

PSYCHOLOGY 2301

A STUDENT SUPPLEMENTARY HANDBOOK

TO ACCOMPANY

The Science of Psychology

By

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WHAT TO KNOW ABOUT STUDYING PSYCHOLOGY

TEXTBOOK

To succeed in this course, you must have the appropriate textbook. There are several textbooks currently in use by instructors of PSYC 2301 at Houston Community College. Check your instructor's syllabus to be certain that you have the textbook s/he has specified.

THE PURPOSE OF THIS HANDBOOK

At Houston Community College, PSYC 2301: Introduction to Psychology includes a core set of topics and concepts. This material is covered in all classes at all campuses and is tested in a comprehensive final examination at the end of the course. This Supplementary Handbook is intended as a guide to the specific concepts, terms, and objectives representing the core topics that will be covered on the departmental final exam. You are encouraged to use this Supplementary Handbook as your guide to prepare for the final exam by responding to the Learning Objectives and defining the Key Terms.

CLASS PREPARATION AND STUDY GUIDELINES

The study of psychology is not hard, but there is a lot of material to learn. Students are expected to keep up with all of the assigned reading. You should understand the material and be able to relate it to real human behavior. The information presented below is designed to help you learn the subject by providing the kinds of study hints you can employ successfully in any college class you take.

HOW MUCH TIME SHOULD I SPEND STUDYING PSYCHOLOGY?

To be successful, a good guideline for any college class of the amount of time you need to invest outside of class is two hours for each hour you spend in class. If you can make this commitment, you should encounter no serious problems in completing all assignments and preparing comfortably for tests. You should spend your time doing the following:

Read Ahead

The best starting place is the Course Schedule in your syllabus. It will specify the material that needs to be covered in the sequence deemed most appropriate by your instructor. You should always maintain a disciplined reading schedule so that you can stay current with assigned readings; falling behind in your reading can be disastrous. You should read ahead all the material that will be covered in the next class. This reading will acquaint you with the Learning Objective Questions and the Key Terms that will be covered in class. With this knowledge, you will be prepared to ask questions and discuss relevant topics.

Read Effectively

Create a comfortable reading environment for yourself. Avoid distractions and interruptions. Be alert and attentive. Don't rush yourself. These "little things" will increase your comprehension of the subject. Use your *Supplementary Handbook* as a

guide for your reading. Keep a dictionary by your side to look up any unfamiliar words. Remember, as in sports, music, dance, or other arts, learning takes time and effort; the more you put in, the more you will get out of the learning process.

SHOULD I ATTEND CLASS?

Studies indicate that students who attend their classes do better than students who do not attend. In class, you will not only cover important course-related information, but, additionally, announcements will be made, due dates assigned, and study suggestions offered. In college, you are largely responsible for your own learning. Your instructor is a facilitator. Use class time to ask questions, seek clarification, and participate in discussions. The more involved you are in your own learning, the more fruitful the activity will be, and the more you will learn.

WHAT SHOULD I DO DURING CLASS TIME?

There are several things you can do to improve your chances of being successful in your class. You are in control of all of them, so do the following things to maximize the benefits of being in class.

Be On Time

The start of class is an important time. Be prepared to take notes, participate, or take a test. Tardiness is disruptive to you and your classmates.

Take Good Notes

Good note taking keeps your mind focused on the subject being discussed. Attentiveness should lead to better comprehension. Note taking provides you with documentation about what the instructor feels is the most relevant, important, difficult, or interesting information about a subject. You should couple your notes with related text material for a comprehensive understanding of the subject. Use your notes to prepare for assignments and tests. Make sure your notes are legible, thorough, and organized.

Participate in Class Discussions

Whenever you have the opportunity to participate, do so! Show off what you have learned, but do it in a way that contributes to a positive learning environment for you and your classmates. Be involved in the learning process. Ask relevant questions. Offer insights. Give examples. Participation should be constructive and fun.

Get to Know Your Classmates

Together you can do several things that enhance learning. Every time you explain a concept to someone else, you increase your understanding of the material. You can share ideas and information. You can check each other to make sure you are learning the material. You can “bounce” ideas around. You can study together in advance of tests. If you miss a class, you’ll know someone who will share notes with you or who can tell you about up-coming assignments or tests.

*You are special because you chose to pursue higher learning.
Invest in yourself and you should be successful!*

The Science of Psychology

Laura A. King

LEARNING OBJECTIVES and KEY TERMS For the FINAL EXAMINATION

Students are responsible for the following learning objectives and key terms for the comprehensive departmental final exam. Learning objectives and key terms not included in this list will not be tested on the Final Exam.

I. INTRODUCTION (CH. 1 & 2)		
<i>Learning Objectives</i>	<i>Key Terms</i>	<i>Pages</i>
1. Define psychology	psychology	4
2. Define the scientific method and explain how it is used in psychology.	Scientific method	26-30
3. Describe the major schools of thought and theoretical perspectives in psychology.	Biological psychology	11-12
	Behaviorism	12
	Psychoanalysis (Psychodynamic)	12-13
	Humanistic psychology	13
	Cognitive psychology	13
	Evolutionary psychology	13-14
4. Define and explain the differences between the various descriptive research methods.	Sociocultural approach	14
	Naturalistic observation	30; 46
	Laboratory observations	30; 46
	Case study	31-32
	Survey	30-31
	Correlation	33-36
5. Define representative sample and explain why it is important.	Correlation coefficient	33
	Population	45
	Sample	45
	Representative sample	45, Addendum (1)
6. Describe the experimental method, state its advantages and disadvantages, and distinguish between independent and dependent variables.	Experimental method	37
	Hypothesis	27
	Random assignment	38
	Independent variable	38-39
	Dependent variable	39-40
	Experimental group	40
7. Explain the rationale behind placebo-control experiments.	Control group	40
	Experimenter bias	42
	Placebo	43
	Placebo effect	43
8. Outline the ethical standards that psychological researchers must follow.	Double-blind procedure	43
		52-54

9. Explain the difference between a psychologist and a psychiatrist.	Psychologist Psychiatrist	15 15
II. BIOLOGY AND BEHAVIOR (CH. 3)		
<i>Learning Objectives</i>	<i>Key Terms</i>	<i>Pages</i>
1. Identify the basic components of the neuron.	Neuron	65
	Dendrites	67
	Cell body	67
	Axon	67
2. Identify the basic components of the synapse.	Synapse	70
	Synaptic gap	70
3. Define the action potential and explain the processes that occur when a neuron is activated.	Resting potential	69
	Action potential	69-70
4. Identify the major neurotransmitters and explain how neurotransmitters affect behavior.	Neurotransmitters	70
	Acetylcholine	72
	Norepinephrine	72-73
	Dopamine	73
	Serotonin	73
	Endorphins	73
5. Identify the medulla, pons and cerebellum, and describe their functions	Brain stem	78
	Medulla	78
	Pons	78
	Cerebellum	78-79
6. List the processes regulated by the hypothalamus.	Hypothalamus	81-82
7. Describe the limbic system, and list the responses and behaviors affected by it.	Limbic system	80
	Hippocampus	81
	Amygdala	81
8. Describe the components of the cerebrum and their functions.	Cerebrum	Addendum (2)
	Cerebral cortex	82
	Corpus callosum	87
	Cerebral hemispheres	82; 86-87
9. Explain the functions of the frontal lobes.	Frontal lobes	84
	Motor cortex	85
	Association areas	86
	Broca's area	86
	Broca's aphasia	86
10. Describe various methods for studying the brain and its functions.	Electroencephalograph (EEG)	75
	Computerized axial tomography (CAT or CT scan)	76
	Positron emission tomography (PET scan)	76
	Magnetic resonance imaging (MRI)	77
	Functional magnetic resonance	77

	imaging (fMRI)	
11. Explain the difference between the central and the peripheral nervous systems.	Central nervous system Peripheral nervous system	64 64
12. Explain the functions of the sympathetic and parasympathetic nervous systems.	Sympathetic nervous system Parasympathetic nervous system Autonomic nervous system	64 64 64
13. Explain plasticity.	Plasticity	63; 91-92
14. What is the endocrine system? Describe the ways that the pituitary gland and adrenal glands affect behavior.	Endocrine system Hormones Pituitary gland Adrenal glands	90 90 90 90-91
III. LEARNING (CH. 6)		
<i>Learning Objectives</i>	<i>Key Terms</i>	<i>Pages</i>
1. Define and identify examples of learning.	learning	182
2. Explain the process through which classical conditioning modifies an organism's responses to stimuli.	Classical conditioning Unconditioned stimulus Unconditioned response Neutral stimulus Conditioned stimulus Conditioned response Stimulus generalization Stimulus discrimination Extinction (in classical conditioning) Spontaneous recovery	183 184 184 184-185 184 184 186-187 187 188 188
3. Summarize the contributions of Pavlov, Watson and Skinner to the study of learning.		184, 189, 193-194
4. Explain the process through which operant conditioning modifies an organism's responses to stimuli.	Operant conditioning Reinforcer Extinction Generalization Reinforcement Primary reinforcer Secondary reinforcer	193 195 197 197 195 196 196-197
5. Define shaping.	Shaping Successive approximations	194 194-195
6. Explain the difference between positive and negative reinforcement	Positive reinforcement Negative reinforcement	195-196 195-196
7. Define punishment and summarize the factors that influence its effectiveness.	Punishment by application (positive) Punishment by removal (negative)	199-200 199-200

8. Define behavior modification	Behavior modification Token economy	201-202 197
9. Define observational learning.	Observational learning Mirror neurons	202 66 (CH. 3)
IV. MEMORY (CH. 7)		
<i>Learning Objectives</i>	<i>Key Terms</i>	<i>Pages</i>
1. Explain the information-processing approach to memory	Information processing approach Encoding Storage Retrieval	218 218-219 218, 222 218, 234
2. Describe the function and characteristics of short-term memory	Short-term memory Working memory	223 224-225
3. Describe the characteristics of long-term memory.	Long-term memory Declarative memory Semantic memory Episodic memory Nondeclarative memory Procedural memory	226 227 228 228 228-229 229-230
4. Explain the differences between recall, free recall, cued recall, and recognition measures of memory.	Recall Recognition	236 236
5. Explain the reasons for forgetting.	Encoding failure Decay theory Interference theory Motivated forgetting Retrieval failure	243 244-245 244 239 244
6. Describe the process of reconstructive memory	Eyewitness accounts	240-243
7. Explain the roles of schemas in memory.	Schema	231
8. Describe several techniques for improving memory	Mnemonics Elaborative rehearsal (elaboration) Self-references Visual imaginary Organization Overlearning Massed practice Spaced (distributed) practice	Addendum (3) 220-221 220 221 246-247 Addendum (4) Addendum (5) Addendum (6)
V. LIFESPAN DEVELOPMENT (CH. 9)		
<i>Learning Objectives</i>	<i>Key Terms</i>	<i>Pages</i>
1. Explain the differences between cross-sectional and longitudinal	Cross-sectional design Longitudinal design	291 291

research designs.		
2. List the characteristics of the three stages of prenatal development.	Zygote Germinal period Embryonic period Fetal period	293 293 293 294
3. Explain the effects of teratogens and other negative factors on prenatal development.	Teratogen Fetal alcohol (spectrum) syndrome	294 294
4. Describe the relationship between contact comfort and attachment.	Attachment Separation anxiety Stranger anxiety	305 Addendum (7) Addendum (8)
5. Explain the differences between the secure, anxious-ambivalent, avoidant, and disorganized patterns of attachment.	Secure attachment Anxious-ambivalent Avoidant Disorganized	305 305 305 Addendum (9)
6. Explain the differences between the social learning and gender schema theory explanations of gender role development.	Sex Gender identity Sexual orientation	358 359 376 (CH. 11)
7. Describe the process of cognitive development according to Piaget.	Schemes (schemas) Assimilation accommodation	298 298 298
8. Summarize the characteristics of Piaget's four stages of cognitive development.	Sensorimotor stage Object permanence Preoperational stage Egocentrism Concrete operational stage Conservation Formal operational stage	298-299 299 299-300 300 299, 300 300 299, 300-301
9. Summarize the characteristics of Erikson's eight stages of psychosocial development.	Trust/ mistrust Autonomy/ shame & doubt Initiative/guilt Industry/inferiority Identity/role confusion Intimacy/isolation Generativity/stagnation Ego integrity/despair	307-308 307-308 307-308 307-308 309, 313 309, 320 309, 320 309, 321 Addendum (Table A)
10. Explain the effects of authoritarian, authoritative, and permissive parenting styles on children's development.	Authoritarian style Authoritative style Permissive style	308-309 309 309
11. Explain Kohlberg's levels and stages of moral development	Preconventional level & stages Conventional level & stages Postconventional level & stages	310 310 310
12. Describe the symptoms and	Alzheimer's disease	249 (CH. 7)

proposed causes of Alzheimer's disease		
VI. PERSONALITY (CH. 12)		
<i>Learning Objective</i>	<i>Key Terms</i>	<i>Pages</i>
1. Define personality.	Personality	396
2. Describe the processes that take place in the conscious, preconscious, and unconscious mind.	Conscious Preconscious unconscious	396-397 Addendum (10) 396-397
3. Define and identify the functions of the id, ego, and superego.	Id Ego Superego	397-398 397-398 397-398
4. Explain the purpose of defense mechanisms in Freud's theory.	Defense mechanism Repression Projection Displacement Reaction formation Regression Denial	398-399 398 398-399 398 398-399 398 398
5. Summarize the basic assumptions associated with Freud's psychosexual stages.	Psychosexual stages	399-400
6. Explain the Big Five personality traits.	Trait Big Five	406-407 407-409
7. Explain the views of humanistic theorists regarding personality.	Humanistic psychology	403-405
8. Explain the views of Abraham Maslow on self-actualization.	Hierarchy of needs Self-actualization	336-337 (CH. 10) 403-404
9. Explain Bandura's social-cognitive view of personality.	Social cognitive Self-efficacy Reciprocal determinism	414-415 415 414 Addendum (11)
10. Describe the evidence for and against the view that personality is inherited.	Behavior genetics	420
11. Explain the differences between objective (self-report inventory) and projective personality test.	Self-report inventory Projective test	421-422 422-423
VII. STRESS AND HEALTH (CH. 17)		
<i>Learning Objectives</i>	<i>Key Terms</i>	<i>Pages</i>
1. Describe the stages of the General Adaptation Syndrome (GAS).	General Adaptation syndrome (GAS) Alarm stage	571 571 571

	Resistance stage Exhaustion stage	571
2. Describe the features of post-traumatic stress disorder (PTSD).	Post-traumatic stress disorder	511 (CH. 15)
3. Explain the differences between problem-focused and emotion-focused coping.	Problem-focused coping Emotion-focused coping	574 574
4. Explain the purpose and structure of the Social Readjustment Rating Scale (SRRS.)	Social Readjustment Rating Scale (SRRS)	Addendum (12)
5. Describe the impact of daily hassles on stress and health.	Hassles	Addendum (13)
6. Describe the effects of stress on the immune system.	Biopsychosocial model Health psychology psychoneuroimmunology	562 562 572
7. List the factors that influence individual capacity for resisting the effects of stress.	Resilience Social support Hardiness Meditation Biofeedback	351 CH. 10 568 575 176-178 (CH.5) Addendum (14)
VIII. PSYCHOLOGICAL DISORDERS (CH. 15)		
<i>Learning Objectives</i>	<i>Key Terms</i>	<i>Pages</i>
1. List the criteria for abnormal behavior	Deviation for social/cultural norms Maladaptive/dysfunctional behaviors Personal distress	500 500 500
2. Describe the purpose, organization, and content of the DSM-5.	DSM-5	502-504
3. Define and describe the group of disorders called “anxiety disorders.”	Generalized anxiety disorder Panic disorder Specific phobias Social anxiety disorder Agoraphobia	506 507 508 508-509 Addendum (15)
4. Describe the features of obsessive-compulsive disorders.	Obsessive-compulsive disorders	509
5. Describe the characteristics of dissociative identity disorder.	Dissociative identity disorder	516-517
6. Describe the features of schizophrenia.	schizophrenia	517-518
7. List the possible causes of schizophrenia.		518-520
8. Describe the features of major depression.	Major depressive disorder	511-512
9. Summarize the features of bipolar	Bipolar disorder	514-515

disorder.	Mania (manic episode)	
10. Summarize the risk factors for suicide.		524-526
11. Summarize the features of the personality disorders.	Personality disorders Antisocial personality Paranoid personality Borderline personality Narcissistic personality	521 521-523 521 523-524 521
IX. Therapies (CH. 16)		
<i>Learning Objectives</i>	<i>Key Terms</i>	<i>Pages</i>
1. Summarize the various approaches to therapy.	Psychoanalysis Client-centered (person-centered) therapy Behavior therapy Cognitive therapy Biomedical (biological) therapy	539-540 540 540-542 542-544 546-551 545 Addendum (Table B)

ADDENDUM:

Supplementary list of definitions for the key terms

This list provides the definitions of the key terms that will be covered in the PSYC2301 Final Exam but are not defined in the textbook of Visualizing Psychology. They are ordered by sections in which they appear in the master list.

I. INTRODUCTION

1. **Representative Sample:** a sample consists of the important subgroups (e.g., age, sex, education, income) in the same proportion as they are found in the population.

II. BIOLOGY AND BEHAVIOR

2. **Cerebrum:** The large, rounded structure of the brain occupying most of the cranial cavity, divided into two cerebral hemispheres that are joined at the bottom by the corpus callosum. It controls and integrates motor, sensory, and higher mental functions, such as thought, reason, emotion, and memory.

III. LEARNING

IV. MEMORY

3. **Mnemonic (Devices):** Strategies that can improve memory, especially for material that is not easily organized.
4. **Overlearning:** Continue to study the materials after you think you know them.
5. **Massed Practice:** Time spent learning is grouped (or massed) into long, unbroken intervals (also known as cramming).
6. **Spaced (or Distributed) Practice:** Learning in short practice sessions with rest periods in between.

V. LIFESPAN DEVELOPMENT

7. **Separation Anxiety:** An infant's distress when a familiar caregiver leaves; most obvious between 9 and 14 months.
8. **Stranger Anxiety (or Wariness):** An infant's expression of concern – a quiet stare, clinging to a familiar person, or sadness – when a stranger appears.

- 9. Disorganized Attachment:** Infant may show distress when mother leaves and alternate between happiness, indifference, and anger when mother returns; often look away from mother or look at her with expressionless face.

VI. PERSONALITY

- 10. Preconscious:** Consists of things that a person is not currently aware of, but could be retrieved or brought into consciousness if desired or needed.
- 11. Reciprocal Determinism:** Personality development is determined by the reciprocal interactions of behavior, environmental (or situational) factors, and cognitive (personal) factors.

VII. STRESS AND HEALTH

- 12. Social Readjustment Rating Scale (SRRS):** The scale was developed by Holmes and Rahe to measure stress by ranking different life events from most to least stressful and assigning a point value to each event. Life events, negative or positive, that produce the greatest life changes and require the greatest adaptation are considered the most stressful. The 43 life events on the SRRS range from death of a spouse (100 points) to getting a traffic ticket (11 points).
- 13. Hassles:** Small problems of daily living that can accumulate and sometimes become a major source of stress.
- 14. Biofeedback:** An involuntary bodily process (such as blood pressure or heart rate) is recorded by an external monitoring device, and the information is fed back to an organism to increase voluntary control over the bodily function.

VIII. PSYCHOLOGICAL DISORDERS

- 15. Agoraphobia:** An extreme fear of venturing into public places. Agoraphobia often develops following a panic attack. People with agoraphobia fear being in places from which they cannot easily escape. In severe cases, they may refuse to leave their home because this is the only place they feel safe.

V. LIFESPAN DEVELOPMENT

TABLE A:
ERIKSON'S PSYCHOSOCIAL STAGES ("Eight Stages of (Hu)Man")

Stage	Age	Significant others	Main task (Basic Virtue)	Conditions favoring positive resolution
1. Trust vs. Mistrust	Infancy Birth-1 year	Parents (especially mother)	Lifelong sense of trust ("Hope")	Good quality of care (consistency and regularity in care)
2. Autonomy vs. Shame & Doubt	Early Childhood 1 - 3 years	Parents	Sense of independence ("Will")	Parenting-patience, tolerance, firmness, no over-protection.
3. Initiative vs. Guilt	Middle Childhood 3 -6 years	Parents	Self starting Self guidance ("Purpose")	Parenting- same as in second stage
4. Industry vs. Inferiority	Elementary School years 6 -11 years	Parents Teachers	Sense of achievement (doing projects, making things) ("Competence")	Encouraging good efforts, giving positive feedback.
5. Identity vs. Role Confusion	Adolescence (11 - 18-22 years)	Parents Teachers Peers	Identity - "Who am I?" making choices. Lifelong process ("Fidelity")	Freedom to explore options in life.
6. Intimacy vs. Isolation	Young Adulthood (22 - 35 years)	Mate, Intimate friends	Searching for "soul mate" ("Love")	Prerequisite- Sense of identity
7. Generativity vs. Stagnation	Middle Adulthood (35 - 65 years)	Next generation	To help and guide next generation ("Care")	Having made good decisions in previous stages
8. Ego integrity vs. despair	Late Adulthood (65 years - death)	Mankind	Reflection of one's life ("Wisdom")	Having made good decisions in previous stages

(Table Created by Dr. Joanne Hsu)

IX: THERAPIES

TABLE B:
Perspectives on the causes and treatment of psychological disorders

Perspective	Cause	Treatment
Psychodynamic (Psychoanalytical)	Fixation (early childhood) unresolved unconscious conflict, breakdown of ego defense mechanisms	Psychoanalysis (free association, dream analysis, analyzing resistance, analyzing transference, interpretation) (p. 539)
Humanistic	Blocking of normal tendency toward growth and self actualization	Person-center (or Client- centered therapy) (Empathy, unconditional positive regard, congruence (genuineness), active listening) (pp. 540)
Behavioral	Learned by – classical conditioning, or – reinforcement, or – observation and modeling	Behavior Therapy (Exposure therapy using systematic desensitization procedure, token economy, modeling, etc.) (pp. 540-542)
Cognitive	Faulty, irrational, negative and self-defeating thinking	Beck's Cognitive Therapy, Cognitive restructuring (pp. 542-544)
Cognitive- Behavioral	Combination of Learned maladaptive behavior and negative thinking pattern	Cognitive Behavior Therapy (CBT) ("problem focused" and "action oriented", specific strategies are used to address specific problems.) (pp. 543-544)
Biological (Diathesis-Stress Model)	Hereditary factors, malfunctioning of the nervous system or body's biochemistry	Biomedical Therapies (Psychopharmacology or drug therapies, Electroconvulsive Therapy (ECT), transcranial magnetic stimulation (TMS) and psychosurgery.) (pp. 546-551)

(Table Created by Dr. Joanne Hsu)