

MCAT Psychology Topics Listed by UD Course Number

PSY 101	<p>Sensory Processing</p> <ul style="list-style-type: none">• Sensation<ul style="list-style-type: none">○ Thresholds○ Weber's Law○ Signal detection theory○ Sensory adaptation• Sensory receptors<ul style="list-style-type: none">○ Sensory pathways○ Types of sensory receptors <p>Vision</p> <ul style="list-style-type: none">• Structure and function of the eye• Visual processing<ul style="list-style-type: none">○ Visual pathways in the brain○ Parallel processing○ Feature detection <p>Hearing</p> <ul style="list-style-type: none">• Auditory processing<ul style="list-style-type: none">○ Auditory pathways in the brain• Sensory reception by hair cells <p>Other Senses</p> <ul style="list-style-type: none">• Somatosensation<ul style="list-style-type: none">○ Pain perception• Taste<ul style="list-style-type: none">○ Taste buds/chemoreceptors that detect specific chemicals• Smell<ul style="list-style-type: none">○ Olfactory cells/chemoreceptors that detect specific chemicals○ Pheromones○ Olfactory pathways in the brain• Kinesthetic sense• Vestibular sense <p>Perception</p> <ul style="list-style-type: none">• Perception<ul style="list-style-type: none">○ Bottom-up/Top-down processing○ Perceptual organization (e.g., depth, form, motion, constancy)○ Gestalt principles <p>Attention</p> <ul style="list-style-type: none">• Selective attention• Divided attention <p>Cognition</p> <ul style="list-style-type: none">• Information-processing model• Cognitive development<ul style="list-style-type: none">○ Piaget's stages of cognitive development○ Cognitive changes in late adulthood○ Role of culture in cognitive development
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	<ul style="list-style-type: none">○ Influence of heredity and environment on cognitive development● Biological factors that affect cognition● Problem solving and decision making<ul style="list-style-type: none">○ Types of problem solving○ Barriers to effective problem solving○ Approaches to problem solving○ Heuristics, biases, intuition, and emotion<ul style="list-style-type: none">▪ Overconfidence and belief perseverance● Intellectual functioning<ul style="list-style-type: none">○ Multiple definitions of intelligence○ Influence of heredity and environment on intelligence○ Variations in intellectual ability <p>Consciousness</p> <ul style="list-style-type: none">● States of consciousness<ul style="list-style-type: none">○ Alertness○ Sleep<ul style="list-style-type: none">▪ Stages of sleep▪ Sleep cycles and changes to sleep cycles▪ Sleep and circadian rhythms▪ Dreaming▪ Sleep disorders○ Hypnosis and meditation● Consciousness altering drugs<ul style="list-style-type: none">○ Types of consciousness altering drugs and their effects on the nervous system and behavior○ Drug addiction and the reward pathway in the brain <p>Memory</p> <ul style="list-style-type: none">● Encoding<ul style="list-style-type: none">○ Process of encoding information○ Processes that aid in encoding memories● Storage<ul style="list-style-type: none">○ Types of memory storage (e.g., sensory, working, long-term)○ Semantic networks and spreading activation● Retrieval<ul style="list-style-type: none">○ Recall, recognition, and relearning○ Retrieval cues○ The role of emotion in retrieving memories● Forgetting<ul style="list-style-type: none">○ Aging and memory○ Memory dysfunctions (e.g., Alzheimer's disease, Korsakoff's syndrome)○ Decay○ Interference○ Memory construction and source monitoring
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	<ul style="list-style-type: none">• Changes in synaptic connections underlie memory and learning<ul style="list-style-type: none">○ Neural plasticity○ Memory and learning○ Long-term potentiation <p>Language</p> <ul style="list-style-type: none">• Theories of language development (e.g., learning, Nativist, Interactionist)• Influence of language on cognition<ul style="list-style-type: none">○ Different brain areas control language and speech <p>Emotion</p> <ul style="list-style-type: none">• Three components of emotion (i.e., cognitive, physiological, behavioral)• Universal emotions (e.g., fear, anger, happiness, surprise, joy, disgust, sadness)• Adaptive role of emotion• Theories of emotion<ul style="list-style-type: none">○ James-Lange theory○ Cannon-Bard theory○ Schachter-Singer theory• The role of biological processes in perceiving emotion<ul style="list-style-type: none">○ Generation and experience of emotions involve many brain regions○ The role of the limbic system in emotion○ Emotional experiences can be stored as memories that can be recalled by similar circumstances○ Prefrontal cortex is critical for emotional experience, and is also important in<ul style="list-style-type: none">○ temperament and decision making○ Emotion and the autonomic nervous system○ Physiological markers of emotion (signatures of emotion) <p>Stress</p> <ul style="list-style-type: none">• The nature of stress<ul style="list-style-type: none">○ Appraisal○ Different types of stressors (e.g., cataclysmic events, personal, etc.)○ Effects of stress on psychological functions• Stress outcomes/response to stressors<ul style="list-style-type: none">○ Physiological○ Emotional○ Behavioral○ Managing stress (e.g., exercise, relaxation techniques, spirituality, etc.) <p>Biological Bases of Behavior</p> <ul style="list-style-type: none">• The nervous system<ul style="list-style-type: none">○ Neurons<ul style="list-style-type: none">▪ The reflex arc
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MCAT Psychology Topics Listed by UD Course Number

	<ul style="list-style-type: none">○ Neurotransmitters○ Peripheral nervous system○ Central nervous system<ul style="list-style-type: none">▪ The brain<ul style="list-style-type: none">● The brainstem● The cerebellum● The diencephalon● The cerebrum● Control of voluntary movement in the cerebral cortex● Information processing in the cerebral cortex● Lateralization of cortical functions● Methods of studying the brain● Neurons communicate and influence behavior● Influence of neurotransmitters on behavior● The endocrine system<ul style="list-style-type: none">○ Components of the endocrine system○ Effects of the endocrine system on behavior● Behavioral genetics<ul style="list-style-type: none">○ Genes, temperament, and heredity○ Adaptive value of traits and behaviors○ Interaction between heredity and environmental influences● Genetic and environmental factors contribute to the development of behaviors<ul style="list-style-type: none">○ Experience and behavior○ Regulatory genes and behavior○ Genetically based behavioral variation in natural populations● Human physiological development<ul style="list-style-type: none">○ Prenatal development○ Motor development○ Developmental changes in adolescence <p>Personality</p> <ul style="list-style-type: none">● Theories of personality<ul style="list-style-type: none">○ Psychoanalytic perspective○ Humanistic perspective○ Trait perspective○ Social cognitive perspective○ Biological perspective○ Behaviorist perspective○ Situational approach to explaining behavior <p>Psychological Disorders</p> <ul style="list-style-type: none">● Understanding psychological disorders<ul style="list-style-type: none">○ Biomedical vs. biopsychosocial approaches○ Classifying psychological disorders
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	<ul style="list-style-type: none">○ Rates of psychological disorders● Types of psychological disorders<ul style="list-style-type: none">○ Anxiety disorders○ Somatoform disorders○ Mood disorders○ Schizophrenia○ Dissociative disorder○ Personality disorders● Biological bases of nervous system disorders<ul style="list-style-type: none">○ Schizophrenia○ Depression○ Alzheimer's disease○ Parkinson's disease○ Stem cell-based therapy to regenerate neurons in CNS <p>Motivation</p> <ul style="list-style-type: none">● Factors that influence motivation<ul style="list-style-type: none">○ Instinct○ Arousal○ Drives<ul style="list-style-type: none">▪ Negative feedback systems○ Needs● Theories that explain how motivation affects human behavior<ul style="list-style-type: none">○ Drive reduction theory○ Incentive theory○ Other: cognitive and need based theories● Application of theories of motivation to understand behaviors (e.g., eating, sexual, drug and alcohol use, etc.)<ul style="list-style-type: none">○ Biological factors in regulation of these motivational processes○ Socio-cultural factors in regulation of these motivational processes <p>Attitudes</p> <ul style="list-style-type: none">● Components of attitudes (i.e., cognitive, affective, and behavioral)● The link between attitudes and behavior<ul style="list-style-type: none">○ Processes by which behavior influences attitudes (e.g., foot-in-the door phenomenon, role-playing effects)○ Processes by which attitudes influence behavior○ Cognitive dissonance theory <p>How the Presence of Others Affects Individual Behavior</p> <ul style="list-style-type: none">● Social facilitation● Deindividuation● Bystander effect● Social loafing● Peer pressure
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	<p>Group Processes</p> <ul style="list-style-type: none">• Group polarization• Groupthink <p>Socialization</p> <ul style="list-style-type: none">• Definition of socialization• Norms• Agents of socialization (e.g., the family, mass media, peers, workplace)• Stigma and deviance• Conformity and obedience <p>Habituation and Dishabituation</p> <p>Associative Learning</p> <ul style="list-style-type: none">• Classical conditioning<ul style="list-style-type: none">○ Neutral, conditioned, and unconditioned stimuli○ Conditioned and unconditioned response○ Processes: acquisition, extinction, spontaneous recovery, generalization, discrimination• Operant conditioning<ul style="list-style-type: none">○ Processes of shaping and extinction○ Types of reinforcement: positive, negative, primary, conditional○ Reinforcement schedules: fixed-ratio, variable-ratio, fixed-interval, variable-interval○ Punishment○ Escape and avoidance learning• Cognitive processes that affect associative learning• Biological factors that affect associative learning<ul style="list-style-type: none">○ Innate behaviors are developmentally fixed○ Learned behaviors are modified based on experiences○ Development of learned behaviors <p>Observational Learning</p> <ul style="list-style-type: none">• Modeling• Biological processes that affect observational learning<ul style="list-style-type: none">○ Mirror neurons○ Role of the brain in experiencing vicarious emotions• Applications of observational learning to explain individual behavior <p>Theories of Attitude and Behavior Change</p> <ul style="list-style-type: none">• Elaboration Likelihood Model<ul style="list-style-type: none">○ Information processing routes to persuasion (e.g., central and peripheral route processing)• Social Cognitive theory• Factors that affect attitude change (e.g., changing behavior, characteristics of the message and target, social factors) <p>Self-Concept and Identity</p> <ul style="list-style-type: none">• Definitions of self-concept, identity, and social identity• The role of self-esteem, self-efficacy, and locus of control in self-
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	<ul style="list-style-type: none">concept and self-identity• Different types of identities (e.g., race/ethnicity, gender, age, sexual orientation, class) <p>Formation of Identity</p> <ul style="list-style-type: none">• Stages of identity development<ul style="list-style-type: none">○ Theories of developmental stages (e.g., Erikson, Vygotsky, Kohlberg, Freud)• Influence of social factors on identity formation<ul style="list-style-type: none">○ Influence of individuals (e.g., imitation, role-taking)○ Influence of group (e.g., reference group)• Influence of culture and socialization on identity formation <p>Attributing Behavior to Persons or Situations</p> <ul style="list-style-type: none">• Attribution theory<ul style="list-style-type: none">○ Fundamental attribution error○ How culture affects attributions• How self-perceptions shape our perceptions of others• How perceptions of the environment shape our perceptions of others <p>Prejudice and Bias</p> <ul style="list-style-type: none">• Definition of prejudice• Processes that contribute to prejudice<ul style="list-style-type: none">○ Power, prestige, and class○ The role of emotion in prejudice○ The role of cognition in prejudice• Stereotypes• Ethnocentrism<ul style="list-style-type: none">○ In-group and out-group○ Ethnocentrism vs. cultural relativism <p>Processes Related to Stereotypes</p> <ul style="list-style-type: none">• Self-fulfilling prophecy• Stereotype threat <p>Elements of Social Interaction</p> <ul style="list-style-type: none">• Statuses• Roles• Groups• Networks• Organizations <p>Self-presentation and Interacting with Others</p> <ul style="list-style-type: none">• Expressing and detecting emotion<ul style="list-style-type: none">○ Gender shapes expression○ Culture shapes expression• Impression management<ul style="list-style-type: none">○ Front stage vs. back stage self (Dramaturgical approach)• Verbal and nonverbal communication• Animal signals and communication <p>Social Behavior</p> <ul style="list-style-type: none">• Attraction
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	<ul style="list-style-type: none"> • Aggression • Attachment • Social support • Biological explanations of social behavior in animals <ul style="list-style-type: none"> ○ Foraging behavior ○ Mating behavior and mate choice ○ Applying game theory ○ Altruism ○ Inclusive fitness <p>Discrimination</p> <ul style="list-style-type: none"> • Individual vs. institutional discrimination • The relationship between prejudice and discrimination • How power, prestige, and class facilitate discrimination
<p>PSY 321</p>	<p>Perception</p> <ul style="list-style-type: none"> • Perception <ul style="list-style-type: none"> ○ Bottom-up/Top-down processing ○ Perceptual organization (e.g., depth, form, motion, constancy) ○ Gestalt principles <p>Attention</p> <ul style="list-style-type: none"> • Selective attention • Divided attention <p>Cognition</p> <ul style="list-style-type: none"> • Information-processing model • Cognitive development <ul style="list-style-type: none"> ○ Piaget's stages of cognitive development ○ Cognitive changes in late adulthood ○ Role of culture in cognitive development ○ Influence of heredity and environment on cognitive development • Biological factors that affect cognition • Problem solving and decision making <ul style="list-style-type: none"> ○ Types of problem solving ○ Barriers to effective problem solving ○ Approaches to problem solving ○ Heuristics, biases, intuition, and emotion <ul style="list-style-type: none"> ▪ Overconfidence and belief perseverance • Intellectual functioning <ul style="list-style-type: none"> ○ Multiple definitions of intelligence ○ Influence of heredity and environment on intelligence ○ Variations in intellectual ability ○ <p>Consciousness</p> <ul style="list-style-type: none"> • States of consciousness <ul style="list-style-type: none"> ○ Alertness ○ Sleep

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	<ul style="list-style-type: none">▪ Stages of sleep▪ Sleep cycles and changes to sleep cycles▪ Sleep and circadian rhythms▪ Dreaming▪ Sleep disorders○ Hypnosis and meditation• Consciousness altering drugs<ul style="list-style-type: none">○ Types of consciousness altering drugs and their effects on the nervous system and behavior○ Drug addiction and the reward pathway in the brain <p>Memory</p> <ul style="list-style-type: none">• Encoding<ul style="list-style-type: none">○ Process of encoding information○ Processes that aid in encoding memories• Storage<ul style="list-style-type: none">○ Types of memory storage (e.g., sensory, working, long-term)○ Semantic networks and spreading activation• Retrieval<ul style="list-style-type: none">○ Recall, recognition, and relearning○ Retrieval cues○ The role of emotion in retrieving memories• Forgetting<ul style="list-style-type: none">○ Aging and memory○ Memory dysfunctions (e.g., Alzheimer's disease, Korsakoff's syndrome)○ Decay○ Interference○ Memory construction and source monitoring• Changes in synaptic connections underlie memory and learning<ul style="list-style-type: none">○ Neural plasticity○ Memory and learning○ Long-term potentiation <p>Language</p> <ul style="list-style-type: none">• Theories of language development (e.g., learning, Nativist, Interactionist)• Influence of language on cognition<ul style="list-style-type: none">○ Different brain areas control language and speech <p>Biological Bases of Behavior</p> <ul style="list-style-type: none">• The nervous system<ul style="list-style-type: none">○ Neurons<ul style="list-style-type: none">▪ The reflex arc○ Neurotransmitters○ Peripheral nervous system
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	<ul style="list-style-type: none"> ○ Central nervous system <ul style="list-style-type: none"> ▪ The brain <ul style="list-style-type: none"> ● The brainstem ● The cerebellum ● The diencephalon ● The cerebrum ● Control of voluntary movement in the cerebral cortex ● Information processing in the cerebral cortex ● Lateralization of cortical functions ● Methods of studying the brain ● Neurons communicate and influence behavior ● Influence of neurotransmitters on behavior ● The endocrine system <ul style="list-style-type: none"> ○ Components of the endocrine system ○ Effects of the endocrine system on behavior ● Behavioral genetics <ul style="list-style-type: none"> ○ Genes, temperament, and heredity ○ Adaptive value of traits and behaviors ○ Interaction between heredity and environmental influences ● Genetic and environmental factors contribute to the development of behaviors <ul style="list-style-type: none"> ○ Experience and behavior ○ Regulatory genes and behavior ○ Genetically based behavioral variation in natural populations ● Human physiological development <ul style="list-style-type: none"> ○ Prenatal development ○ Motor development ○ Developmental changes in adolescence
PSY 322	<p>Attention</p> <ul style="list-style-type: none"> ● Selective attention ● Divided attention <p>Biological Bases of Behavior</p> <ul style="list-style-type: none"> ● The nervous system <ul style="list-style-type: none"> ○ Neurons <ul style="list-style-type: none"> ▪ The reflex arc ○ Neurotransmitters ○ Peripheral nervous system ○ Central nervous system <ul style="list-style-type: none"> ▪ The brain <ul style="list-style-type: none"> ● The brainstem ● The cerebellum ● The diencephalon

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	<ul style="list-style-type: none">• The cerebrum• Control of voluntary movement in the cerebral cortex• Information processing in the cerebral cortex• Lateralization of cortical functions• Methods of studying the brain <ul style="list-style-type: none">• Neurons communicate and influence behavior• Influence of neurotransmitters on behavior• The endocrine system<ul style="list-style-type: none">○ Components of the endocrine system○ Effects of the endocrine system on behavior• Behavioral genetics<ul style="list-style-type: none">○ Genes, temperament, and heredity○ Adaptive value of traits and behaviors○ Interaction between heredity and environmental influences• Genetic and environmental factors contribute to the development of behaviors<ul style="list-style-type: none">○ Experience and behavior○ Regulatory genes and behavior○ Genetically based behavioral variation in natural populations• Human physiological development<ul style="list-style-type: none">○ Prenatal development○ Motor development○ Developmental changes in adolescence <p>Habituation and Dishabituation</p> <p>Associative Learning</p> <ul style="list-style-type: none">• Classical conditioning<ul style="list-style-type: none">○ Neutral, conditioned, and unconditioned stimuli○ Conditioned and unconditioned response○ Processes: acquisition, extinction, spontaneous recovery, generalization, discrimination• Operant conditioning<ul style="list-style-type: none">○ Processes of shaping and extinction○ Types of reinforcement: positive, negative, primary, conditional○ Reinforcement schedules: fixed-ratio, variable-ratio, fixed-interval, variable-interval○ Punishment○ Escape and avoidance learning• Cognitive processes that affect associative learning• Biological factors that affect associative learning<ul style="list-style-type: none">○ Innate behaviors are developmentally fixed○ Learned behaviors are modified based on experiences○ Development of learned behaviors
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	<p>Observational Learning</p> <ul style="list-style-type: none"> • Modeling • Biological processes that affect observational learning <ul style="list-style-type: none"> ○ Mirror neurons ○ Role of the brain in experiencing vicarious emotions • Applications of observational learning to explain individual behavior
<p>PSY 323</p>	<p>Sensory Processing</p> <ul style="list-style-type: none"> • Sensation <ul style="list-style-type: none"> ○ Thresholds ○ Weber's Law ○ Signal detection theory ○ Sensory adaptation • Sensory receptors <ul style="list-style-type: none"> ○ Sensory pathways ○ Types of sensory receptors <p>Vision</p> <ul style="list-style-type: none"> • Structure and function of the eye • Visual processing <ul style="list-style-type: none"> ○ Visual pathways in the brain ○ Parallel processing ○ Feature detection <p>Hearing</p> <ul style="list-style-type: none"> • Auditory processing <ul style="list-style-type: none"> ○ Auditory pathways in the brain • Sensory reception by hair cells <p>Other Senses</p> <ul style="list-style-type: none"> • Somatosensation <ul style="list-style-type: none"> ○ Pain perception • Taste <ul style="list-style-type: none"> ○ Taste buds/chemoreceptors that detect specific chemicals • Smell <ul style="list-style-type: none"> ○ Olfactory cells/chemoreceptors that detect specific chemicals ○ Pheromones ○ Olfactory pathways in the brain • Kinesthetic sense • Vestibular sense <p>Perception</p> <ul style="list-style-type: none"> • Perception <ul style="list-style-type: none"> ○ Bottom-up/Top-down processing ○ Perceptual organization (e.g., depth, form, motion, constancy) ○ Gestalt principles <p>Attention</p>

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	<ul style="list-style-type: none"> • Selective attention • Divided attention <p>Biological Bases of Behavior</p> <ul style="list-style-type: none"> • The nervous system <ul style="list-style-type: none"> ○ Neurons <ul style="list-style-type: none"> ▪ The reflex arc ○ Neurotransmitters ○ Peripheral nervous system ○ Central nervous system <ul style="list-style-type: none"> ▪ The brain <ul style="list-style-type: none"> • The brainstem • The cerebellum • The diencephalon • The cerebrum • Control of voluntary movement in the cerebral cortex • Information processing in the cerebral cortex • Lateralization of cortical functions • Methods of studying the brain • Neurons communicate and influence behavior • Influence of neurotransmitters on behavior • The endocrine system <ul style="list-style-type: none"> ○ Components of the endocrine system ○ Effects of the endocrine system on behavior • Behavioral genetics <ul style="list-style-type: none"> ○ Genes, temperament, and heredity ○ Adaptive value of traits and behaviors ○ Interaction between heredity and environmental influences • Genetic and environmental factors contribute to the development of behaviors <ul style="list-style-type: none"> ○ Experience and behavior ○ Regulatory genes and behavior ○ Genetically based behavioral variation in natural populations • Human physiological development <ul style="list-style-type: none"> ○ Prenatal development ○ Motor development ○ Developmental changes in adolescence
PSY 341	<p>Attitudes</p> <ul style="list-style-type: none"> • Components of attitudes (i.e., cognitive, affective, and behavioral) • The link between attitudes and behavior <ul style="list-style-type: none"> ○ Processes by which behavior influences attitudes (e.g., foot-in-the door phenomenon,

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	<ul style="list-style-type: none">○ role-playing effects)○ Processes by which attitudes influence behavior○ Cognitive dissonance theory <p>How the Presence of Others Affects Individual Behavior</p> <ul style="list-style-type: none">● Social facilitation● Deindividuation● Bystander effect● Social loafing● Peer pressure <p>Group Processes</p> <ul style="list-style-type: none">● Group polarization● Groupthink <p>Culture</p> <ul style="list-style-type: none">● Assimilation● Multiculturalism● Subcultures <p>Socialization</p> <ul style="list-style-type: none">● Definition of socialization● Norms● Agents of socialization (e.g., the family, mass media, peers, workplace)● Stigma and deviance● Conformity and obedience <p>Theories of Attitude and Behavior Change</p> <ul style="list-style-type: none">● Elaboration Likelihood Model<ul style="list-style-type: none">○ Information processing routes to persuasion (e.g., central and peripheral route processing)● Social Cognitive theory● Factors that affect attitude change (e.g., changing behavior, characteristics of the message and target, social factors) <p>Self Concept and Identity</p> <ul style="list-style-type: none">● Definitions of self-concept, identity, and social identity● The role of self-esteem, self-efficacy, and locus of control in self-concept and self-identity● Different types of identities (e.g., race/ethnicity, gender, age, sexual orientation, class) <p>Formation of Identity</p> <ul style="list-style-type: none">● Stages of identity development<ul style="list-style-type: none">○ Theories of developmental stages (e.g., Erikson, Vygotsky, Kohlberg, Freud)● Influence of social factors on identity formation<ul style="list-style-type: none">○ Influence of individuals (e.g., imitation, role-taking)○ Influence of group (e.g., reference group)● Influence of culture and socialization on identity formation <p>Attributing Behavior to Persons or Situations</p> <ul style="list-style-type: none">● Attribution theory<ul style="list-style-type: none">○ Fundamental attribution error
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	<ul style="list-style-type: none"> ○ How culture affects attributions ● How self-perceptions shape our perceptions of others ● How perceptions of the environment shape our perceptions of others <p>Prejudice and Bias</p> <ul style="list-style-type: none"> ● Definition of prejudice ● Processes that contribute to prejudice <ul style="list-style-type: none"> ○ Power, prestige, and class ○ The role of emotion in prejudice ○ The role of cognition in prejudice ● Stereotypes ● Ethnocentrism <ul style="list-style-type: none"> ○ In-group and out-group ○ Ethnocentrism vs. cultural relativism <p>Processes Related to Stereotypes</p> <ul style="list-style-type: none"> ● Self-fulfilling prophecy ● Stereotype threat <p>Elements of Social Interaction</p> <ul style="list-style-type: none"> ● Statuses ● Roles ● Groups ● Networks ● Organizations <p>Self-presentation and Interacting with Others</p> <ul style="list-style-type: none"> ● Expressing and detecting emotion <ul style="list-style-type: none"> ○ Gender shapes expression ○ Culture shapes expression ● Impression management <ul style="list-style-type: none"> ○ Front stage vs. back stage self (Dramaturgical approach) ● Verbal and nonverbal communication ● Animal signals and communication <p>Social Behavior</p> <ul style="list-style-type: none"> ● Attraction ● Aggression ● Attachment ● Social support ● Biological explanations of social behavior in animals <ul style="list-style-type: none"> ○ Foraging behavior ○ Mating behavior and mate choice ○ Applying game theory ○ Altruism ○ Inclusive fitness
PSY 351	<p>Cognition</p> <ul style="list-style-type: none"> ● Information-processing model ● Cognitive development <ul style="list-style-type: none"> ○ Piaget's stages of cognitive development

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	<ul style="list-style-type: none"> ○ Cognitive changes in late adulthood ○ Role of culture in cognitive development ○ Influence of heredity and environment on cognitive development ● Biological factors that affect cognition ● Problem solving and decision making <ul style="list-style-type: none"> ○ Types of problem solving ○ Barriers to effective problem solving ○ Approaches to problem solving ○ Heuristics, biases, intuition, and emotion <ul style="list-style-type: none"> ▪ Overconfidence and belief perseverance ● Intellectual functioning <ul style="list-style-type: none"> ○ Multiple definitions of intelligence ○ Influence of heredity and environment on intelligence ○ Variations in intellectual ability <p>Language</p> <ul style="list-style-type: none"> ● Theories of language development (e.g., learning, Nativist, Interactionist) ● Influence of language on cognition <ul style="list-style-type: none"> ○ Different brain areas control language and speech <p>Stress</p> <ul style="list-style-type: none"> ● The nature of stress <ul style="list-style-type: none"> ○ Appraisal ○ Different types of stressors (e.g., cataclysmic events, personal, etc.) ○ Effects of stress on psychological functions ● Stress outcomes/response to stressors <ul style="list-style-type: none"> ○ Physiological ○ Emotional ○ Behavioral ○ Managing stress (e.g., exercise, relaxation techniques, spirituality, etc.) <p>Biological Bases of Behavior</p> <ul style="list-style-type: none"> ● The nervous system <ul style="list-style-type: none"> ○ Neurons <ul style="list-style-type: none"> ▪ The reflex arc ○ Neurotransmitters ○ Peripheral nervous system ○ Central nervous system <ul style="list-style-type: none"> ▪ The brain <ul style="list-style-type: none"> ● The brainstem ● The cerebellum ● The diencephalon ● The cerebrum ● Control of voluntary movement in the cerebral cortex ● Information processing in the cerebral
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MCAT Psychology Topics Listed by UD Course Number

	<ul style="list-style-type: none">cortex<ul style="list-style-type: none">• Lateralization of cortical functions• Methods of studying the brain• Neurons communicate and influence behavior• Influence of neurotransmitters on behavior• The endocrine system<ul style="list-style-type: none">○ Components of the endocrine system○ Effects of the endocrine system on behavior• Behavioral genetics<ul style="list-style-type: none">○ Genes, temperament, and heredity○ Adaptive value of traits and behaviors○ Interaction between heredity and environmental influences• Genetic and environmental factors contribute to the development of behaviors<ul style="list-style-type: none">○ Experience and behavior○ Regulatory genes and behavior○ Genetically based behavioral variation in natural populations• Human physiological development<ul style="list-style-type: none">○ Prenatal development○ Motor development○ Developmental changes in adolescence <p>Habituation and Dishabituation</p> <p>Associative Learning</p> <ul style="list-style-type: none">• Classical conditioning<ul style="list-style-type: none">○ Neutral, conditioned, and unconditioned stimuli○ Conditioned and unconditioned response○ Processes: acquisition, extinction, spontaneous recovery, generalization, discrimination• Operant conditioning<ul style="list-style-type: none">○ Processes of shaping and extinction○ Types of reinforcement: positive, negative, primary, conditional○ Reinforcement schedules: fixed-ratio, variable-ratio, fixed-interval, variable-interval○ Punishment○ Escape and avoidance learning• Cognitive processes that affect associative learning• Biological factors that affect associative learning<ul style="list-style-type: none">○ Innate behaviors are developmentally fixed○ Learned behaviors are modified based on experiences○ Development of learned behaviors <p>Observational Learning</p> <ul style="list-style-type: none">• Modeling• Biological processes that affect observational learning<ul style="list-style-type: none">○ Mirror neurons
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MCAT Psychology Topics Listed by UD Course Number

	<ul style="list-style-type: none"> ○ Role of the brain in experiencing vicarious emotions ● Applications of observational learning to explain individual behavior <p>Self Concept and Identity</p> <ul style="list-style-type: none"> ● Definitions of self-concept, identity, and social identity ● The role of self-esteem, self-efficacy, and locus of control in self-concept and self-identity ● Different types of identities (e.g., race/ethnicity, gender, age, sexual orientation, class) <p>Formation of Identity</p> <ul style="list-style-type: none"> ● Stages of identity development <ul style="list-style-type: none"> ○ Theories of developmental stages (e.g., Erikson, Vygotsky, Kohlberg, Freud) ● Influence of social factors on identity formation <ul style="list-style-type: none"> ○ Influence of individuals (e.g., imitation, role-taking) ○ Influence of group (e.g., reference group) ● Influence of culture and socialization on identity formation
PSY 361	<p>Personality</p> <ul style="list-style-type: none"> ● Theories of personality <ul style="list-style-type: none"> ○ Psychoanalytic perspective ○ Humanistic perspective ○ Trait perspective ○ Social cognitive perspective ○ Biological perspective ○ Behaviorist perspective ○ Situational approach to explaining behavior <p>Self Concept and Identity</p> <ul style="list-style-type: none"> ● Definitions of self-concept, identity, and social identity ● The role of self-esteem, self-efficacy, and locus of control in self-concept and self-identity ● Different types of identities (e.g., race/ethnicity, gender, age, sexual orientation, class) <p>Formation of Identity</p> <ul style="list-style-type: none"> ● Stages of identity development <ul style="list-style-type: none"> ○ Theories of developmental stages (e.g., Erikson, Vygotsky, Kohlberg, Freud) ● Influence of social factors on identity formation <ul style="list-style-type: none"> ○ Influence of individuals (e.g., imitation, role-taking) ○ Influence of group (e.g., reference group) ● Influence of culture and socialization on identity formation
PSY 366	<p>Emotion</p> <ul style="list-style-type: none"> ● Three components of emotion (i.e., cognitive, physiological, behavioral) ● Universal emotions (e.g., fear, anger, happiness, surprise, joy, disgust, sadness)

MCAT Psychology Topics Listed by UD Course Number

	<ul style="list-style-type: none">• Adaptive role of emotion• Theories of emotion<ul style="list-style-type: none">○ James-Lange theory○ Cannon-Bard theory○ Schachter-Singer theory• The role of biological processes in perceiving emotion<ul style="list-style-type: none">○ Generation and experience of emotions involve many brain regions○ The role of the limbic system in emotion○ Emotional experiences can be stored as memories that can be recalled by similar circumstances○ Prefrontal cortex is critical for emotional experience, and is also important in<ul style="list-style-type: none">○ temperament and decision making○ Emotion and the autonomic nervous system○ Physiological markers of emotion (signatures of emotion) <p>Stress</p> <ul style="list-style-type: none">• The nature of stress<ul style="list-style-type: none">○ Appraisal○ Different types of stressors (e.g., cataclysmic events, personal, etc.)○ Effects of stress on psychological functions• Stress outcomes/response to stressors<ul style="list-style-type: none">○ Physiological○ Emotional○ Behavioral○ Managing stress (e.g., exercise, relaxation techniques, spirituality, etc.) <p>Biological Bases of Behavior</p> <ul style="list-style-type: none">• The nervous system<ul style="list-style-type: none">○ Neurons<ul style="list-style-type: none">▪ The reflex arc○ Neurotransmitters○ Peripheral nervous system○ Central nervous system<ul style="list-style-type: none">▪ The brain<ul style="list-style-type: none">• The brainstem• The cerebellum• The diencephalon• The cerebrum• Control of voluntary movement in the cerebral cortex• Information processing in the cerebral cortex• Lateralization of cortical functions• Methods of studying the brain
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MCAT Psychology Topics Listed by UD Course Number

	<ul style="list-style-type: none">• Neurons communicate and influence behavior• Influence of neurotransmitters on behavior• The endocrine system<ul style="list-style-type: none">○ Components of the endocrine system○ Effects of the endocrine system on behavior• Behavioral genetics<ul style="list-style-type: none">○ Genes, temperament, and heredity○ Adaptive value of traits and behaviors○ Interaction between heredity and environmental influences• Genetic and environmental factors contribute to the development of behaviors<ul style="list-style-type: none">○ Experience and behavior○ Regulatory genes and behavior○ Genetically based behavioral variation in natural populations• Human physiological development<ul style="list-style-type: none">○ Prenatal development○ Motor development○ Developmental changes in adolescence <p>Psychological Disorders</p> <ul style="list-style-type: none">• Understanding psychological disorders<ul style="list-style-type: none">○ Biomedical vs. biopsychosocial approaches○ Classifying psychological disorders○ Rates of psychological disorders• Types of psychological disorders<ul style="list-style-type: none">○ Anxiety disorders○ Somatoform disorders○ Mood disorders○ Schizophrenia○ Dissociative disorder○ Personality disorders• Biological bases of nervous system disorders<ul style="list-style-type: none">○ Schizophrenia○ Depression○ Alzheimer's disease○ Parkinson's disease○ Stem cell-based therapy to regenerate neurons in CNS <p>Motivation</p> <ul style="list-style-type: none">• Factors that influence motivation<ul style="list-style-type: none">○ Instinct○ Arousal○ Drives<ul style="list-style-type: none">▪ Negative feedback systems○ Needs• Theories that explain how motivation affects human behavior<ul style="list-style-type: none">○ Drive reduction theory
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MCAT Psychology Topics Listed by UD Course Number

	<ul style="list-style-type: none"> ○ Incentive theory ○ Other: cognitive and need based theories ● Application of theories of motivation to understand behaviors (e.g., eating, sexual, drug and alcohol use, etc.) <ul style="list-style-type: none"> ○ Biological factors in regulation of these motivational processes ○ Socio-cultural factors in regulation of these motivational processes <p>Attitudes</p> <ul style="list-style-type: none"> ● Components of attitudes (i.e., cognitive, affective, and behavioral) ● The link between attitudes and behavior <ul style="list-style-type: none"> ○ Processes by which behavior influences attitudes (e.g., foot-in-the door phenomenon, role-playing effects) ○ Processes by which attitudes influence behavior ○ Cognitive dissonance theory <p>How the Presence of Others Affects Individual Behavior</p> <ul style="list-style-type: none"> ● Social facilitation ● Deindividuation ● Bystander effect ● Social loafing ● Peer pressure <p>Attributing Behavior to Persons or Situations</p> <ul style="list-style-type: none"> ● Attribution theory <ul style="list-style-type: none"> ○ Fundamental attribution error ○ How culture affects attributions ● How self-perceptions shape our perceptions of others ● How perceptions of the environment shape our perceptions of others <p>Health Disparities</p> <ul style="list-style-type: none"> ● Race, gender, and class inequalities in health <p>Healthcare Disparities</p> <ul style="list-style-type: none"> ● Race, gender, and class inequalities in healthcare
PSY 368	<p>Culture</p> <ul style="list-style-type: none"> ● Symbolic culture <ul style="list-style-type: none"> ○ Language and symbols ○ Values and beliefs ○ Norms and rituals
PSY 422	<p>Vision</p> <ul style="list-style-type: none"> ● Structure and function of the eye ● Visual processing <ul style="list-style-type: none"> ○ Visual pathways in the brain ○ Parallel processing ○ Feature detection <p>Hearing</p>

MCAT Psychology Topics Listed by UD Course Number

	<ul style="list-style-type: none">• Auditory processing<ul style="list-style-type: none">○ Auditory pathways in the brain• Sensory reception by hair cells <p>Other Senses</p> <ul style="list-style-type: none">• Somatosensation<ul style="list-style-type: none">○ Pain perception• Taste<ul style="list-style-type: none">○ Taste buds/chemoreceptors that detect specific chemicals• Smell<ul style="list-style-type: none">○ Olfactory cells/chemoreceptors that detect specific chemicals○ Pheromones○ Olfactory pathways in the brain• Kinesthetic sense• Vestibular sense <p>Consciousness</p> <ul style="list-style-type: none">• States of consciousness<ul style="list-style-type: none">○ Alertness○ Sleep<ul style="list-style-type: none">▪ Stages of sleep▪ Sleep cycles and changes to sleep cycles▪ Sleep and circadian rhythms▪ Dreaming▪ Sleep disorders○ Hypnosis and meditation• Consciousness altering drugs<ul style="list-style-type: none">○ Types of consciousness altering drugs and their effects on the nervous system and behavior○ Drug addiction and the reward pathway in the brain <p>Stress</p> <ul style="list-style-type: none">• The nature of stress<ul style="list-style-type: none">○ Appraisal○ Different types of stressors (e.g., cataclysmic events, personal, etc.)○ Effects of stress on psychological functions• Stress outcomes/response to stressors<ul style="list-style-type: none">○ Physiological○ Emotional○ Behavioral○ Managing stress (e.g., exercise, relaxation techniques, spirituality, etc.) <p>Biological Bases of Behavior</p> <ul style="list-style-type: none">• The nervous system<ul style="list-style-type: none">○ Neurons<ul style="list-style-type: none">▪ The reflex arc
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MCAT Psychology Topics Listed by UD Course Number

	<ul style="list-style-type: none">○ Neurotransmitters○ Peripheral nervous system○ Central nervous system<ul style="list-style-type: none">▪ The brain<ul style="list-style-type: none">● The brainstem● The cerebellum● The diencephalon● The cerebrum● Control of voluntary movement in the cerebral cortex● Information processing in the cerebral cortex● Lateralization of cortical functions● Methods of studying the brain● Neurons communicate and influence behavior● Influence of neurotransmitters on behavior● The endocrine system<ul style="list-style-type: none">○ Components of the endocrine system○ Effects of the endocrine system on behavior● Behavioral genetics<ul style="list-style-type: none">○ Genes, temperament, and heredity○ Adaptive value of traits and behaviors○ Interaction between heredity and environmental influences● Genetic and environmental factors contribute to the development of behaviors<ul style="list-style-type: none">○ Experience and behavior○ Regulatory genes and behavior○ Genetically based behavioral variation in natural populations● Human physiological development<ul style="list-style-type: none">○ Prenatal development○ Motor development○ Developmental changes in adolescence <p>Psychological Disorders</p> <ul style="list-style-type: none">● Understanding psychological disorders<ul style="list-style-type: none">○ Biomedical vs. biopsychosocial approaches○ Classifying psychological disorders○ Rates of psychological disorders● Types of psychological disorders<ul style="list-style-type: none">○ Anxiety disorders○ Somatoform disorders○ Mood disorders○ Schizophrenia○ Dissociative disorder○ Personality disorders● Biological bases of nervous system disorders
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MCAT Psychology Topics Listed by UD Course Number

	<ul style="list-style-type: none">○ Schizophrenia○ Depression○ Alzheimer's disease○ Parkinson's disease○ Stem cell-based therapy to regenerate neurons in CNS
PSY 443	<p>Culture</p> <ul style="list-style-type: none">• Symbolic culture<ul style="list-style-type: none">○ Language and symbols○ Values and beliefs○ Norms and rituals• Evolution and human culture