

Comprehensive Examinations

General Information

As part of the program requirements, you may be required to complete our comprehensive examinations. The purpose of the examination is to allow you to demonstrate your competency of the material learned in your graduate studies. Studying for this examination will give you a chance to integrate what you have learned in your classes and to remedy your deficiencies, and will help prepare you to take the licensing exam. Each comp has an associated outline and study guide(s) so it will be clear what you need to know.

You must have a 3.0 grade-point average to take comps. You also must have taken the relevant course(s) before taking a particular comp. Check the list of relevant classes below.

There are six different tests:

- (1) Statistics & Research Design (required)
- (2) Ethics (required)
- (3) Assessment & Test Construction
- (4) Psychotherapy & Abnormal Psychology
- (5) Developmental & Social Psychology
- (6) Learning, Cognitive, & Physiological

Both the Statistics & Design and Ethics tests are required. You must choose three other tests based on your course work. This is a decision you make in conjunction with your advisor. You must take five out of six tests to complete comps.

Each test has 50 multiple-choice questions. A passing grade for each test is 60% or above. You do not have to take them all at one time. Rather, as soon as you have passed the relevant class(es) you may take that comp. Passing a course means a satisfactory grade has been entered on your transcript. For example, if you take and pass the ethics course in the summer, you can take the ethics comp at the beginning of the fall semester. If you are graduating in the same semester that you are taking a required course for one of the comps, we will allow you to take the comp at mid-term.

All five exams should be completed by mid-term of the semester you are graduating.

The exams are administered on at least four different days during the fall and spring semesters (TBA) and on an individual basis during the summer. You must schedule them at least one week in advance with Dr. Mehta (Fall and Spring semesters) or Dr. Ray (Summer semester).

Registering for Comps

Students should register for PSYC 6982 summer of their first year. Do NOT re-register for PSYC 6982 in any subsequent semesters. When you have passed all five exams, Dr. Mehta will change your grade from an In-Progress to a Satisfactory.

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Relevant Classes

- (1) Statistics & Research Design exam = Research Statistics (6920) AND Advanced Research Methods (6190)
- (2) Ethics exam = Ethics and Professional Issues (6100)
- (3) Assessment & Test Construction exam = Psychometrics for Psychological Assessment (6263) AND Intelligence Testing (6723) AND Objective Assessment (6283).
- (4) Therapy & Abnormal exam = Advanced Abnormal Psychology (6530). Parts of Principles of Psychotherapy (6243) and parts of Theories of Psychotherapy (6150) should be helpful but are not required to take the test.
- (5) Developmental & Social Psychology exam = Advanced Developmental Psychology (6780) OR Advanced Social Psychology (6450). Note that although only one of these classes is required, BOTH content areas are covered on the exam.
- (6) Learning, Cognitive, and Physiological exam = Cognitive Neuroscience (6670). Parts of Theories of Psychotherapy should be helpful but is not required to take the exam.

Study Guides & Review Books

Brief study guides for each exam (except Ethics) are available in the department as well as on our Website. These outlines will assist you in selecting the relevant material to study in the review books and from your course notes. The review books are on reserve in the department and may be checked out for 24-hours at a time. Please see Ms. Sexton or Dr. Mehta to check out these materials. You may also ask a graduate faculty member to check the materials out for you. When you check the materials back in, it is your responsibility to make sure a note is made documenting that you have returned the materials. The review books are copyrighted material so we cannot give you permission to photocopy them.

<u>Exam</u>	<u>Review Books</u>
(1) Statistics & Research Design	Statistics and Research Design
(2) Ethics	Ethics
(3) Assessment & Test Construction	Psychological Assessment; Test Construction
(4) Psychotherapy & Abnormal Psychology	Treatment/Intervention DSM-5
(5) Developmental & Social Psychology	Life-Span Development; Social Psychology
(6) Learning, Cognitive, & Physiological	Learning Theory and the Behavioral & Cognitive-Behavioral Therapies; Physiological Psychology and Psychopharmacology

Failing an Exam

Students who fail an exam are allowed one retake. If a student fails an exam a second time, she or he must meet with the department chair, the advisor, and the departmental graduate coordinator, who will develop a written remedial plan, which may include additional coursework. Inability to pass the comprehensive exam may result in the student's not being awarded a master's degree from AUM.

Comprehensive Examination Outlines
Assessment & Test Construction

Assessment

1. Validity and reliability of interview data for children (p. 3)
2. Genetics/degree of relatedness and intelligence (p. 7)
3. Cross-sectional vs. longitudinal research on the stability of intelligence (p. 8)
4. Flynn effect (p. 8)
5. Stanford-Binet- direct descendent of original Binet scales (1905, 1908, 1911) (p. 13)
6. Differences in IQ based on race & gender (p. 11)
7. Practice effects and the Wechsler Scales (p. 17)
8. Infant and Developmental Screening Tests (particularly the Bayley Scales and Denver Test) (p. 20)
9. Culture Fair tests – what’s wrong with them? (p. 22)
10. Curriculum-based measures (CBM) What are they? (p. 25)
11. Methods of developing personality tests (p. 29).
12. MMPI: Purpose, validity scale definitions & interpretations (pp. 30 -32)
13. Other personality tests: NEO-PI-R (p. 32) projective tests (pp. 32-34)

Test Construction

Reliability

- Classical Test Theory
- Interpreting the Reliability Coefficient
- Standard Error of Measurement
- Confidence Intervals
- Types of Reliability
- Ways of Assessing Reliability
- Kappa Statistic, Spearman Formula, etc.
- Improving Reliability

Validity

- Interpreting Validity Coefficients
- Standard Error of Estimate
- Face Validity
- Content Validity
- Criterion-Related Validity (Concurrent & Predictive Validity)
- Construct Validity (Convergent & Discriminant Validity)
- Multitrait-Multimethod Matrix
- Decision Theory (applied to psychological tests)
- Incremental Validity (True Positives, False Positives, True Negatives, False Negatives)
- Relationship Between Reliability and Validity
- Criterion Contamination

Test Score Interpretation

- Norm-Referenced Interpretation
 - Percentile Ranks
 - Standard Scores (Z-scores)

Comprehensive Examination Outlines
Developmental Psychology and Social Psychology

Developmental Psychology

I. Early Influences on Development

The issue of nature vs. nurture
Critical and sensitive periods
Teratogens and their effects

II. Physical Development

Reflexes in the newborn
Nervous system development
Perception in childhood and adulthood

III. Cognitive Development

Piaget's theory
Sociocultural Theory (Vygotsky)
Memory processes

IV. Language Development

Theories of Language development
Stages of Language acquisition

V. Temperament, Personality, and Identity

Basic Temperament
Theories of personality development
Identity Development

VI. Social and Moral Development

Attachment
Peer relationships (friendship)
Moral Development

VII. Family Factors

Divorce
Stepfamilies
Daycare and childcare

Child Abuse

VIII. School and Television

Time viewing TV
Effects of TV violence

Social Psychology

I. Social Perception

- a. Impression formation
 - i. Central traits
 - ii. Schemata
 - iii. Illusory correlation
 - iv. Pseudopatients
- b. Attribution of cause
 - i. Attribution
 1. Dispositional versus situational
 2. Stable versus unstable
 3. Specific versus global
 - ii. Fundamental attribution bias
 - iii. Actor-observer effect
 - iv. Self-serving bias
 - v. Learned helplessness

II. Interpersonal Relationships

- a. Affiliation
 - i. Anxiety
 1. Misery loves miserable company
 - ii. Gender
 1. Gender differences in affiliation
- b. Attraction
 - i. Gain-loss effect
- c. The maintenance and dissolution of relationships
 - i. Social exchange theory
 - ii. Equity theory
- d. Emotion in relationships
 - i. Emotion-in-relationships model

III. The Self in the Social Context

- a. Self-perception theory
 - i. Epinephrine studies
 - ii. Overjustification hypothesis
- b. Social comparison theory

- c. Self-verification theory
- d. Self-monitoring

IV. Social Influence

- a. Types of social influence
 - i. Conformity to group norms
 - 1. Autokinetic effect
 - ii. Obedience to authority
- b. Bases of social power
 - i. Coercive
 - ii. Reward
 - iii. Expert
 - iv. Referent
 - v. Legitimate
 - vi. Informational
 - vii. Compliance
 - viii. Identification
 - ix. Internalization
- c. Minority influence
- d. Psychological reactance

V. Attitudes and Attitude Change

- a. Attitudes and behavior
 - i. Theory of planned behavior
- b. Factors influencing attitude change
 - i. Characteristics of the communicator
 - 1. Credibility
 - 2. Trustworthiness
 - ii. Characteristics of the communication
 - 1. Level of discrepancy
 - 2. Order of presentation
 - a. Primacy effect
 - b. Recency effect
 - 3. Accidental message
 - iii. Characteristics of the audience
- c. Theories of attitude change
 - i. Cognitive dissonance theory
 - ii. Elaboration likelihood model
 - iii. Social judgment theory
- d. Resistance to persuasion
 - i. Attitude inoculation

VI. Aggression

- a. Theories of aggression
 - i. Frustration-aggression hypothesis
 - ii. Social learning theory

1. effects of media violence
2. effects of pornography
- b. Factors that affect aggressiveness
 - i. Deindividuation
 - ii. Social roles
 1. Prison study
 - iii. Catharsis
 - iv. Threat of retaliation

VII. Prejudice and Discrimination

- a. The nature of prejudice
 - i. Symbolic (modern) racism
 - ii. Homophobia
 - iii. Heterosexism
 - iv. Sexual prejudice
- b. Methods for reducing prejudice and discrimination
 - i. Contact hypothesis

VIII. Prosocial Behavior

- a. Cooperation
 - i. Robber's Cave study
 - ii. Superordinate goals
 - iii. Jigsaw method
- b. Bystander intervention
 - i. Bystander apathy
 1. Pluralistic ignorance
 2. Evaluation apprehension
 3. Diffusion of responsibility

IX. The Social Environment

- a. Field theory
- b. Motivational conflicts
 - i. Approach-approach
 - ii. Avoidance-avoidance
 - iii. Approach-avoidance
- c. Zeigarnik effect
- d. Crowding

Comprehensive Examination Outlines
Therapy & Abnormal Psychology

Abnormal Psychology

I. The Classification of Mental Disorders: DSM-5

II. Disorders Usually First Diagnosed in Infancy, Childhood, or Adolescence

- A. Intellectual Developmental Disorder
- B. Learning Disorders
- C. Communication Disorders
- D. Pervasive Developmental Disorders
 - 1. Rett's Disorder
 - 2. Autism Spectrum Disorder
- E. Attention-Deficit and Disruptive Behavior Disorders
- F. Feeding and Eating Disorders of Infancy or Early Childhood
- G. Tic Disorders
- H. Elimination Disorders
- I. Other Disorders of Infancy, Childhood, or Adolescence
- J. Behavioral Pediatrics

III. Mental Disorders Due to a General Medical Condition: Delirium and Dementia

- A. Delirium
- B. Major Neurocognitive Disorder
- C. Pseudementia
- D. Mild Neurocognitive Disorder

IV. Substance-Related Disorders

- A. Substance Use Disorder
- B. Substance-Induced Disorders

V. Schizophrenias and Other Psychotic Disorders

- A. Schizophrenia
 - 1. Concordance rates of biological relatives
- B. Schizophreniform
- C. Schizoaffective Disorder
- D. Delusional Disorder
- E. Brief Psychotic Disorder

VI. Mood Disorders and Suicide

- A. Mood Episodes
- B. Depressive Disorders
- C. Bipolar Disorders
 - 1. Bipolar I
 - 2. Bipolar II
- D. Suicide

VII. Anxiety Disorders

- A. Panic Disorder with and Without Agoraphobia
- B. Specific Phobia
- C. Social Phobia
- D. Obsessive-Compulsive Disorder
- E. Generalized Anxiety Disorder

VIII. Trauma- and Stressor-related disorders

- A. PTSD and Acute Stress Disorder

IX. Obsessive-Compulsive Disorder

- A. Obsessive-Compulsive Disorder
- B. Body Dysmorphic Disorder

VIII. Somatoform, Factitious, and Dissociative Disorders

- A. Somatoform Disorders
 - 1. Somatic Symptom Disorder
 - 2. Illness Anxiety Disorder
 - 3. Conversion Disorder
- B. Factitious Disorders
- C. Dissociative Disorders
 - 1. Dissociative Amnesia
 - 2. Dissociative Identity Disorder
 - 3. Depersonalization-Derealization Disorder

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IX. Sexual and Gender Identity Disorders, Sleep Disorders, Eating Disorders, and Adjustment Disorders

- A. Sexual and Gender Identity Disorders
- B. Sleep Disorders
- C. Eating Disorders
 - 1. Anorexia Nervosa
 - 2. Bulimia Nervosa
- D. Adjustment Disorders

X. Personality Disorders

- A. Cluster A Personality Disorders (Odd or Eccentric Behaviors)
- B. Cluster B Personality Disorders (Dramatic, Emotional, or Erratic Behaviors)
- C. Cluster C Personality Disorders (Anxiety or Fearfulness)

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THERAPY

1. Behavior Therapy
 - a. Classical Conditioning
 - i. Counterconditioning
 - (1) Systematic desensitization
 - (2) Wolpe and reciprocal inhibition.
 - ii. Aversive Counterconditioning
 - (1) In Vivo Aversion Therapy
 - (2) Covert Sensitization
 - iii. Classical Extinction
 - (1) In Vivo Exposure with Response Prevention (Flooding)
 - (2) Implosive Therapy
 - (3) Graduate Exposure
 - (4) Eye Movement Desensitization and Reprocessing (EMDR)
 - b. Operant Conditioning
 - i. Reinforcement
 - (1) Influences on Effectiveness
 - (2) Shaping
 - (3) Premack Principle
 - (4) Differential Reinforcement
 - ii. Punishment
 - (1) Influences on Effectiveness.
 - (2) Verbal Reprimands
 - (3) Overcorrection
 - (4) Response Cost
 - (5) Time-Out
 - iii. Extinction
 - iv. Contingency Contracts
 - v. Token Economies
 - vi. Social Skills Training
2. Cognitive Therapy
 - a. Rational-Emotive Behavior Therapy
 - b. Beck's Cognitive Therapy
 - i. Depressogenic Schemas
 - ii. Common Cognitive Distortions
 - iii. Depressive Cognitive Triad
 - iv. Collaborative Empiricism
 - v. Socratic Dialogue
 - vi. Automatic Thoughts
 - vii. Core Beliefs
 - c. Stress-Innocation
 - d. Biofeedback
3. Psychodynamic Psychotherapies
 - a. Freudian Psychoanalysis
 - i. Structural Theory

- (1) Id – pleasure principle
 - (2) Ego – reality principle
 - (3) Superego – society, morality
 - (4) Primary vs. secondary process thinking
 - ii. Developmental Theory
 - (1) Psychosexual stages
 - iii. Anxiety – defense mechanisms
 - iv. Psychopathology derives from unconscious, unresolved conflicts rooted in childhood.
 - v. Therapy
 - (1) Goal to make the unconscious conscious
 - (2) Psychic determinism
 - (3) Techniques
 - (a) Free association
 - (b) Analysis of dreams
 - (c) Addressing Resistance
 - (d) Interpretation of Transference
 - (4) Therapeutic Processes.
 - (a) Clarification
 - (b) Confrontation
 - (c) Interpretation
 - (d) Working Through
- b. Adler's Individual Psychology
 - i. Conceptual Ideas
 - (1) Style of life
 - (2) Teleological view of behavior
 - (3) Social interest – root of psychopathology
 - (4) Mistaken style of life
 - (5) Inferiority
 - ii. Therapy
 - (1) collaborative relationship
 - (2) focus on consequences of behavior
 - (3) reorienting of client's belief system and goals
 - (4) lifestyle investigation
 - (a) basic mistakes (distorted cognitions)
 - (b) family constellation
 - (c) fictional (hidden) goals
 - (5) Goals of misbehavior: attention, power, revenge, display deficiency.
- c. Jung's Analytical Psychotherapy
 - i. Personal vs. Collective Unconscious
 - ii. Archetypes
 - iii. Individuation
 - iv. Dream Interpretation
 - v. Optimistic and emphasizes healthy aspects of client personality and upon the here-and-now.

- d. Object Relations Therapy
 - i. Mahler, Klein, Fairbairn, & Kernberg
 - ii. Maher – infant identity processes
 - (1) normal autism,
 - (2) normal symbiosis
 - (3) separation-individuation
 - (4) independence-dependence – separation anxiety
 - (5) object constancy
 - iii. Pathology – abnormalities of early object relations, i.e. splitting of good and bad objects.
 - iv. Therapy – support, acceptance, and restoration of client’s interpersonal faculties to a more meaningful and realistic state.
4. Humanistic Psychotherapies
- a. Person-Centered Therapy
 - i. The Self
 - ii. Pathology – incongruence between self and experience or ideal self (who you think you ought to be internally) and real self (what your experiences in the world tell you about who you are)
 - iii. Self-Actualization
 - iv. Three Facilitative Conditions Therapist should embody(necessary and sufficient)
 - (1) Unconditional Positive Regard (respect)
 - (2) Genuineness (Congruence)
 - (3) Accurate Empathic Understanding
 - b. Gestalt Therapy
 - c. Existential Therapy
 - i. Emphases
 - (1) depersonalization and isolation
 - (2) responsibility
 - (3) freedom
 - (4) death
 - (5) focus upon the therapist-client relationship as the curative factor.
5. Brief Therapies
- a. Interpersonal Therapy
 - b. Solution-Focused Therapy
 - c. Transtheoretical Model
 - i. Stages of Change
 - ii. Processes of Change
 - iii. Levels of Change
 - iv.
6. Family Therapy
- a. General Systems Theory and Cybernetics
 - i. Positive and negative feedback loops
 - b. Communication/Interaction Family Therapy (Mental Research Institute)
 - i. Double-Bind Communication from research with schizophrenic patients.

- ii. Symmetrical communications
 - iii. Complementary Communications
 - iv. Circular Model of Causality
 - v. Combination of direct intervention and paradoxical intervention.
 - c. Bowenian Extended Family Systems Therapy
 - i. Differentiation of the Self
 - ii. Emotional Triangle
 - iii. Family Projection Process
 - iv. Genograms
 - d. Minuchin's Structural Family Therapy
 - i. Concerned with boundaries, power hierarchies, and family subsystems
 - ii. Problems due to inflexible family structure
 - iii. Therapy – joining, evaluation, and restructuring
 - e. Haley's Strategic Family Therapy
 - i. Emphasize role of communication patterns
 - ii. Symptoms represent a strategy for controlling family
 - iii. Pathology when members deny their attempts at control
 - iv. Therapy – alter family's transactions and organization
 - v. Highly structured first session
 - vi. Use of paradoxical interventions: ordeals, restraining, positioning, prescribing the symptom
 - f. Object Relations Family Therapy
 - i. Projective identification
 - ii. Multiple transferences
7. Group Therapy
- a. Yalom's Stages of Group Development
 - b. Yalom's Curative Factors in Group Therapy
 - c. Yalom's Primary Therapist's Tasks
8. Feminist Therapy
- a. "personal is political"
 - b. Avoidance of Labels or Diagnosis
 - c. Egalitarian Therapeutic Relationship
 - d. Avoidance of Revictimization (blaming the victim)
 - e. Difference between feminist and non-sexist therapies.
 - f. Feminist therapy and object relations therapy
9. Community Psychology
- a. Types of Prevention
10. Psychotherapy Research
- a. General Outcome Studies
 - i. Eysenck (1952)
 - ii. Smith, Glass and Miller (1980) and meta-analysis
 - iii. What are the statements we can make about the effectiveness of specific therapies from meta-analytic research?

- b. Effects of Treatment Length
 - i. Howard et al (1986) – dose-dependent effect
 - (1) Where do treatment length’s positive effect level off?
 - ii. Phase Model
 - (1) Remoralization
 - (2) Remediation
 - (3) Rehabilitation
 - c. Efficacy vs. Effectiveness Research
 - d. Placebo Effect
 - e. Diagnostic Overshadowing
 - f. Therapist Distress
 - g. Psychiatric Hospitalization
11. Multicultural Psychotherapy
- a. Research
 - i. Sue et al. (1991)
 - ii. Premature Termination
 - iii. Therapist-Client Matching – what are the implications?
 - b. Cultural Competence
 - c. Sue and Zane (1987) – critical processes when working with culturally diverse clients
 - i. Credibility
 - ii. “Giving” – client’ sense that they are receiving something
 - d. Sue and Sue (2002)
 - i. Awareness, Knowledge and Skills
 - e. Concepts
 - i. Cultural Encapsulation
 - ii. Emic vs. Etic
 - iii. High vs. Low Context Communication
 - iv. Consequences of Oppression
 - v. Cultural vs. Functional Paranoia
 - vi. Sexism and Heterosexism
 - f. Acculturation and Identity Development
 - i. Berry’s acculturation categories
 - ii. Cross (1991) Black Racial Identity Development Model
 - (1) Preencounter
 - (2) Encounter
 - (3) Immersion/Emersion
 - (4) Internalization/Commitment
 - iii. Helms (1990) White Racial Identity Development Model
 - (1) Contact
 - (2) Disintegration
 - (3) Reintegration
 - (4) Pseudo-Independence
 - (5) Immersion-Emmersion
 - (6) Autonomy
 - iv. Troiden’s Homosexual Identity Development Model
 - (1) Sensitization, Feeling Different

- (2) Self-Recognition, Identity Confusion
- (3) Identity Assumption
- (4) Commitment; Identity Integration

Comprehensive Exam Outline Learning, Cognitive, and Physiological

I. Principles of Classical Conditioning

A. Ivan Pavlov

Key concepts: Unconditioned Stimulus/Response, Conditioned Stimulus/Response
Forward conditioning (delay conditioning), classical extinction, spontaneous recovery, stimulus generalization, stimulus discrimination and experimental neurosis, higher order conditioning

B. John B. Watson

Key concepts and Topics : His views on what psychologist should study, the Little Albert study

II. Principles of Operant Conditioning

A. Edward L. Thorndike

Key Concepts and Topics: Law of Effect, trial and error learning, connectionism

B. B.F. Skinner

Key Concepts and Topics: Reinforcer, Punisher, Positive/negative reinforcement, Positive/Negative punishment, operant extinction, extinction burst, primary/secondary reinforcers, schedules of reinforcement, continuous schedule, intermittent schedules: fixed/variable interval, fixed/variable ratio, Concurrent schedules of reinforcement, superstitious behavior, stimulus control of behavior, chaining, stimulus and response generalization, escape conditioning, avoidance conditioning.

III. Cognitive Learning Theories

A. Latent Learning

Key Concepts and Topics: Tolman's purposive behaviorism, Tolman's and Honzik (1930)

B. Insight

Key Concepts and Topics: Gestalt psychology and Kohler, Kohler's classic ape/banana study study

C. Observational/ Social Learning

Key Concepts and Topics: Bandura, Bobo doll study, the four cognitive processes involve in observation learning, guided participation

D. Learned Helplessness

Key Concepts and Topics: How it was first observed, its relationship to depression, the type of attributions made by depressed people, hopelessness and learned helplessness

IV. Memory and Forgetting

A. Memory

Key Concepts and Topics: The three main memory processes, the information processing model, sensory memory, short-term memory, long-term memory, anterograde amnesia, retrograde amnesia, serial position effect, levels of processing approach, procedural memory, declarative memory, prospective memory, schema, metamemory and metacognition

B. Forgetting

Key Concepts and Topics: forgetting: trace decay theory, interference theory, retroactive interference, proactive interference, cue dependent forgetting

C. Methods for Improving Learning and Memory

Key Concepts and Topics : Encoding specificity, state dependent learning, elaborative rehearsal, mnemonic devices, method of loci, keyword method, arousal and memory, Yerkes-Dodson Law

V. Physiological Psychology and Psychopharmacology

A. The Nervous System

1. The Neuron
 - a. Parts of the neuron
 - b. Myelin sheath
 - c. Potentiation
 - d. Reuptake
2. Neurotransmitters – 5 major types
3. Divisions of the Nervous System

B. Brain Anatomy

1. Hindbrain
2. Midbrain
3. Forebrain
 - a. Subcortical Structures
 - b. Cerebral Cortex
 - i. Frontal lobe & prefrontal cortex & Broca's area
 - ii. Parietal lobe
 - iii. Temporal lobe & Wernicke's area
 - iv. Occipital lobe

- c. What kind of function loss results in damage to these areas?
 - 4. Hemispheric Specialization
 - a. Corpus Callosum
 - b. Split brain patients
 - C. Sensation and Perception – Theories of Color Vision
 - 1. Young-Helmholtz trichromatic theory
 - 2. Opponent-process theory
 - D. Stress – General Adaption Syndrome
 - E. Psychopharmacology (know major drug families)
 - 1. Antipsychotic drugs
 - 2. Antidepressant drugs
 - 3. Mood Stabilizing drugs
 - 4. Sedative-Hypnotics
 - 5. Beta-Blockers
 - 6. Narcotic-Analgesics
 - 7. Psychostimulants

Comprehensive Exam Outlines

Research Design and Statistics

Research Design

I. Planning and Conducting Research

Identify and define relevant variables (e.g., IVs & DVs)
Quasi-experimental vs. "True" experimental research (i.e., randomization)
Sampling Techniques (e.g., random, stratified, cluster)

II. Methods of Control in Experimental Research

Maximizing variability due to the IVs
Controlling variability due to Extraneous Variables (i.e., randomization, matching, Blocking, statistical control-ANCOVA)
Minimizing Random error

III. Internal and External Validity

Threats to internal validity (maturation, history, etc.)
Threats to external validity (testing x treatment... ability to generalize, etc.)

IV. Experimental Research Design

Groups Design (i.e., between groups, factorial, within-participants, mixed designs)
Single-participant designs (i.e., AB, ABA, ...multiple baseline designs)

Statistics Study Topics

I. Scales of Measurement

- A. Nominal
- B. Ordinal
- C. Interval
- D. Ratio

II. Descriptive Statistics

- A. Frequency Polygons (distributions)
- B. Central Tendencies
- C. Measures of Variability

D. Effects of Mathematical Operations on Measure of Central Tendency and Variability

III. Overview of Inferential Statistics

- A. The logic of Statistical Inference (populations/samples, sampling distributions, etc.)
- B. The logic of hypothesis testing (null/alternate hypothesis, alpha, rejection region, decision outcomes, etc.)

IV. Inferential Statistical Tests

- 1. For Nominal data (non-parametric test, Chi-squares)
- 2. For Ordinal data (Mann-Whitney U, Wilcoxon Matched-Pairs, Kruskal Wallis)
- 3. For interval and ratio data (t-tests, ANOVAs)

V. Correlation and Prediction

- A. Bi-Variate Techniques (Scattergrams, Correlation Coefficients, Simple Regression)
- B. Multivariate Techniques and Predictions (Multiple Regressions, Discriminant Functional Analysis, Canonical Correlations)
- C. Multivariate Techniques: Causal Modeling
 - 1. Path Analysis
 - 2. LISREL.