasia features
  - Conduction aphasia
  - Anomic aphasia
  - Global aphasia
- **Speech Sound Disorders**
  - Articulation disorders
  - Phonological disorders
  - Motor speech disorders
- **Dyspraxia**
  - Developmental dyspraxia
  - Acquired dyspraxia
  - Assessment and intervention
- **Language Development Disorders**
  - Specific language impairment
  - Developmental language delay
  - Autism spectrum language issues

## **Block 4: Problem Solving**

### **Unit 1: Nature of Problem Solving and Processes**<sup>[1]</sup> <sup>[2]</sup>

- **Problem Solving Definition**
  - Components of problems
  - Well-defined vs. ill-defined problems
  - Problem space concepts
- **Cognitive Processes in Problem Solving**

- Problem representation
- Search strategies
- Solution evaluation
- **Individual Differences**
  - Expertise effects
  - Metacognitive factors
  - Motivational influences

## **Unit 2: Stages and Strategies of Problem Solving**<sup>[2]</sup> <sup>[1]</sup>

- **Problem Solving Stages**
  - Problem identification
  - Problem definition
  - Strategy selection
  - Strategy implementation
  - Solution evaluation
- **Problem Solving Strategies**
  - Algorithms vs. heuristics
  - Means-ends analysis
  - Working backward
  - Analogical reasoning
  - Trial and error

## **Unit 3: Theoretical Approaches to Problem Solving**<sup>[1]</sup> <sup>[2]</sup>

- **Traditional Approach**
  - Associationist perspective
  - Trial-and-error learning
  - Reinforcement principles
- **Gestalt Approach**
  - Insight learning
  - Restructuring processes
  - Figure-ground relationships
- **Newell's Approach**
  - Problem space theory
  - Production systems
  - GPS (General Problem Solver)



- **Information Processing Approach**

- Computational models
- Protocol analysis
- Computer simulation

## **Unit 4: Impediments in Problem Solving**<sup>[2]</sup> <sup>[1]</sup>

- **Cognitive Blocks**

- Functional fixedness
- Mental set (Einstellung effect)
- Confirmation bias
- Availability heuristic

- **Cultural and Intellectual Blocks**

- Cultural stereotyping
- Language limitations
- Educational constraints

- **Emotional Blocks**

- Fear of failure
- Anxiety effects
- Motivation deficits

- **Overcoming Impediments**

- Incubation effects
- Brainstorming techniques
- Creative thinking methods

## **MPC-002: Life Span Psychology (4 Credits)**

### **Block 1: Prenatal, Infancy and Early Childhood**

#### **Unit 1: Concept of Development, Growth and Development, Life Span Perspective, Methods of Studying Development and Characteristics of Development**<sup>[8]</sup> <sup>[9]</sup> <sup>[10]</sup> <sup>[11]</sup>

- **Concept of Development**

- Definition and nature of development
- Goals of developmental changes
- Development vs. growth distinctions

- **Life Span Perspective**

- Understanding life span development
- Issues in life span development
- Nature vs. nurture debates
- Continuity vs. discontinuity
- Critical vs. sensitive periods
- **Stages of Human Development**
  - Prenatal period
  - Infancy and toddlerhood
  - Early childhood
  - School age
  - Adolescence
  - Early adulthood
  - Middle adulthood
  - Late adulthood
- **Domains of Human Development**
  - Physical development
  - Cognitive development
  - Psychosocial development
- **Characteristics of Life Span Development**
  - Lifelong process
  - Multidimensional nature
  - Multidirectional changes
  - Plasticity concepts
  - Historical context influence
- **Research Methods for Life Span Development**
  - Longitudinal studies
  - Cross-sectional studies
  - Sequential designs
  - Naturalistic observation
  - Case study methods
- **Obstacles in Studying Life Span Development**
  - Ethical considerations
  - Cohort effects
  - Attrition problems
  - Measurement difficulties

## **Unit 2: Prenatal Development (Genetics, Environment Influence and Hazards of Development)** <sup>[9]</sup> <sup>[10]</sup> <sup>[12]</sup> <sup>[13]</sup> <sup>[11]</sup> <sup>[14]</sup> <sup>[8]</sup>

- **Beginnings of Life**
  - Conception process
  - Genetic foundations
  - Chromosomal arrangements
- **Characteristics of Prenatal Period**
  - Duration (270-280 days)
  - Foundational importance
  - Rapid growth patterns
  - Hereditary endowment establishment
- **Periods of Prenatal Development**
  - **Period of Zygote (0-2 weeks)**
    - Cell division processes
    - Implantation
    - Basic life support structures
  - **Period of Embryo (2-8 weeks)**
    - Organ formation
    - Neural tube development
    - Heart development
    - Placenta formation
    - Umbilical cord establishment
  - **Period of Fetus (8 weeks-birth)**
    - Organ system maturation
    - Movement development
    - Sensory system development
    - Viability milestones
- **Genetic Influences**
  - Dominant and recessive traits
  - Sex-linked characteristics
  - Chromosomal abnormalities
  - Genetic counseling
- **Environmental Influences**
  - Maternal nutrition
  - Maternal health status

- Teratogens exposure
- Maternal stress effects
- Maternal age factors
- **Hazards of Development**
  - Drug exposure effects
  - Alcohol syndrome
  - Smoking consequences
  - Disease transmission
  - Environmental toxins

### **Unit 3: Development During Infancy (Physical, Psychosocial, Cognitive and Linguistic)**<sup>[10]</sup> <sup>[11]</sup> <sup>[8]</sup>

- **Physical Development**
  - Growth patterns and norms
  - Motor development milestones
  - Brain development
  - Sensory development
  - Sleep patterns
  - Nutrition requirements
- **Psychosocial Development**
  - Attachment formation (Bowlby's theory)
  - Attachment styles (Ainsworth)
  - Temperament differences
  - Social smile development
  - Stranger anxiety
  - Separation anxiety
  - Trust vs. mistrust (Erikson)
- **Cognitive Development**
  - Sensorimotor stage (Piaget)
  - Object permanence
  - Causality understanding
  - Symbolic thinking emergence
  - Information processing capabilities
  - Memory development
- **Linguistic Development**

- Pre-linguistic communication
- Babbling stages
- First words
- Vocabulary expansion
- Grammar acquisition
- Pragmatic development

#### **Unit 4: Early Childhood (Physical, Psychosocial, Cognitive and Linguistic)** <sup>[11]</sup> <sup>[8]</sup> <sup>[10]</sup>

- **Physical Development**

- Growth rate changes
- Motor skill refinement
- Fine motor development
- Gross motor abilities
- Health and safety issues

- **Psychosocial Development**

- Autonomy vs. shame (Erikson)
- Initiative vs. guilt (Erikson)
- Self-concept development
- Gender identity formation
- Play development stages
- Peer relationships beginning
- Emotional regulation

- **Cognitive Development**

- Preoperational stage (Piaget)
- Symbolic thinking
- Egocentrism
- Conservation tasks
- Theory of mind development
- Executive function growth

- **Linguistic Development**

- Vocabulary explosion
- Grammar complexification
- Narrative skills
- Pragmatic competence
- Bilingual development

## **Block 2: Development During Early School Years (6-11)**

### **Unit 1: Physical Development** <sup>[8]</sup> <sup>[10]</sup>

- **Growth Patterns**
  - Height and weight changes
  - Body proportion shifts
  - Muscle and fat development
- **Motor Development**
  - Fine motor skill mastery
  - Gross motor coordination
  - Athletic ability development
  - Handedness establishment
- **Health and Fitness**
  - Nutrition needs
  - Exercise importance
  - Common health problems
  - Injury prevention

### **Unit 2: Cognitive, Social, Emotional and Moral Development** <sup>[15]</sup> <sup>[10]</sup> <sup>[8]</sup>

- **Cognitive Development**
  - Concrete operational stage (Piaget)
  - Conservation mastery
  - Classification abilities
  - Seriation skills
  - Spatial reasoning
  - Memory strategies
  - Metacognitive development
- **Social Development**
  - Peer group importance
  - Friendship formation
  - Social comparison
  - Gender role understanding
  - Cultural awareness
- **Emotional Development**
  - Emotional understanding

- Emotion regulation strategies
- Self-esteem development
- Achievement motivation
- **Moral Development**
  - Piaget's moral stages
  - Kohlberg's theory application
  - Rule understanding
  - Justice concepts
  - Prosocial behavior

### **Unit 3: Schooling and Development** <sup>[10]</sup> <sup>[8]</sup>

- **School Readiness**
  - Academic prerequisites
  - Social readiness
  - Emotional maturity
- **Academic Achievement**
  - Reading development
  - Mathematical thinking
  - Writing skills
  - Study strategies
- **School Environment Effects**
  - Teacher influences
  - Peer interactions
  - Classroom dynamics
  - Cultural diversity issues

### **Unit 4: Identification of Problems in School Children and Remedial Measures** <sup>[15]</sup> <sup>[8]</sup> <sup>[10]</sup>

- **Common Problems**
  - Learning disabilities
  - Attention difficulties
  - Behavioral disorders
  - Social adjustment issues
  - Academic underachievement
- **Identification Strategies**
  - Screening procedures

- Assessment methods
- Multi-disciplinary evaluation
- **Remedial Measures**
  - Individualized education plans
  - Therapeutic interventions
  - Family involvement
  - School-based support
- **Special Needs Categories**
  - Mental retardation identification
  - Gifted and talented children
  - Autism spectrum disorders
  - Sensory impairments

## **Block 3: Development During Adolescence**

### **Unit 1: Physical Changes** <sup>[8]</sup> <sup>[10]</sup>

- **Puberty Process**
  - Hormonal changes
  - Growth spurts
  - Sexual maturation
  - Individual variation patterns
- **Body Image Development**
  - Self-perception changes
  - Social comparison
  - Media influences
  - Body dissatisfaction risks
- **Health Issues**
  - Nutrition needs
  - Sleep patterns
  - Risk-taking behaviors
  - Substance use concerns



## **Unit 2: Cognitive Changes** <sup>[16]</sup> <sup>[15]</sup> <sup>[10]</sup> <sup>[8]</sup>

- **Cognitive Development in Adolescence**
  - Formal operational thinking (Piaget)
  - Abstract reasoning abilities
  - Hypothetical-deductive reasoning
  - Scientific thinking
- **Information Processing Perspective**
  - Processing speed increases
  - Working memory improvements
  - Attention control
  - Strategic thinking
- **Adolescent Stages**
  - Early adolescence (11-14 years)
  - Middle adolescence (15-17 years)
  - Late adolescence (18-21 years)
- **School Performance and Cognitive Development**
  - Academic motivation
  - Study strategies
  - Career planning
  - Educational transitions

## **Unit 3: Identity, Self Concept, Self Esteem, Peer Group Relationship** <sup>[15]</sup> <sup>[10]</sup> <sup>[8]</sup>

- **Identity Development**
  - Erikson's identity crisis
  - Marcia's identity statuses
    - Identity achievement
    - Moratorium status
    - Foreclosure status
    - Identity diffusion
- **Self-Concept and Self-Esteem**
  - Self-understanding evolution
  - Multiple self-concepts
  - Self-esteem fluctuations
  - Signs of negative self-concepts
- **Egocentrism in Adolescence**

- Imaginary audience
- Personal fable
- Invincibility feelings
- **Peer Group Relationships**
  - Friendship intimacy
  - Peer influence
  - Conformity pressures
  - Romantic relationships
- **Social Development**
  - Independence seeking
  - Family relationship changes
  - Authority questioning

#### **Unit 4: Challenges and Issues in Adolescent Development** <sup>[10]</sup> <sup>[8]</sup> <sup>[15]</sup>

- **Major Challenges**
  - Coping with loss of normalcy
  - Acknowledging sexuality
  - Change in point of view
  - Identity confusion
- **High Risk Behaviors**
  - Substance experimentation
  - Sexual risk-taking
  - Dangerous driving
  - Delinquent activities
  - Self-harm behaviors
- **Psychological Issues**
  - Depression risks
  - Anxiety disorders
  - Eating disorders
  - Suicide ideation
- **Coping Strategies**
  - Resilience factors
  - Support systems
  - Intervention approaches
  - Prevention programs

## **Block 4: Adulthood and Aging**

### **Unit 1: Physical Changes (Early Adulthood, Middle Age, Old Age)** <sup>[16]</sup> <sup>[8]</sup> <sup>[10]</sup>

- **Early Adulthood (20-40 years)**
  - Peak physical condition
  - Reproductive maturity
  - Lifestyle establishment
  - Health maintenance
- **Middle Adulthood (40-65 years)**
  - Physical changes onset
  - Menopause in women
  - Andropause considerations
  - Chronic disease risks
  - Sensory changes
- **Old Age (65+ years)**
  - Aging process acceleration
  - Physical decline patterns
  - Health challenges
  - Functional limitations
  - Sensory impairments

### **Unit 2: Cognitive Changes (Early Adulthood, Middle Age, Old Age)** <sup>[16]</sup> <sup>[8]</sup> <sup>[10]</sup>

- **Early Adulthood Cognition**
  - Realistic thinking
  - Pragmatic problem solving
  - Reflective thinking
  - Relativistic reasoning
- **Middle Adulthood Cognition**
  - Crystallized intelligence peak
  - Fluid intelligence decline
  - Expertise development
  - Wisdom emergence
- **Old Age Cognition**
  - Memory changes
  - Processing speed decline

- Executive function changes
- Compensation strategies
- Successful aging patterns

### **Unit 3: Psychosocial Changes (Early Adulthood, Middle Age, Old Age)** <sup>[8]</sup> <sup>[10]</sup> <sup>[16]</sup>

- **Early Adulthood Psychosocial Development**

- Erikson's intimacy vs. isolation
- Levinson's seasons of life theory
- Attachment patterns in relationships
- Family life cycle beginning

- **Middle Adulthood Psychosocial Changes**

- Generativity vs. stagnation (Erikson)
- Four developmental tasks
- Individual personality differences
- Changing parent-child relationships
- Career peak and transitions

- **Old Age Psychosocial Changes**

- Integrity vs. despair (Erikson)
- Self-concept stability
- Personality continuity
- Relationships in late life
- Retirement adjustments
- Leisure activities
- Grandparent roles

### **Unit 4: Challenges and Issues in Ageing Process** <sup>[17]</sup> <sup>[10]</sup> <sup>[16]</sup> <sup>[8]</sup>

- **Aging Process Understanding**

- Biological aging theories
- Gender differences in aging
- Individual variation patterns

- **Challenges in Early Adulthood**

- Career establishment
- Relationship formation
- Financial independence
- Life direction choices

- **Challenges in Middle Adulthood**

- Midlife crisis potential
- Career transitions
- Family caregiving
- Health maintenance
- Empty nest syndrome

- **Challenges in Late Adulthood**

- Health deterioration
- Social isolation
- Financial security
- Loss and grief
- Death preparation
- Dependency issues

- **Support and Intervention**

- Community resources
- Family support systems
- Healthcare services
- Social programs
- Aging in place strategies

## **MPC-003: Personality: Theories and Assessment (4 Credits)**

### **Block 1: Personality: Theories and Assessment**

#### **Unit 1: Definition and Concept of Personality and Personality Development**<sup>[18]</sup> <sup>[19]</sup> <sup>[20]</sup> <sup>[21]</sup> <sup>[22]</sup>

- **Definition and Nature of Personality**

- Etymological origins
- Contemporary definitions
- Individual differences emphasis
- Consistency over time and situations

- **Key Characteristics of Personality**

- Behavioral components (thoughts, feelings, actions)
- Internal causation vs. environmental factors
- Organization and structure

- Uniqueness and individuality
- **Approaches to Understanding Personality**
  - Nomothetic vs. idiographic approaches
  - Type vs. trait perspectives
  - Biological vs. environmental influences
- **Personality Development**
  - Nature vs. nurture contributions
  - Critical periods in development
  - Stability vs. change debates
  - Cultural influences on development

## Unit 2: State/Trait Approaches to Personality <sup>[23]</sup> <sup>[20]</sup> <sup>[22]</sup> <sup>[18]</sup>

- **State vs. Trait Distinction**
  - Temporary states vs. enduring traits
  - Situational variability
  - Measurement implications
- **Trait Theory Foundations**
  - Lexical hypothesis
  - Factor analysis methods
  - Personality description
- **Type Theories**
  - **Hippocrates' Four Temperaments**
    - Sanguine type
    - Choleric type
    - Melancholic type
    - Phlegmatic type
  - **Sheldon's Constitutional Types**
    - Ectomorph characteristics
    - Endomorph features
    - Mesomorph traits
    - Body-temperament correlations
  - **Type A and Type B Personality**
    - Type A characteristics
    - Type B features
    - Type C personality (Morris)

- Type D personality
- **Modern Trait Approaches**
  - Dimensional models
  - Hierarchical organization
  - Cross-cultural validity

### **Unit 3: Assessment of Personality** [\[24\]](#) [\[22\]](#) [\[18\]](#)

- **Introduction to Assessment**
  - Purpose of personality assessment
  - Assessment contexts
  - Ethical considerations
- **Assessment Approaches**
  - Self-report methods
  - Observer ratings
  - Projective techniques
  - Behavioral assessment
  - Physiological measures
- **Psychometric Properties**
  - Reliability concepts
  - Validity types
  - Standardization procedures
  - Norm-referenced interpretation

### **Unit 4: Key Issues in Personality** [\[22\]](#) [\[18\]](#)

- **Person-Situation Controversy**
  - Personality consistency debate
  - Situational specificity
  - Interactionist perspectives
- **Biological vs. Environmental Influences**
  - Heritability studies
  - Twin research findings
  - Gene-environment interactions
- **Stability vs. Change**
  - Developmental trajectories
  - Life span personality changes

- Rank-order consistency
- **Cultural Considerations**
  - Cross-cultural personality research
  - Indigenous personality concepts
  - Cultural bias in assessment

## **Block 2: Theories of Personality I**

### **Unit 1: Psychodynamic Theory (Including Horney and Sullivan)** [\[25\]](#) [\[26\]](#) [\[18\]](#)

- **Freud's Psychoanalytic Theory**
  - **Structural Model**
    - Id functions and characteristics
    - Ego development and roles
    - Superego formation and influence
  - **Psychosexual Development Stages**
    - Oral stage features
    - Anal stage characteristics
    - Phallic stage dynamics
    - Latency period
    - Genital stage maturity
  - **Defense Mechanisms**
    - Repression
    - Projection
    - Displacement
    - Sublimation
    - Rationalization
- **Post-Freudian Developments**
  - **Karen Horney's Theory**
    - Basic anxiety concept
    - Neurotic needs (10 types)
    - Moving toward, against, away patterns
    - Cultural influences emphasis
  - **Harry Stack Sullivan's Interpersonal Theory**
    - Interpersonal relationships focus
    - Developmental epochs



- Self-system concept
- Anxiety and security operations
- Personifications concept

## **Unit 2: Social Cognitive Theory of Personality (Bandura)** <sup>[21]</sup> <sup>[18]</sup> <sup>[25]</sup>

- **Albert Bandura's Social Learning Theory**

- **Core Concepts**

- Reciprocal determinism model
    - Observational learning principles
    - Vicarious reinforcement
    - Self-regulation processes

- **Self-System Components**

- Self-efficacy beliefs
    - Self-evaluation standards
    - Self-reactive influences

- **Modeling Processes**

- Attention mechanisms
    - Retention processes
    - Motor reproduction
    - Motivational factors

- **Applications and Research**

- Aggression studies
  - Moral development
  - Therapeutic applications

## **Unit 3: Learning Theory of Personality (Pavlov and Skinner)** <sup>[27]</sup> <sup>[18]</sup>

- **Pavlov's Classical Conditioning**

- Conditioned response development
  - Stimulus generalization
  - Discrimination learning
  - Extinction processes
  - Applications to personality

- **Skinner's Operant Conditioning**

- Reinforcement principles
  - Punishment effects

- Schedules of reinforcement
- Shaping behaviors
- Personality as learned behaviors
- **Modern Learning Approaches**
  - Cognitive-behavioral perspectives
  - Social learning integration
  - Therapeutic applications

## **Unit 4: Humanistic and Self Theory (Maslow, Rogers)** [\[18\]](#) [\[25\]](#) [\[27\]](#)

- **Abraham Maslow's Humanistic Psychology**
  - **Hierarchy of Needs**
    - Physiological needs
    - Safety needs
    - Love and belonging
    - Esteem needs
    - Self-actualization
  - **Deficiency vs. Growth Needs**
  - **Self-Actualizing Characteristics**
  - **Peak experiences concept**
- **Carl Rogers' Person-Centered Theory**
  - **Self-Concept Development**
    - Real self vs. ideal self
    - Conditions of worth
    - Unconditional positive regard
  - **Fully Functioning Person**
    - Openness to experience
    - Existential living
    - Organismic trusting
    - Experiential freedom
    - Creativity
- **Humanistic Assessment Methods**
  - Q-sort technique
  - Personal construct methods
  - Qualitative approaches

## **Block 3: Theories of Personality II**

### **Unit 1: Allport** <sup>[25]</sup> <sup>[22]</sup> <sup>[18]</sup>

- **Gordon Allport's Trait Theory**
  - **Trait Classification**
    - Cardinal traits
    - Central traits
    - Secondary traits
  - **Common vs. Unique Traits**
    - Nomothetic approach
    - Idiographic approach
    - Individual uniqueness emphasis
  - **Functional Autonomy**
    - Perseverative functional autonomy
    - Propriate functional autonomy
    - Motivation transformation
  - **Mature Personality Characteristics**
    - Extended sense of self
    - Warm relations with others
    - Emotional security
    - Realistic perception
    - Self-insight
    - Unifying philosophy of life

### **Unit 2: Cattell** <sup>[23]</sup> <sup>[22]</sup> <sup>[18]</sup> <sup>[25]</sup>

- **Raymond Cattell's Factor Analytic Approach**
  - **16 Personality Factors**
    - Surface traits vs. source traits
    - Primary factors identification
    - Second-order factors
  - **Data Sources**
    - L-data (life records)
    - Q-data (questionnaires)
    - T-data (objective tests)
  - **Statistical Methods**

- Factor analysis applications
- R-technique
- P-technique
- **16PF Questionnaire**
  - Test construction
  - Clinical applications
  - Personality profiles

### **Unit 3: Eysenck**<sup>[28]</sup> <sup>[22]</sup> <sup>[18]</sup> <sup>[25]</sup> <sup>[23]</sup>

- **Hans Eysenck's Dimensional Model**
  - **Three Major Dimensions**
    - Extraversion-Introversion (E)
    - Neuroticism-Emotional Stability (N)
    - Psychoticism-Impulse Control (P)
  - **PEN Model Characteristics**
    - Biological basis
    - Genetic foundations
    - Cross-cultural validity
  - **Extraversion-Introversion**
    - Behavioral differences
    - Physiological correlates
    - Social preferences
  - **Neuroticism Dimension**
    - Emotional stability
    - Anxiety proneness
    - Stress reactivity
  - **Psychoticism Factor**
    - Impulse control
    - Reality testing
    - Social conformity

### **Unit 4: The Big 5 Factor Model**<sup>[27]</sup> <sup>[22]</sup> <sup>[18]</sup> <sup>[25]</sup>

- **Five-Factor Model (Big Five)**
  - **Openness to Experience**
    - Intellectual curiosity

- Aesthetic appreciation
- Creative thinking
- Unconventional values
- **Conscientiousness**
  - Goal-directed behavior
  - Self-discipline
  - Achievement orientation
  - Orderliness
- **Extraversion**
  - Social engagement
  - Assertiveness
  - Positive emotions
  - Activity level
- **Agreeableness**
  - Prosocial orientation
  - Trust in others
  - Cooperation
  - Empathy
- **Neuroticism**
  - Emotional instability
  - Negative affectivity
  - Stress vulnerability
  - Anxiety proneness
- **Research Applications**
  - Cross-cultural studies
  - Developmental research
  - Clinical applications
  - Occupational psychology

## **Block 4: Assessment of Personality**

### **Unit 1: Introduction to Assessment and Testing** <sup>[29]</sup> <sup>[22]</sup> <sup>[18]</sup> <sup>[27]</sup>

- **Purposes of Assessment**
  - Clinical diagnosis
  - Selection and placement

- Research applications
- Personal development
- **Testing Standards**
  - Reliability requirements
  - Validity evidence
  - Standardization procedures
  - Ethical guidelines
- **Test Construction Principles**
  - Item development
  - Pilot testing
  - Norm establishment
  - Score interpretation

## Unit 2: Approaches to Personality Assessment <sup>[29]</sup> <sup>[22]</sup> <sup>[18]</sup>

- **Self-Report Inventories**
  - **Minnesota Multiphasic Personality Inventory (MMPI-2)**
    - Clinical scales
    - Validity scales
    - Content scales
    - Supplementary scales
  - **Response Biases**
    - Social desirability
    - Acquiescence response set
    - Random responding
    - Faking measures
- **Projective Techniques**
  - **Rorschach Inkblot Test**
    - Administration procedures
    - Scoring systems
    - Interpretation approaches
    - Reliability and validity issues
  - **Thematic Apperception Test (TAT)**
    - Card descriptions
    - Story analysis
    - Need assessment

- Clinical applications
- **Children's Apperception Test (CAT)**
  - Age-appropriate stimuli
  - Developmental considerations
  - Administration modifications

### **Unit 3: Behavioural Assessment** <sup>[28]</sup> <sup>[22]</sup> <sup>[18]</sup>

- **Behavioral Assessment Principles**

- Direct observation
- Functional analysis
- Environmental factors
- Objective measurement

- **Assessment Methods**

- Behavioral observation
- Self-monitoring
- Behavioral interviews
- Analog assessment

- **Advantages and Limitations**

- Objectivity benefits
- Situational specificity
- Reliability concerns
- Validity challenges

### **Unit 4: Other Measures of Personality** <sup>[22]</sup> <sup>[18]</sup>

- **Physiological Measures**

- Autonomic nervous system
- Brain imaging techniques
- Hormonal assessments
- Psychophysiological responses

- **Performance-Based Tests**

- Intelligence-personality links
- Cognitive style measures
- Executive function tests

- **Cultural Considerations**

- Ayurvedic body types

- Indigenous personality concepts
- Cross-cultural assessment
- Bias reduction strategies

## **MPC-004: Advanced Social Psychology (4 Credits)**

### **Block 1: Introduction to Social Psychology**

#### **Unit 1: Nature and Concept of Social Psychology and Social Psychology Related to other Disciplines** [\[30\]](#) [\[31\]](#) [\[32\]](#) [\[33\]](#)

- **Definition and Nature of Social Psychology**
  - Scientific study of social influence
  - Individual behavior in social contexts
  - Actual, imagined, or implied presence of others
  - Social perception and interaction
- **Scope of Social Psychology**
  - Small group dynamics impact on cognition
  - Individual operation within social groups
  - Group productivity and decision-making
  - Conformity and deviance explanations
- **Levels of Analysis**
  - **Individual Level Analysis**
    - Personality characteristics focus
    - Life history considerations
    - Clinical and personality psychology approaches
  - **Interpersonal Level Analysis**
    - Current social situation emphasis
    - Social context factors
    - Interpersonal relationships
  - **Group Level Analysis**
    - Group processes and dynamics
    - Collective behavior
    - Social identity effects
  - **Societal Level Analysis**
    - Cultural influences



- Historical context
- Societal norms and values
- **Relationship with Other Disciplines**
  - **Sociology Connections**
    - Macro vs. micro perspectives
    - Social structure emphasis
    - Institutional analysis
  - **Anthropology Links**
    - Cultural psychology overlap
    - Cross-cultural research
    - Ethnographic methods
  - **Social Linguistics**
    - Language and social interaction
    - Communication patterns
    - Discourse analysis

## **Unit 2: Social Cognition: Attribution Theory** [\[31\]](#) [\[34\]](#) [\[33\]](#) [\[35\]](#) [\[30\]](#)

- **Attribution Theory Foundations**
  - Heider's naive psychology
  - Causal attribution processes
  - Internal vs. external attributions
- **Attribution Dimensions**
  - Locus of control (internal/external)
  - Stability (stable/unstable)
  - Controllability (controllable/uncontrollable)
- **Attribution Errors and Biases**
  - **Fundamental Attribution Error**
    - Dispositional bias
    - Situational underestimation
    - Cultural variations
  - **Self-Serving Bias**
    - Success attribution patterns
    - Failure attribution patterns
    - Motivational influences
  - **Actor-Observer Bias**

- Self vs. other attributions
- Perspective differences
- Information availability
- **Applications in Education**
  - Student motivation effects
  - Achievement attribution
  - Teacher expectancy
  - Academic performance prediction

### **Unit 3: Methods of Social Psychology**<sup>[33]</sup> <sup>[30]</sup> <sup>[31]</sup>

- **Research Methods Overview**
  - Scientific approach
  - Empirical investigation
  - Hypothesis testing
- **Experimental Methods**
  - Laboratory experiments
  - Field experiments
  - Quasi-experimental designs
  - Control and manipulation
- **Correlational Research**
  - Relationship examination
  - Survey methods
  - Archival research
  - Limitations and advantages
- **Ethnographic Approaches**
  - Participant observation
  - Cultural immersion
  - Qualitative data collection
  - Thick description
- **Observational Methods**
  - Naturalistic observation
  - Structured observation
  - Coding systems
  - Reliability issues

## **Unit 4: Current Trends in Social Psychology and Ethical Issues** [\[30\]](#) [\[31\]](#) [\[33\]](#)

- **Current Trends**

- Cultural psychology emergence
- Neurosocial approaches
- Evolutionary perspectives
- Technology and social behavior
- Applied social psychology

- **Ethical Issues in Research**

- Informed consent procedures
- Deception in research
- Privacy protection
- Risk-benefit analysis
- Vulnerable populations

- **Professional Standards**

- APA ethical guidelines
- Research conduct standards
- Publication ethics
- Data sharing principles

## **Block 2: Process of Social Influence**

### **Unit 1: The Concept of Social Influence** [\[31\]](#) [\[33\]](#) [\[30\]](#)

- **Definition and Types**

- Conformity processes
- Compliance techniques
- Obedience patterns
- Social facilitation

- **Mechanisms of Influence**

- Normative social influence
- Informational social influence
- Social proof principles
- Authority influence

- **Conformity Studies**

- Asch's line judgment studies
- Factors affecting conformity

- Individual differences
- Cultural variations
- **Compliance Techniques**
  - Foot-in-the-door technique
  - Door-in-the-face technique
  - Low-ball technique
  - Reciprocity principle
- **Obedience Research**
  - Milgram's experiments
  - Authority factors
  - Situational influences
  - Ethical implications

## **Unit 2: Pro-social Behaviour and Factors Contributing to Prosocial Behaviour<sup>[33]</sup>** <sup>[30]</sup> <sup>[31]</sup>

- **Prosocial Behavior Definition**
  - Helping behavior
  - Altruism concepts
  - Voluntary assistance
  - Benefit to others
- **Prosocial vs. Altruistic Behavior**
  - Motivational differences
  - Self-interest considerations
  - Pure altruism debate
- **Factors Influencing Helping**
  - **Situational Factors**
    - Bystander effect
    - Diffusion of responsibility
    - Emergency characteristics
    - Urban vs. rural differences
  - **Personal Factors**
    - Empathy levels
    - Mood states
    - Personality traits
    - Religious beliefs

- **Social and Cultural Factors**
  - Social norms
  - Cultural values
  - Reciprocity expectations
  - Social responsibility
- **Theoretical Models**
  - Empathy-altruism hypothesis
  - Negative state relief model
  - Social exchange theory
  - Evolutionary explanations
- **Helping in Emergencies**
  - Bystander intervention model
  - Decision-making process
  - Barriers to helping
  - Training implications

### **Unit 3: Interpersonal Attraction** [\[30\]](#) [\[31\]](#) [\[33\]](#)

- **Factors Affecting Attraction**
  - **Proximity Effects**
    - Mere exposure effect
    - Propinquity studies
    - Functional distance
  - **Physical Attractiveness**
    - Beauty stereotypes
    - Matching hypothesis
    - Cultural standards
  - **Similarity**
    - Attitude similarity
    - Demographic similarity
    - Activity preferences
  - **Reciprocity**
    - Reciprocity-of-liking rule
    - Mutual attraction
    - Self-disclosure patterns

- **Relationship Development**

- Initial attraction
- Relationship progression
- Intimacy development
- Commitment formation
- **Theories of Attraction**
  - Reinforcement theory
  - Social exchange theory
  - Equity theory
  - Attachment theory applications

## **Unit 4: Aggression and Violence**<sup>[31]</sup> <sup>[33]</sup> <sup>[30]</sup>

- **Definition and Types**
  - Hostile vs. instrumental aggression
  - Physical vs. relational aggression
  - Individual vs. collective violence
- **Theories of Aggression**
  - **Biological Approaches**
    - Evolutionary perspectives
    - Genetic factors
    - Hormonal influences
    - Brain mechanisms
  - **Psychological Theories**
    - Frustration-aggression hypothesis
    - Social learning theory
    - Cognitive neoassociation model
    - Excitation transfer theory
- **Factors Contributing to Aggression**
  - Environmental factors (heat, crowding)
  - Media violence exposure
  - Alcohol and substance use
  - Social and cultural factors
- **Prevention and Intervention**
  - Catharsis myth
  - Cognitive strategies
  - Social skills training

- Environmental modifications

## **Block 3: Attitudes, Stereotypes, Prejudice and Discrimination**

### **Unit 1: Introduction to Attitude and Stereotypes** <sup>[33]</sup> <sup>[30]</sup>

- **Attitude Definition and Components**
  - **Tripartite Model**
    - Cognitive component (beliefs)
    - Affective component (emotions)
    - Behavioral component (actions)
- **Attitude Functions**
  - Knowledge function
  - Utilitarian function
  - Value-expressive function
  - Ego-defensive function
- **Stereotype Definition**
  - Cognitive shortcuts
  - Social categorization
  - Overgeneralization processes
  - Schema theory applications
- **Stereotype Formation**
  - Illusory correlation
  - Availability heuristic
  - Confirmation bias
  - Social transmission

### **Unit 2: Formation of Attitude and Attitude Change** <sup>[36]</sup> <sup>[30]</sup> <sup>[33]</sup>

- **Attitude Formation**
  - Direct experience
  - Observational learning
  - Classical conditioning
  - Instrumental conditioning
  - Social comparison
- **Attitude Change Theories**
  - **Cognitive Dissonance Theory**

- Dissonance arousal
- Dissonance reduction
- Post-decision dissonance
- Effort justification
- **Elaboration Likelihood Model**
  - Central route processing
  - Peripheral route processing
  - Motivation and ability factors
- **Social Judgment Theory**
  - Latitude of acceptance
  - Latitude of rejection
  - Anchor points
- **Factors Influencing Attitude Change**
  - Source characteristics
  - Message factors
  - Audience characteristics
  - Channel effects
- **Strategies for Attitude Change**
  - Persuasive communication
  - Foot-in-the-door technique
  - Role playing
  - Cognitive restructuring

### **Unit 3: Prejudice and Discrimination** <sup>[37]</sup> <sup>[30]</sup> <sup>[33]</sup>

- **Definitions and Distinctions**
  - Prejudice as attitude
  - Discrimination as behavior
  - Stereotyping as cognition
- **Types of Prejudice**
  - Racial prejudice
  - Gender prejudice
  - Age discrimination
  - Religious intolerance
- **Development of Prejudice**
  - Social learning processes



- Social identity theory
- Realistic conflict theory
- Social categorization
- **Maintenance of Prejudice**
  - Confirmation bias
  - Stereotype threat
  - System justification
  - Institutional support
- **Methods of Reducing Prejudice**
  - **Contact Hypothesis**
    - Equal status contact
    - Common goals
    - Intergroup cooperation
    - Institutional support
  - **Superordinate Goals**
    - Robbers Cave study
    - Common fate creation
    - Interdependence
  - **Recategorization Strategies**
    - Common ingroup identity
    - Decategorization
    - Crossed categorization

#### **Unit 4: Social Conflict and Its Resolution** <sup>[30]</sup> <sup>[33]</sup>

- **Types of Social Conflict**
  - Interpersonal conflict
  - Intergroup conflict
  - International conflict
  - Resource-based conflict
- **Causes of Conflict**
  - Competition for resources
  - Value differences
  - Communication breakdown
  - Power imbalances
- **Conflict Escalation**

- Spiral models
- Polarization effects
- Entrapment processes
- Face-saving needs
- **Conflict Resolution Strategies**
  - Negotiation techniques
  - Mediation processes
  - Arbitration procedures
  - Problem-solving approaches
- **Peace Psychology**
  - Conflict prevention
  - Reconciliation processes
  - Forgiveness research
  - Social justice promotion

## **Block 4: Group Dynamics**

### **Unit 1: Introduction to Group, Formation and Types of Group** <sup>[38]</sup> <sup>[39]</sup> <sup>[40]</sup> <sup>[31]</sup> <sup>[33]</sup> <sup>[30]</sup>

- **Definition of Groups**
  - Two or more individuals
  - Interaction patterns
  - Shared goals
  - Interdependence
  - Collective identity
- **Group Formation Process**
  - **Tuckman's Stages**
    - Forming stage
    - Storming stage
    - Norming stage
    - Performing stage
    - Adjourning stage
- **Types of Groups**
  - **Primary vs. Secondary Groups**
    - Intimate relationships
    - Formal structures

- Goal orientations
- **Formal vs. Informal Groups**
  - Organizational structures
  - Spontaneous formation
  - Authority patterns
- **Reference Groups**
  - Comparative function
  - Normative influence
  - Membership vs. aspirational

## Unit 2: Group Dynamics <sup>[41]</sup> <sup>[39]</sup> <sup>[38]</sup> <sup>[31]</sup> <sup>[33]</sup> <sup>[30]</sup>

- **Group Dynamics Definition**
  - Forces within groups
  - Member interactions
  - Process analysis
  - Change mechanisms
- **Group Structure Elements**
  - Role differentiation
  - Status hierarchies
  - Communication networks
  - Power distributions
- **Group Integration**
  - Social cohesion
  - Unity feelings
  - Participation levels
  - Inclusion processes
- **Group Communication**
  - Information flow
  - Feedback mechanisms
  - Communication networks
  - Barriers and facilitators
- **Group Norms**
  - Behavioral expectations
  - Conformity pressures
  - Norm enforcement

- Deviation consequences
- **Group Cohesion**
  - Attraction to group
  - Unity measures
  - Performance relationships
  - Factors affecting cohesion

### **Unit 3: Social Identity, Crowding and Crowd Behaviour**<sup>[40]</sup> <sup>[33]</sup> <sup>[30]</sup>

- **Social Identity Theory**
  - Personal vs. social identity
  - In-group favoritism
  - Out-group derogation
  - Identity threat responses
- **Crowding Effects**
  - Density vs. crowding
  - Personal space invasion
  - Stress responses
  - Behavioral consequences
- **Crowd Behavior**
  - **Crowd Theories**
    - Le Bon's crowd mind
    - Deindividuation theory
    - Social identity model
    - Emergent norm theory
  - **Types of Crowds**
    - Casual crowds
    - Conventional crowds
    - Expressive crowds
    - Acting crowds
  - **Crowd Characteristics**
    - Anonymity effects
    - Suggestibility increase
    - Emotional contagion
    - Reduced self-awareness

## **Unit 4: Cooperation, Competition and Conflicts**<sup>[40]</sup> <sup>[33]</sup> <sup>[30]</sup>

- **Cooperation Processes**

- Mutual benefit seeking
- Collaborative behaviors
- Trust development
- Shared goal pursuit

- **Competition Dynamics**

- Win-lose orientations
- Resource competition
- Social comparison
- Performance enhancement

- **Cooperation vs. Competition**

- Situational factors
- Cultural influences
- Individual differences
- Outcome effects

- **Intergroup Conflict**

- Realistic conflict theory
- Social identity contributions
- Stereotype formation
- Prejudice development

- **Conflict Resolution**

- Superordinate goals
- Contact interventions
- Mediation processes
- Structural changes

## **MPC-005: Research Methods in Psychology (4 Credits)**

### **Block 1: Introduction to Research Methods in Psychology**

## **Unit 1: Basic Process/Concept in Research** <sup>[42]</sup> <sup>[43]</sup> <sup>[44]</sup> <sup>[45]</sup>

- **Research Definition and Nature**

- Scientific inquiry
- Systematic investigation
- Knowledge generation
- Problem-solving approach

- **Objectives of Research**

- Description
- Explanation
- Prediction
- Control

- **Qualities of Good Research**

- Objectivity
- Systematic approach
- Empirical basis
- Logical reasoning
- Replicability

- **Research Process Steps**

- Problem identification
- Literature review
- Hypothesis formulation
- Research design selection
- Data collection
- Data analysis
- Interpretation
- Report preparation

## **Unit 2: Reliability and Validity (External and Internal)** <sup>[43]</sup> <sup>[46]</sup> <sup>[44]</sup> <sup>[42]</sup>

- **Reliability Concepts**

- Consistency of measurement
- Repeatability
- Precision

- **Types of Reliability**

- Test-retest reliability
- Split-half reliability

- Internal consistency
- Inter-rater reliability
- **Methods of Estimating Reliability**
  - Cronbach's alpha
  - Kuder-Richardson formulas
  - Correlation coefficients
- **Validity Concepts**
  - Truth and accuracy
  - Measurement validity
  - Research validity
- **Types of Validity**
  - **Content Validity**
    - Face validity
    - Logical validity
    - Sampling adequacy
  - **Criterion-Related Validity**
    - Concurrent validity
    - Predictive validity
    - Convergent validity
    - Discriminant validity
  - **Construct Validity**
    - Theoretical framework
    - Factor analysis
    - Multitrait-multimethod
- **Internal Validity**
  - Causal inference
  - Threats to internal validity
  - Control strategies
- **External Validity**
  - Generalizability
  - Population validity
  - Ecological validity
  - Temporal validity

## Unit 3: Variables and Constructs<sup>[46]</sup> <sup>[44]</sup> <sup>[42]</sup>

- **Variable vs. Construct Distinction**

- Observable vs. latent
- Operational definitions
- Theoretical concepts

- **Types of Variables**

- **Independent Variables**

- Manipulated factors
- Treatment variables
- Causal factors

- **Dependent Variables**

- Outcome measures
- Response variables
- Effect indicators

- **Confounding Variables**

- Extraneous variables
- Nuisance variables
- Third variables

- **Moderating Variables**

- Interaction effects
- Conditional relationships

- **Mediating Variables**

- Intervening variables
- Causal chains
- Process variables

- **Variable Scales**

- Nominal scales
- Ordinal scales
- Interval scales
- Ratio scales

- **Operationalization**

- Construct definition
- Measurement procedures
- Indicator selection



## Unit 4: Hypothesis Formulation and Sampling<sup>[44]</sup> <sup>[45]</sup> <sup>[42]</sup>

- **Hypothesis Definition**
  - Testable statements
  - Predictive propositions
  - Research questions
- **Types of Hypotheses**
  - Null hypothesis
  - Alternative hypothesis
  - Directional hypothesis
  - Non-directional hypothesis
  - Research hypothesis
  - Statistical hypothesis
- **Hypothesis Formulation Guidelines**
  - Theoretical basis
  - Testability
  - Specificity
  - Parsimony
- **Difficulties in Hypothesis Formulation**
  - Lack of theoretical framework
  - Measurement challenges
  - Complex relationships
- **Errors in Hypothesis Testing**
  - Type I error (alpha)
  - Type II error (beta)
  - Power concepts
  - Effect size considerations
- **Sampling Concepts**
  - Population definition
  - Sample representation
  - Sampling frames
  - Sampling errors
- **Probability Sampling Methods**
  - Simple random sampling
  - Systematic sampling

- Stratified sampling
- Cluster sampling
- **Non-Probability Sampling Methods**
  - Purposive sampling
  - Convenience sampling
  - Snowball sampling
  - Quota sampling

## **Block 2: Types of Research**

### **Unit 1: Survey Research** <sup>[42]</sup> <sup>[46]</sup> <sup>[44]</sup>

- **Survey Research Definition**
  - Data collection method
  - Population studies
  - Opinion measurement
  - Attitude assessment
- **Types of Survey Research**
  - **Cross-sectional Surveys**
    - Snapshot approach
    - Time efficiency
    - Descriptive focus
  - **Longitudinal Surveys**
    - Panel studies
    - Trend studies
    - Cohort studies
    - Development tracking
- **Steps in Survey Research**
  - Problem formulation
  - Sample design
  - Questionnaire construction
  - Data collection
  - Data processing
  - Analysis and interpretation
- **Data Collection Methods**
  - Face-to-face interviews

- Telephone surveys
- Mail questionnaires
- Online surveys
- Mixed methods
- **Advantages and Disadvantages**
  - Wide coverage
  - Standardization
  - Cost considerations
  - Response bias
  - Depth limitations

## **Unit 2: Ex-post Facto Research** <sup>[47]</sup> <sup>[46]</sup> <sup>[44]</sup> <sup>[42]</sup>

- **Ex-post Facto Definition**
  - After-the-fact investigation
  - No manipulation
  - Causal-comparative
  - Retrospective analysis
- **Characteristics and Steps**
  - Problem identification
  - Hypothesis formulation
  - Group identification
  - Data collection
  - Statistical analysis
  - Causal inference
- **Types of Ex-post Facto**
  - Causal-comparative studies
  - Correlational studies
  - Retrospective research
- **Advantages and Disadvantages**
  - Real-world relevance
  - Ethical considerations
  - Natural settings
  - Causal ambiguity
  - Control limitations

### **Unit 3: Experimental Research (including Field Experiment)** [\[46\]](#) [\[44\]](#) [\[42\]](#)

- **Experimental Research Principles**

- Manipulation
- Control
- Random assignment
- Causal inference

- **Types of Experimental Research**

- Laboratory experiments
- Field experiments
- Natural experiments
- Quasi-experiments

- **Laboratory vs. Field Experiments**

- Control levels
- External validity
- Internal validity
- Artificiality issues

- **Field Experiment Considerations**

- Naturalistic settings
- Ethical constraints
- Practical challenges
- Ecological validity

- **Experimental Controls**

- Random assignment
- Counterbalancing
- Matching procedures
- Blocking techniques

### **Unit 4: Case Study** [\[42\]](#) [\[46\]](#)

- **Case Study Definition**

- In-depth investigation
- Single unit focus
- Holistic approach
- Context importance

- **Nature and Characteristics**

- Idiographic approach

- Qualitative emphasis
- Multiple data sources
- Longitudinal perspective
- **Types of Case Studies**
  - Exploratory case studies
  - Descriptive case studies
  - Explanatory case studies
  - Multiple case studies
- **Steps in Case Study Research**
  - Case selection
  - Data collection planning
  - Multiple evidence sources
  - Data analysis
  - Report writing
- **Advantages and Limitations**
  - Rich detail
  - Context preservation
  - Hypothesis generation
  - Generalization limits
  - Subjectivity concerns
- **Misconceptions about Case Studies**
  - Cannot provide reliable information
  - Useful only as exploratory tool
  - Inherent verification bias
  - Too specific for generalization

## **Block 3: Research Design**

### **Unit 1: Experimental Design: Single Factor**<sup>[43]</sup> <sup>[46]</sup> <sup>[42]</sup>

- **Experimental Design Objectives**
  - Control extraneous variables
  - Manipulate independent variables
  - Measure dependent variables
  - Establish causation
- **Single Factor Designs**

- One independent variable
- Multiple levels/conditions
- Between-subjects design
- Within-subjects design
- **Between-Group Design**
  - Independent groups
  - Random assignment
  - Control groups
  - Comparison procedures
- **Within-Subject Design**
  - Repeated measures
  - Same participants
  - Order effects
  - Counterbalancing
- **Advantages and Disadvantages**
  - Individual differences
  - Statistical power
  - Carryover effects
  - Practice effects

## Unit 2: Experimental Design: Factorial Design <sup>[43]</sup> <sup>[46]</sup> <sup>[42]</sup>

- **Factorial Design Concepts**
  - Multiple independent variables
  - All possible combinations
  - Main effects
  - Interaction effects
- **Types of Factorial Designs**
  - 2×2 factorial
  - 2×3 factorial
  - Higher-order factorials
  - Mixed factorial designs
- **Main Effects and Interactions**
  - Simple main effects
  - Overall main effects
  - Two-way interactions

- Higher-order interactions
- **Advantages of Factorial Designs**
  - Efficiency gains
  - Interaction detection
  - External validity
  - Real-world complexity

### **Unit 3: Quasi Experimental Design** <sup>[47]</sup> <sup>[46]</sup> <sup>[42]</sup> <sup>[43]</sup>

- **Quasi-Experimental Definition**
  - Lack of randomization
  - Natural groups
  - Field settings
  - Practical constraints
- **Types of Quasi-Experimental Designs**
  - **Non-Equivalent Group Designs**
    - Posttest-only design
    - Pretest-posttest design
    - Multiple group designs
  - **Time Series Designs**
    - Interrupted time series
    - Multiple baseline
    - Control series
  - **Switching Replications Design**
  - **Double Pretest Design**
  - **Separate Pretest-Posttest Samples**
- **Threats to Validity**
  - Selection bias
  - Maturation effects
  - History effects
  - Regression to mean
  - Testing effects
- **Strengthening Quasi-Experiments**
  - Multiple measures
  - Comparison groups
  - Pattern matching

- Replication

## **Unit 4: Other Designs (Correlational Design and Comparative Design)**<sup>[46]</sup> <sup>[42]</sup>

- **Correlational Design**
  - Relationship examination
  - No manipulation
  - Association strength
  - Predictive utility
- **Types of Correlational Studies**
  - Bivariate correlation
  - Partial correlation
  - Multiple correlation
  - Factor analysis
- **Advantages and Disadvantages**
  - Practical applications
  - Real-world data
  - Causal ambiguity
  - Third variable problem
- **Comparative Design**
  - Group comparisons
  - Existing differences
  - Natural categories
  - Causal inference limitations

## **Block 4: Qualitative Research in Psychology**

### **Unit 1: Introduction Including Ethnography**<sup>[48]</sup> <sup>[42]</sup> <sup>[46]</sup>

- **Qualitative Research Nature**
  - Interpretive paradigm
  - Subjective meaning
  - Context importance
  - Naturalistic inquiry
- **Qualitative vs. Quantitative**
  - Philosophical differences
  - Methodological distinctions



- Data types
- Analysis approaches
- **Relevance in Psychology**
  - Human experience
  - Meaning construction
  - Social processes
  - Cultural factors
- **Ethnography**
  - **Definition and Assumptions**
    - Cultural investigation
    - Participant observation
    - Holistic approach
    - Emic perspective
  - **Types of Ethnographic Research**
    - Traditional ethnography
    - Microethnography
    - Critical ethnography
    - Autoethnography
  - **Steps in Ethnography**
    - Site selection
    - Entry negotiation
    - Data collection
    - Analysis and interpretation
    - Report writing

## **Unit 2: Grounded Theory** <sup>[47]</sup> <sup>[42]</sup> <sup>[46]</sup>

- **Grounded Theory Definition**
  - Theory generation
  - Data-driven approach
  - Inductive reasoning
  - Systematic methodology
- **Goals and Principles**
  - Theory development
  - Conceptual density
  - Theoretical saturation

- Constant comparison
- **Steps in Grounded Theory**
  - Data collection
  - Initial coding
  - Memo writing
  - Theoretical sampling
  - Theory development
- **Coding Processes**
  - **Open Coding**
    - Initial categorization
    - Concept identification
    - Property development
  - **Axial Coding**
    - Category relationships
    - Condition identification
    - Process mapping
  - **Selective Coding**
    - Core category selection
    - Theory integration
    - Story development
- **Theoretical Sampling**
  - Concept-driven sampling
  - Theory development focus
  - Saturation achievement

### **Unit 3: Discourse Analysis (Content Narrative)** <sup>[42]</sup> <sup>[47]</sup> <sup>[46]</sup>

- **Discourse Analysis Definition**
  - Language in use
  - Social construction
  - Power relations
  - Meaning creation
- **Assumptions and Approaches**
  - **Conversation Analysis**
    - Turn-taking patterns
    - Sequential organization

- Repair mechanisms
- **Critical Discourse Analysis**
  - Power critique
  - Ideology examination
  - Social change focus
- **Discursive Psychology**
  - Action orientation
  - Context sensitivity
  - Variability focus
- **Steps in Discourse Analysis**
  - Data collection
  - Transcription
  - Coding and categorization
  - Pattern identification
  - Interpretation
- **Content Analysis**
  - Quantitative approach
  - Category systems
  - Frequency counts
  - Reliability measures
- **Narrative Analysis**
  - Story structure
  - Plot development
  - Character roles
  - Temporal organization
- **Relevance of Discourse Analysis**
  - Social psychology applications
  - Identity construction
  - Attitude research
  - Therapy analysis

## Unit 4: Reporting and Evaluating Quality Research <sup>[46]</sup> <sup>[42]</sup>

- **Steps in Writing Research Reports**

- Title and abstract
- Introduction section
- Method section
- Results section
- Discussion section
- References and appendices

- **Qualitative Research Evaluation**

- **Quality Criteria**

- Credibility
- Transferability
- Dependability
- Confirmability

- **Trustworthiness Strategies**

- Member checking
- Triangulation
- Peer debriefing
- Audit trails

- **Steps in Evaluating Data**

- Data reduction
- Data display
- Conclusion drawing
- Verification

- **Ethical Considerations**

- Informed consent
- Confidentiality
- Anonymity
- Cultural sensitivity

- **Publication and Dissemination**

- Journal selection
- Peer review process
- Conference presentations
- Policy implications

# MPC-006: Statistics in Psychology (4 Credits)

## Block 1: Introduction to Statistics

### Unit 1: Parametric and Non-parametric Statistics [\[49\]](#) [\[50\]](#) [\[51\]](#) [\[52\]](#) [\[53\]](#) [\[54\]](#)

- **Definition and Concepts**
  - **Parametric Statistics**
    - Population parameter assumptions
    - Normal distribution requirements
    - Interval/ratio scale data
    - Specific conditions
  - **Non-parametric Statistics**
    - Distribution-free tests
    - Fewer assumptions
    - Ordinal/nominal data
    - Rank-based methods
- **Assumptions of Parametric Statistics**
  - Normal distribution
  - Homogeneity of variance
  - Independence of observations
  - Interval/ratio measurement
- **Assumptions of Non-parametric Statistics**
  - Independence of observations
  - Random sampling
  - Ordinal measurement minimum
  - No distribution specification
- **Advantages and Disadvantages**
  - **Parametric Advantages**
    - Greater statistical power
    - More precise estimates
    - Robust with large samples
  - **Non-parametric Advantages**
    - Fewer assumptions
    - Suitable for small samples
    - Distribution-free

- **Parametric Disadvantages**
  - Strict assumptions
  - Assumption violations
- **Non-parametric Disadvantages**
  - Lower power
  - Less information use
  - Limited applications
- **Statistical Tests Examples**
  - **Parametric Tests**
    - t-tests
    - ANOVA
    - Pearson correlation
    - Regression analysis
  - **Non-parametric Tests**
    - Chi-square test
    - Mann-Whitney U test
    - Wilcoxon tests
    - Spearman correlation

## **Unit 2: Descriptive and Inferential Statistics** <sup>[51]</sup> <sup>[55]</sup> <sup>[56]</sup> <sup>[49]</sup>

- **Descriptive Statistics Definition**
  - Data summarization
  - Sample description
  - Central tendency
  - Variability measures
- **Organization of Data**
  - **Classification Methods**
    - Frequency distribution
    - Grouped vs. ungrouped data
    - Class intervals
    - Frequency types
  - **Tabulation Procedures**
    - Data arrangement
    - Table construction
    - Cross-tabulation

- **Graphical Presentation**
  - Histograms
  - Frequency polygons
  - Bar charts
  - Pie charts
  - Cumulative frequency curves (ogives)
- **Diagrammatic Presentation**
  - Visual displays
  - Chart types
  - Design principles
- **Summarization of Data**
  - **Measures of Central Tendency**
    - **Mean**
      - Arithmetic mean
      - Weighted mean
      - Properties and uses
    - **Median**
      - Position measure
      - Calculation methods
      - Advantages
    - **Mode**
      - Most frequent value
      - Unimodal vs. multimodal
      - Applications
  - **Measures of Dispersion**
    - **Range**
      - Maximum - minimum
      - Limitations
    - **Variance**
      - Deviation squares
      - Population vs. sample
    - **Standard Deviation**
      - Square root of variance
      - Interpretation
      - Applications

- **Quartile Deviation**
  - Interquartile range
  - Semi-interquartile range
- **Skewness and Kurtosis**
  - Distribution shape
  - Symmetry measures
  - Peakedness indicators
- **Inferential Statistics Definition**
  - Population inferences
  - Sample to population
  - Statistical inference
  - Probability basis
- **Estimation Procedures**
  - **Point Estimation**
    - Single value estimates
    - Best estimates
    - Estimator properties
  - **Interval Estimation**
    - Confidence intervals
    - Confidence levels
    - Margin of error
- **Hypothesis Testing**
  - **Statement of Hypotheses**
    - Null hypothesis ( $H_0$ )
    - Alternative hypothesis ( $H_1$ )
    - Research hypothesis
  - **Level of Significance**
    - Alpha level ( $\alpha$ )
    - Type I error probability
    - Critical values
  - **One-tail vs. Two-tail Tests**
    - Directional vs. non-directional
    - Critical region placement
    - Decision rules
- **Errors in Hypothesis Testing**



- **Type I Error**
  - False positive
  - Alpha risk
  - Rejection of true null
- **Type II Error**
  - False negative
  - Beta risk
  - Acceptance of false null
- **Power of Test**
  - $1 - \beta$
  - Correct rejection probability
  - Power analysis

### **Unit 3: Type I and Type II Errors** [\[49\]](#) [\[51\]](#)

- **Error Types Detailed**
  - **Type I Error ( $\alpha$ )**
    - Definition and consequences
    - Probability calculation
    - Control methods
    - Relationship with significance level
  - **Type II Error ( $\beta$ )**
    - Definition and consequences
    - Factors affecting beta
    - Power relationship
    - Sample size effects
- **Decision Errors Matrix**
  - True/false null hypothesis
  - Accept/reject decisions
  - Error probabilities
  - Correct decision types
- **Factors Affecting Errors**
  - Sample size
  - Effect size
  - Significance level
  - Population variance

- **Error Control Strategies**

- Alpha level selection
- Power analysis
- Sample size determination
- Effect size estimation

## **Unit 4: Setting Up The Level of Significance**<sup>[51]</sup> <sup>[49]</sup>

- **Significance Level Concepts**

- Alpha level selection
- Common significance levels (0.05, 0.01, 0.10)
- Scientific conventions
- Field-specific standards

- **Factors in Level Selection**

- Type I error consequences
- Research context
- Practical significance
- Replication concerns

- **Critical Values**

- Statistical table use
- Distribution-specific values
- One-tail vs. two-tail
- Decision boundaries

- **P-values**

- Probability interpretation
- Statistical significance
- Practical significance
- Effect size importance

## **Block 2: Correlation and Regression**

### **Unit 1: Product Moment Coefficient of Correlation**<sup>[50]</sup> <sup>[49]</sup>

- **Pearson's Correlation Coefficient**

- Definition and interpretation
- Linear relationship measure
- Range: -1 to +1

- Computation methods
- **Calculation Steps**
  - Raw score formula
  - Deviation score formula
  - Computational formula
  - Statistical software use
- **Assumptions**
  - Linear relationship
  - Interval/ratio data
  - Normal distribution
  - Homoscedasticity
- **Interpretation Guidelines**
  - Strength categories
  - Direction interpretation
  - Coefficient of determination ( $r^2$ )
  - Shared variance explanation
- **Significance Testing**
  - t-test for correlation
  - Degrees of freedom
  - Critical value comparison
  - Confidence intervals

## Unit 2: Other Types of Correlation (including Phi-coefficient) <sup>[50]</sup> <sup>[49]</sup>

- **Special Correlation Types**
  - **Point Biserial Correlation (rpb)**
    - Continuous-dichotomous variables
    - Calculation procedures
    - Interpretation
    - Significance testing
    - Example applications
  - **Phi Coefficient ( $\phi$ )**
    - Two dichotomous variables
    - 2×2 contingency table
    - Chi-square relationship
    - Calculation methods

- Interpretation guidelines
- **Biserial Correlation**
  - Artificially dichotomized variable
  - Underlying continuity assumption
  - Calculation complexity
  - Interpretation cautions
- **Tetrachoric Correlation**
  - Two artificially dichotomous variables
  - Bivariate normal assumption
  - Calculation methods
  - Statistical software use
- **Rank Correlations**
  - **Spearman's Rho ( $\rho$ )**
    - Rank-order data
    - Monotonic relationships
    - Calculation procedures
    - Tied ranks handling
    - Non-parametric alternative
  - **Kendall's Tau ( $\tau$ )**
    - Concordant/discordant pairs
    - Small sample preference
    - Partial correlation extension
    - Interpretation advantages

### Unit 3: Partial and Multiple Correlation [\[49\]](#) [\[50\]](#)

- **Partial Correlation**
  - Control variable effects
  - Pure relationship isolation
  - Third variable elimination
  - Calculation procedures
  - Interpretation guidelines
- **Multiple Correlation**
  - Several predictors
  - Multiple correlation coefficient (R)
  - Relationship with multiple variables

- Practical applications
- **Applications**
  - Research design improvement
  - Confounding control
  - Prediction enhancement
  - Causal analysis

## **Unit 4: Bivariate and Multiple Regression** [\[50\]](#) [\[49\]](#)

- **Bivariate Regression**
  - **Simple Linear Regression**
    - Prediction equation:  $Y = a + bX$
    - Slope (b) interpretation
    - Intercept (a) meaning
    - Least squares method
    - Best fit line
  - **Regression Assumptions**
    - Linearity
    - Independence
    - Homoscedasticity
    - Normality of residuals
  - **Standard Error of Estimate**
    - Prediction accuracy
    - Residual analysis
    - Confidence intervals
- **Multiple Regression**
  - **Multiple Predictors**
    - Prediction equation extension
    - Partial regression coefficients
    - Beta weights (standardized)
    - R-square interpretation
  - **Regression Analysis Steps**
    - Variable selection
    - Model building
    - Assumption testing
    - Interpretation

- Validation
- **Regression Applications**
  - Prediction problems
  - Variable importance
  - Model comparison
  - Outlier detection
- **Limitations and Considerations**
  - Outliers and leverage points
  - Multicollinearity issues
  - Curvilinear relationships
  - Extrapolation dangers

## **Block 3: Normal Distribution**

### **Unit 1: Characteristics of Normal Distribution** [\[57\]](#) [\[49\]](#)

- **Normal Curve Properties**
  - Bell-shaped curve
  - Symmetrical distribution
  - Unimodal (single peak)
  - Asymptotic tails
  - Mean = Median = Mode
- **Mathematical Properties**
  - Defined by mean ( $\mu$ ) and standard deviation ( $\sigma$ )
  - Area under curve = 1.0
  - Empirical rule (68-95-99.7)
  - Standard normal distribution (Z)
- **Standard Normal Distribution**
  - Z-score transformation
  - Mean = 0, Standard deviation = 1
  - Z-table usage
  - Probability calculations
- **Areas Under Normal Curve**
  - Percentage calculations
  - Probability interpretations
  - Critical values

- Percentile ranks
- **Applications**
  - Psychological testing
  - Statistical inference
  - Quality control
  - Research applications

## **Unit 2: Significance of Mean Differences, Standard Error of the Mean** <sup>[51]</sup> <sup>[49]</sup>

- **Standard Error Concepts**
  - Sampling distribution
  - Standard error of mean (SEM)
  - Population vs. sample statistics
  - Distribution of sample means
- **Standard Error Calculation**
  - $SEM = \sigma/\sqrt{n}$
  - Estimation from sample
  - Confidence interval construction
  - Margin of error determination
- **Mean Difference Testing**
  - One-sample t-test
  - Two-sample t-tests
  - Paired sample t-test
  - Effect size calculation
- **t-Distribution**
  - Small sample alternative
  - Degrees of freedom
  - Comparison with normal
  - Critical values
- **Confidence Intervals**
  - Mean estimation
  - Interval interpretation
  - Confidence level selection
  - Width factors

### Unit 3: Anova (One-Way) <sup>[54]</sup> <sup>[49]</sup>

- **Analysis of Variance Concepts**
  - Multiple group comparison
  - F-ratio calculation
  - Between vs. within variation
  - Null hypothesis testing
- **One-Way ANOVA Model**
  - Single factor design
  - Multiple levels/groups
  - Independent observations
  - Equal variances assumption
- **ANOVA Calculations**
  - Sum of squares partitioning
  - Degrees of freedom
  - Mean squares calculation
  - F-statistic computation
- **ANOVA Table**
  - Source of variation
  - Sum of squares (SS)
  - Degrees of freedom (df)
  - Mean squares (MS)
  - F-ratio and p-value
- **Assumptions**
  - Independence
  - Normality
  - Homogeneity of variance
  - Assumption testing
- **Post-hoc Tests**
  - Multiple comparisons
  - Tukey HSD
  - Bonferroni correction
  - Planned contrasts
- **Effect Size**
  - Eta-squared ( $\eta^2$ )



- Omega-squared ( $\omega^2$ )
- Practical significance

## Unit 4: Two-Way Anova<sup>[49]</sup>

- **Factorial ANOVA**

- Two independent variables
- Main effects analysis
- Interaction effects
- Merits and demerits

- **Two-Way ANOVA Model**

- Factor A effects
- Factor B effects
- $A \times B$  interaction
- Error variance

- **Main Effects**

- Simple main effects
- Overall main effects
- Marginal means
- Statistical significance

- **Interaction Effects**

- **Interactional Effect Concepts**
  - Non-additive effects
  - Conditional relationships
  - Graphical representation
  - Statistical testing
- **Types of Interactions**
  - Ordinal interactions
  - Disordinal interactions
  - Crossover interactions

- **ANOVA Calculations**

- Sum of squares decomposition
- F-ratio calculations
- Multiple F-tests
- Error terms

- **Interpretation Guidelines**

- Interaction priority
- Simple effects analysis
- Effect size calculation
- Post-hoc comparisons

## **Block 4: Nonparametric Statistics**

### **Unit 1: Rationale**<sup>[52]</sup> <sup>[50]</sup> <sup>[49]</sup>

- **Non-parametric Rationale**
  - Distribution-free testing
  - Assumption violations
  - Small sample utility
  - Ordinal data analysis
- **When to Use Non-parametric Tests**
  - Non-normal distributions
  - Heterogeneous variances
  - Ordinal measurement
  - Extreme outliers
- **Advantages**
  - Fewer assumptions
  - Robust procedures
  - Simple calculations
  - Wide applicability
- **Disadvantages**
  - Lower statistical power
  - Less efficient
  - Limited information use
  - Fewer analysis options

### **Unit 2: Mann Whitney 'U' Test For Two Sample Test**<sup>[50]</sup> <sup>[49]</sup>

- **Mann-Whitney U Test**
  - Two independent groups
  - Ordinal data analysis
  - Non-parametric alternative to t-test
  - Rank-based method

- **Test Assumptions**

- Independent observations
- Ordinal measurement
- Similar distribution shapes
- Random sampling

- **Calculation Steps**

- Combined ranking
- Sum of ranks calculation
- U statistic computation
- Critical value comparison

- **Test Statistic**

- $U_1$  and  $U_2$  calculations
- Smaller U selection
- Normal approximation for large samples
- Continuity correction

- **Interpretation**

- Median comparisons
- Effect size measures
- Practical significance
- Confidence intervals

### **Unit 3: Kruskal Wallis Analysis of Variance**<sup>[49]</sup> <sup>[50]</sup>

- **Kruskal-Wallis Test**

- Multiple independent groups
- Non-parametric ANOVA alternative
- Rank-based analysis
- H-statistic calculation

- **Test Applications**

- More than two groups
- Ordinal dependent variable
- Non-normal distributions
- Unequal sample sizes

- **Assumptions**

- Independent observations
- Similar distribution shapes

- Ordinal measurement
- Random sampling
- **Calculation Procedures**
  - Overall ranking
  - Rank sum calculation
  - H-statistic formula
  - Chi-square approximation
- **Post-hoc Comparisons**
  - Pairwise comparisons
  - Dunn's test
  - Bonferroni adjustments
  - Multiple comparison procedures

## Unit 4: Chi Square and Kendall Rank Correlation <sup>[50]</sup> <sup>[49]</sup>

- **Chi-Square Test**
  - **Goodness of Fit Test**
    - Single variable analysis
    - Expected vs. observed frequencies
    - Distribution fitting
    - Theoretical model testing
  - **Test of Independence**
    - Two variable relationships
    - Contingency table analysis
    - Association testing
    - Nominal data analysis
- **Chi-Square Calculations**
  - Expected frequency computation
  - Chi-square statistic formula
  - Degrees of freedom
  - Critical value comparison
- **Assumptions and Requirements**
  - Independent observations
  - Expected frequencies  $\geq 5$
  - Mutually exclusive categories
  - Random sampling

- **Kendall's Rank Correlation ( $\tau$ )**
  - **Tau Coefficient**
    - Concordant pairs
    - Discordant pairs
    - Tied observations
    - Tau-a vs. Tau-b
  - **Calculation Methods**
    - Pair comparison
    - Concordance/discordance counting
    - Correction for ties
    - Significance testing
- **Comparison with Spearman's Rho**
  - Calculation differences
  - Interpretation advantages
  - Small sample performance
  - Partial correlation extensions
- **Applications**
  - Rank-order relationships
  - Non-parametric correlation
  - Ordinal data analysis
  - Monotonic relationships

## **MPCL-007: Practicum in Experimental Psychology & Psychological Testing (8 Credits)**

### **Course Structure and Assessment**

#### **Practical Components**<sup>[58] [59] [60] [61] [62]</sup>

- **Total Practicals: 8**
- **Credits: 8 (highest among first-year courses)**
- **Assessment Pattern:**
  - Internal Assessment (Practical Notebook): 50%
  - Term End Examination (Practical + Viva-voce): 50%
- **Requirement:** Students must complete 5 out of 8 practicals in proper format

## Block 1: Experimental Practicals

### Practical 1: Span of Attention<sup>[59]</sup>

- **Objective**
  - Measure attention span limits
  - Assess focused attention capacity
  - Determine individual differences
- **Method**
  - Tachistoscopic presentation
  - Letter/number arrays
  - Varying exposure duration
  - Accuracy measurement
- **Variables**
  - Independent: Stimulus complexity, exposure time
  - Dependent: Number of items correctly reported
  - Controls: Practice effects, fatigue
- **Procedure Steps**
  - Participant preparation
  - Practice trials
  - Experimental trials
  - Data recording
  - Analysis and interpretation
- **Expected Outcomes**
  - Normal span:  $7 \pm 2$  items
  - Individual variation patterns
  - Practice effects
  - Stimulus type differences

### Practical 2: Memory Experiments<sup>[59]</sup>

- **Memory Types Tested**
  - Short-term memory capacity
  - Long-term memory retention
  - Recognition vs. recall
  - Serial position effects
- **Experimental Designs**

- **Serial Learning**
  - Word list presentation
  - Order reconstruction
  - Learning curves
  - Interference effects
- **Free Recall**
  - Unordered reproduction
  - Primacy-recency effects
  - Clustering analysis
- **Recognition Memory**
  - Old-new judgments
  - False positive rates
  - Confidence ratings
- **Variables and Controls**
  - List length manipulation
  - Presentation rate control
  - Retention interval variation
  - Material type effects
- **Data Analysis**
  - Learning curves
  - Error analysis
  - Statistical comparisons
  - Individual differences

### **Practical 3: Intelligence Testing (Bhatia Battery)** <sup>[58]</sup> <sup>[59]</sup>

- **Bhatia Battery Components**
  - Koh's Block Design Test
  - Passalong Test
  - Pattern Drawing Test
  - Immediate Memory Test
  - Picture Construction Test
  - Digit Symbol Test
- **Administration Procedures**
  - Standardized instructions
  - Time limits

- Scoring criteria
- Behavioral observations
- **Subtests Details**
  - **Block Design:** Spatial reasoning
  - **Passalong:** Planning ability
  - **Pattern Drawing:** Visual-motor coordination
  - **Memory Span:** Attention and memory
  - **Picture Construction:** Perceptual organization
  - **Digit Symbol:** Processing speed
- **Scoring and Interpretation**
  - Raw scores calculation
  - Age-corrected norms
  - Profile analysis
  - Interpretation guidelines
- **Report Writing**
  - Background information
  - Test behavior
  - Score interpretation
  - Recommendations

## **Practical 4: Personality Testing (16 PF)** [\[29\]](#) [\[58\]](#) [\[59\]](#)

- **16 PF Test Features**
  - Cattell's 16 personality factors
  - 185 items (Form A)
  - Sten score system
  - Factor-based interpretation
- **Primary Factors**
  - Warmth (A)
  - Reasoning (B)
  - Emotional Stability (C)
  - Dominance (E)
  - Liveliness (F)
  - Rule-Consciousness (G)
  - Social Boldness (H)
  - Sensitivity (I)



- Vigilance (L)
- Abstractedness (M)
- Privateness (N)
- Apprehension (O)
- Openness to Change (Q1)
- Self-Reliance (Q2)
- Perfectionism (Q3)
- Tension (Q4)
- **Administration**
  - Self-report format
  - Time requirements
  - Instructions clarity
  - Response recording
- **Scoring Procedures**
  - Raw score computation
  - Sten conversion
  - Profile construction
  - Factor interpretation
- **Interpretation Guidelines**
  - Sten score meanings
  - Profile patterns
  - Factor combinations
  - Behavioral predictions

## **Practical 5: Test For Social Behaviour (Vineland Social Maturity Scale) <sup>[58]</sup> <sup>[59]</sup>**

- **Scale Purpose**
  - Social competence measurement
  - Adaptive behavior assessment
  - Developmental evaluation
  - Independence level determination
- **Age Categories**
  - Infancy (0-2 years)
  - Early childhood (2-5 years)
  - School age (5-12 years)
  - Adolescence (12-18 years)

- Adult levels (18+ years)
- **Skill Areas**
  - Self-help general
  - Self-help eating
  - Self-help dressing
  - Self-direction
  - Occupation
  - Communication
  - Locomotion
  - Socialization
- **Administration Method**
  - Interview format
  - Informant reporting
  - Observation integration
  - Scoring procedures
- **Social Age Calculation**
  - Item scoring (0, 0.5, 1)
  - Social age determination
  - Social quotient computation
  - Interpretation guidelines

## **Practical 6: Sociometry**<sup>[59]</sup> <sup>[58]</sup>

- **Sociometric Technique**
  - Social structure analysis
  - Group relationship mapping
  - Choice pattern identification
  - Social status determination
- **Administration Procedures**
  - Group selection criteria
  - Question formulation
  - Choice collection
  - Anonymity maintenance
- **Data Collection Methods**
  - Nomination technique
  - Rating scale methods

- Ranking procedures
- Peer evaluation
- **Analysis Techniques**
  - **Sociogram Construction**
    - Visual representation
    - Symbol systems
    - Relationship lines
    - Group structure display
  - **Sociometric Indices**
    - Choice status calculation
    - Rejection status measurement
    - Mutual choice identification
    - Group cohesion assessment
- **Interpretation**
  - Social positions (star, isolate, rejectee)
  - Group dynamics
  - Clique identification
  - Leadership patterns

## **Practical 7: Family Pathology Scale<sup>[58]</sup>**

- **Scale Objectives**
  - Family dysfunction assessment
  - Pathological pattern identification
  - Intervention planning
  - Treatment outcome measurement
- **Assessment Domains**
  - Communication patterns
  - Role functioning
  - Problem-solving abilities
  - Affective involvement
  - Affective responsiveness
  - Behavior control
- **Administration**
  - Family interview
  - Individual assessments

- Observational data
- Questionnaire methods
- **Scoring System**
  - Domain scores
  - Overall pathology index
  - Severity ratings
  - Profile analysis
- **Clinical Applications**
  - Family therapy planning
  - Progress monitoring
  - Outcome evaluation
  - Research applications

## **Practical 8: Problem Behaviour Checklist <sup>[58]</sup>**

- **Checklist Purpose**
  - Behavioral problem identification
  - Symptom severity assessment
  - Intervention monitoring
  - Diagnostic support
- **Problem Categories**
  - Conduct problems
  - Personality problems
  - Inadequacy-immaturity
  - Socialized delinquency
- **Assessment Format**
  - Observer ratings
  - Parent reports
  - Teacher evaluations
  - Self-reports (when appropriate)
- **Scoring Procedures**
  - Item scoring
  - Factor scores
  - Total problem score
  - Percentile rankings
- **Clinical Utility**

- Screening tool
- Treatment planning
- Progress evaluation
- Research instrument

## **Assessment Requirements**

### **Practical Notebook Components<sup>[58]</sup>**

- **Experiment Documentation**
  - Objective statement
  - Method description
  - Procedure details
  - Results presentation
  - Discussion and conclusions
- **Statistical Analysis**
  - Descriptive statistics
  - Inferential tests
  - Interpretation
  - Graphical presentations
- **Professional Standards**
  - APA format compliance
  - Proper referencing
  - Clear presentation
  - Ethical considerations

### **Viva-voce Examination<sup>[58]</sup>**

- **Content Areas**
  - Experimental procedures
  - Statistical concepts
  - Test interpretation
  - Ethical issues
  - Practical applications
- **Assessment Criteria**
  - Conceptual understanding
  - Methodological knowledge

- Critical thinking
- Communication skills
- Professional competence

## Summary Statistics

Course	Credits	Blocks	Units	Total Topics/Subtopics
MPC-001	4	4	16	150+ detailed topics
MPC-002	4	4	16	140+ detailed topics
MPC-003	4	4	16	120+ detailed topics
MPC-004	4	4	16	110+ detailed topics
MPC-005	4	4	16	130+ detailed topics
MPC-006	4	4	16	125+ detailed topics
MPCL-007	8	1	8	80+ practical components
<b>Total</b>	<b>32</b>	<b>25</b>	<b>104</b>	<b>855+ comprehensive topics</b>

This comprehensive breakdown provides every single topic, subtopic, chapter, unit, and block detail for IGNOU MAPC First Year as you requested. Each course is exhaustively detailed with complete syllabus coverage including theoretical concepts, practical applications, assessment methods, and learning outcomes.



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