

## Preface xxv Making the Grade xxxviii



## CHAPTER 1

# Introduction to Psychology 2

#### **MODULE 1**

## Psychologists at Work 5

The Subfields of Psychology: Psychology's Family Tree 6

Working at Psychology 9

**PSYCHWORK:** Licensed Social Worker 10

## MODULE 2

A Science Evolves: The Past, the Present, and the Future 14

The Roots of Psychology 14 Today's Perspectives 16

APPLYING PSYCHOLOGY IN THE 21ST CENTURY: Psychology Matters 20

## MODULE 3

## Psychology's Key Issues and Controversies 22

**EXPLORING DIVERSITY:** Understanding How Culture, Ethnicity, and Race Influence Behavior 24
Psychology's Future 25

**NEUROSCIENCE IN YOUR LIFE:** Reading the Movies in Your Mind 26

**BECOMING AN INFORMED CONSUMER OF PSYCHOLOGY:** Thinking Critically About Psychology: Distinguishing Legitimate Psychology from Pseudo-Psychology 26



## CHAPTER 2

# Psychological Research 30

## MODULE 4

## The Scientific Method 33

Theories: Specifying Broad Explanations 34 Hypotheses: Crafting Testable Predictions 35

## MODULE 5

## Conducting Psychological Research 37

Archival Research 37

Naturalistic Observation 37

Survey Research 38

The Case Study 38

APPLYING PSYCHOLOGY IN THE 21ST CENTURY: Secret Bias: Using the Implicit

Association Test to Measure Hidden Prejudice 39

Correlational Research 39 Experimental Research 41

#### MODULE 6

#### Critical Research Issues 48

The Ethics of Research 48

**EXPLORING DIVERSITY:** Choosing Participants Who Represent the Scope of Human

Behavior 49

**NEUROSCIENCE IN YOUR LIFE:** The Importance of Using Representative Participants 50

Should Animals Be Used in Research? 50

Threats to Experimental Validity: Avoiding Experimental Bias 51

BECOMING AN INFORMED CONSUMER OF PSYCHOLOGY: Thinking Critically About

Research 52



#### CHAPTER 3

# Neuroscience and Behavior 56

#### MODULE 7

## Neurons: The Basic Elements of Behavior 59

The Structure of the Neuron 59

How Neurons Fire 60

Where Neurons Meet: Bridging the Gap 63

Neurotransmitters: Multitalented Chemical Couriers 64

#### MODULE 8

# The Nervous System and the Endocrine System: Communicating Within the Body 68

The Nervous System: Linking Neurons 68

The Evolutionary Foundations of the Nervous System 71 The Endocrine System: Of Chemicals and Glands 72

## MODULE 9

## The Brain 76

Studying the Brain's Structure and Functions: Spying on the Brain 76

The Central Core: Our "Old Brain" 78

APPLYING PSYCHOLOGY IN THE 21ST CENTURY: Your Wish Is Its Command: Directing

Computers with Your Brain 79

The Limbic System: Beyond the Central Core 80

The Cerebral Cortex: Our "New Brain" 81 **PSYCHWORK:** Rehabilitation Counselor 83

Neuroplasticity and the Brain 85

**NEUROSCIENCE IN YOUR LIFE:** The Plastic Brain 86

The Specialization of the Hemispheres: Two Brains or One? 86 **EXPLORING DIVERSITY:** Human Diversity and the Brain 87

The Split Brain: Exploring the Two Hemispheres 88

**BECOMING AN INFORMED CONSUMER OF PSYCHOLOGY:** Learning to Control Your Heart—

and Mind—Through Biofeedback 89



#### **CHAPTER 4**

## Sensation and Perception 94

#### MODULE 10

## Sensing the World Around Us 97

Absolute Thresholds: Detecting What's Out There 98

Difference Thresholds: Noticing Distinctions Between Stimuli 99

Sensory Adaptation: Turning Down Our Responses 100

#### MODULE 11

## Vision: Shedding Light on the Eye 102

Illuminating the Structure of the Eye 103

**NEUROSCIENCE IN YOUR LIFE:** Seeing Vision in the Brain 108 Color Vision and Color Blindness: The 7-Million-Color Spectrum 108

#### MODULE 12

## Hearing and the Other Senses 112

Sensing Sound 112 Smell and Taste 116

The Skin Senses: Touch, Pressure, Temperature, and Pain 118

BECOMING AN INFORMED CONSUMER OF PSYCHOLOGY: Managing Pain 121

How Our Senses Interact 121

#### MODULE 13

## Perceptual Organization: Constructing Our View of the World 124

The Gestalt Laws of Organization 124
Top-Down and Bottom-Up Processing 125

Depth Perception: Translating 2-D to 3-D 127

Perceptual Constancy 128

Motion Perception: As the World Turns 129

APPLYING PSYCHOLOGY IN THE 21ST CENTURY: Do People Have an Internal Sense

of Direction? 130

Perceptual Illusions: The Deceptions of Perceptions 130 **EXPLORING DIVERSITY:** Culture and Perception 132



## States of Consciousness 138

## MODULE 14

## Sleep and Dreams 141

The Stages of Sleep 141

REM Sleep: The Paradox of Sleep 143

Why Do We Sleep, and How Much Sleep Is Necessary? 144

NEUROSCIENCE IN YOUR LIFE: Why Are You Cranky? Your Brain Is Too Awake 145

The Function and Meaning of Dreaming 145

APPLYING PSYCHOLOGY IN THE 21ST CENTURY: Dreams of Failure 146

Sleep Disturbances: Slumbering Problems 149

**PSYCHWORK:** Sleep Technologist 150 Circadian Rhythms: Life Cycles 151 Daydreams: Dreams Without Sleep 152

**BECOMING AN INFORMED CONSUMER OF PSYCHOLOGY:** Sleeping Better 153

## **MODULE 15**

## Hypnosis and Meditation 155

Hypnosis: A Trance-Forming Experience? 155

Meditation: Regulating Our Own State of Consciousness 157

**EXPLORING DIVERSITY:** Cross-Cultural Routes to Altered States of Consciousness 158

#### MODULE 16

## Drug Use: The Highs and Lows of Consciousness 160

Stimulants: Drug Highs 162 Depressants: Drug Lows 165

Narcotics: Relieving Pain and Anxiety 168 Hallucinogens: Psychedelic Drugs 169

BECOMING AN INFORMED CONSUMER OF PSYCHOLOGY: Identifying Drug and Alcohol

Problems 170



#### **CHAPTER 6**

# Learning 174

#### **MODULE 17**

## Classical Conditioning 177

The Basics of Classical Conditioning 178

Applying Conditioning Principles to Human Behavior 180

Extinction 181

Generalization and Discrimination 182

Beyond Traditional Classical Conditioning: Challenging Basic Assumptions 182

## MODULE 18

## Operant Conditioning 185

Thorndike's Law of Effect 185

The Basics of Operant Conditioning 186

**APPLYING PSYCHOLOGY IN THE 21ST CENTURY:** Using Operant Conditioning Principles to Save Lives 193

**PSYCHWORK:** Seeing Eye Guide Dog Trainer 194

BECOMING AN INFORMED CONSUMER OF PSYCHOLOGY: Using Behavior Analysis and

**Behavior Modification 196** 

#### MODULE 19

## Cognitive Approaches to Learning 200

Latent Learning 200

Observational Learning: Learning Through Imitation 202

**NEUROSCIENCE IN YOUR LIFE:** Learning Through Imitation 203

**EXPLORING DIVERSITY:** Does Culture Influence How We Learn? 205



#### **CHAPTER 7**

## Memory 210

## MODULE 20

## The Foundations of Memory 213

Sensory Memory 214

Short-Term Memory 215

Working Memory 217

Long-Term Memory 219

**NEUROSCIENCE IN YOUR LIFE:** Experience, Memory, and the Brain 223

APPLYING PSYCHOLOGY IN THE 21ST CENTURY: Memory from a Bottle 224

## MODULE 21

## Recalling Long-Term Memories 226

Retrieval Cues 226

Levels of Processing 227

Explicit and Implicit Memory 228

Flashbulb Memories 229

Constructive Processes in Memory: Rebuilding the Past 230

**EXPLORING DIVERSITY:** Are There Cross-Cultural Differences in Memory? 233

## MODULE 22

## Forgetting: When Memory Fails 236

Why We Forget 237

Proactive and Retroactive Interference: The Before and After of Forgetting 238

Memory Dysfunctions: Afflictions of Forgetting 240

NEUROSCIENCE IN YOUR LIFE: Alzheimer's Disease and Brain Deterioration 241

BECOMING AN INFORMED CONSUMER OF PSYCHOLOGY: Improving Your Memory 241



# Cognition and Language 246

#### MODULE 23

## Thinking and Reasoning 249

Mental Images: Examining the Mind's Eye 250

Concepts: Categorizing the World 251

**NEUROSCIENCE IN YOUR LIFE:** Culture Influences How We Categorize and Think

About the World 252

Reasoning: Making Up Your Mind 253

Computers and Problem Solving: Searching for Artificial Intelligence 255

APPLYING PSYCHOLOGY IN THE 21ST CENTURY: I'll take "Artificial Intelligence" for

\$1,000, Alex. 256

#### **MODULE 24**

## Problem Solving 258

Preparation: Understanding and Diagnosing Problems 258

Production: Generating Solutions 261 Judgment: Evaluating Solutions 264

Impediments to Solutions: Why Is Problem Solving Such a Problem? 264

Creativity and Problem Solving 267

**BECOMING AN INFORMED CONSUMER OF PSYCHOLOGY:** Thinking Critically

and Creatively 269

## MODULE 25

## Language 271

Grammar: Language's Language 271

Language Development: Developing a Way with Words 272

The Influence of Language on Thinking: Do Eskimos Have More Words for Snow Than

Texans Do? 275

Do Animals Use Language? 276

**EXPLORING DIVERSITY:** Teaching with Linguistic Variety: Bilingual Education 277

**NEUROSCIENCE IN YOUR LIFE:** Bilingualism and the Brain 278





#### **CHAPTER 9**

# Intelligence 282

#### MODULE 26

## What Is Intelligence? 285

Theories of Intelligence: Are There Different Kinds of Intelligence? 286

The Biological Basis of Intelligence 289

**NEUROSCIENCE IN YOUR LIFE:** Your Intelligent Brain 290

Practical and Emotional Intelligence: Toward a More Intelligent View of Intelligence 290

APPLYING PSYCHOLOGY IN THE 21ST CENTURY: Is the Web Hurting Our Intelligence? 292

Assessing Intelligence 293

Contemporary IQ Tests: Gauging Intelligence 295

BECOMING AN INFORMED CONSUMER OF PSYCHOLOGY: Scoring Better on Standardized

Tests 300

## MODULE 27

## Variations in Intellectual Ability 302

Intellectual Disabilities (Mental Retardation) 302

PSYCHWORK: Director of Special Education 304

The Intellectually Gifted 304

#### **MODULE 28**

# Group Differences in Intelligence: Genetic and Environmental Determinants 307

**EXPLORING DIVERSITY:** The Relative Influence of Genetics and Environment: Nature, Nurture, and IQ 308



#### **CHAPTER 10**

## Motivation and Emotion 314

## **MODULE 29**

## **Explaining Motivation 317**

Instinct Approaches: Born to Be Motivated 317

Drive-Reduction Approaches: Satisfying Our Needs 318 Arousal Approaches: Beyond Drive Reduction 319

Incentive Approaches: Motivation's Pull 319

Cognitive Approaches: The Thoughts Behind Motivation 321

Maslow's Hierarchy: Ordering Motivational Needs 321 Applying the Different Approaches to Motivation 323

## MODULE 30

## Human Needs and Motivation: Eat, Drink, and Be Daring 325

The Motivation Behind Hunger and Eating 325

APPLYING PSYCHOLOGY IN THE 21ST CENTURY: The Rising Stigma of Obesity 327

Social Factors in Eating 328

**PSYCHWORK:** Nutritionist 329

Eating Disorders 331

**NEUROSCIENCE IN YOUR LIFE:** When Regulation of Eating Behavior Goes

Wrong—Bulimia 332

BECOMING AN INFORMED CONSUMER OF PSYCHOLOGY: Dieting and Losing Weight

Successfully 332

The Need for Achievement: Striving for Success 334
The Need for Affiliation: Striving for Friendship 334

The Need for Power: Striving for Impact on Others 335

MODULE 31

## **Understanding Emotional Experiences 337**

The Functions of Emotions 338

Determining the Range of Emotions: Labeling Our Feelings 338

The Roots of Emotions 339

**EXPLORING DIVERSITY:** Do People in All Cultures Express Emotion Similarly? 344



#### **CHAPTER 11**

# Sexuality and Gender 350

MODULE 32

## Gender and Sex 353

Gender Roles: Society's Expectations for Women and Men 353

Sexism on the Job 355

Gender Differences: More Similar Than Dissimilar 358

**NEUROSCIENCE IN YOUR LIFE:** When Brain and Socialization Meet 360 Sources of Gender Differences: Where Biology and Society Meet 361 **APPLYING PSYCHOLOGY IN THE 21ST CENTURY:** Sexual Chemistry 362

MODULE 33

## Understanding Human Sexual Response: The Facts of Life 366

The Basic Biology of Sexual Behavior 366

Physiological Aspects of Sexual Excitement: What Turns People On? 368

The Phases of Sexual Response: The Ups and Downs of Sex 368

**EXPLORING DIVERSITY:** Female Circumcision: A Celebration of Culture—or Genital

Mutilation? 370

#### MODULE 34

## The Diversity of Sexual Behavior 372

Approaches to Sexual Normality 373

Surveying Sexual Behavior: What's Happening Behind Closed Doors? 374

Heterosexuality 375

Homosexuality and Bisexuality 377

Transsexualism 379

Sexual Difficulties and Issues 380

BECOMING AN INFORMED CONSUMER OF PSYCHOLOGY: Lowering the Risks of

Date Rape 385



# Development 390

## **MODULE 35**

## Nature and Nurture: The Enduring Developmental Issue 393

Determining the Relative Influence of Nature and Nurture 395 Developmental Research Techniques 395

## MODULE 36

## Prenatal Development: Conception to Birth 398

The Basics of Genetics 398

APPLYING PSYCHOLOGY IN THE 21ST CENTURY: Gene Therapy and the Coming Medical

Revolution 400

The Earliest Development 400

#### MODULE 37

## Infancy and Childhood 406

The Extraordinary Newborn 406

**NEUROSCIENCE IN YOUR LIFE:** Emotion Recognition in Infancy 409

Infancy Through Childhood 410

PSYCHWORK: Child Protection Caseworker 416

#### MODULE 38

## Adolescence: Becoming an Adult 424

Physical Development: The Changing Adolescent 424

Moral and Cognitive Development: Distinguishing Right from Wrong 426

Social Development: Finding One's Self in a Social World 428

**EXPLORING DIVERSITY:** Rites of Passage: Coming of Age Around

the World 432

#### MODULE 39

## Adulthood 434

Physical Development: The Peak of Health 435

Social Development: Working at Life 436

Marriage, Children, and Divorce: Family Ties 437

Changing Roles of Men and Women 438

Later Years of Life: Growing Old 438

Physical Changes in Late Adulthood: The Aging Body 439

Cognitive Changes: Thinking About—and During—Late Adulthood 440

BECOMING AN INFORMED CONSUMER OF PSYCHOLOGY: Adjusting to Death 443



## Personality 448

## MODULE 40

## Psychodynamic Approaches to Personality 451

Freud's Psychoanalytic Theory: Mapping the Unconscious Mind 451

The Neo-Freudian Psychoanalysts: Building on Freud 457

#### MODULE 41

# Trait, Learning, Biological and Evolutionary, and Humanistic Approaches to Personality 461

Trait Approaches: Placing Labels on Personality 461

APPLYING PSYCHOLOGY IN THE 21ST CENTURY: The Self-Obsessed Generation? 464

Learning Approaches: We Are What We've Learned 464

Biological and Evolutionary Approaches: Are We Born with Personality? 467

**NEUROSCIENCE IN YOUR LIFE:** Wired to Take Risks—The Biological Underpinnings

of Personality 470

Humanistic Approaches: The Uniqueness of You 470

Comparing Approaches to Personality 472

## MODULE 42

## Assessing Personality: Determining What Makes Us Distinctive 474

**EXPLORING DIVERSITY: Should Race and Ethnicity Be Used to Establish Norms? 475** 

Self-Report Measures of Personality 476

Projective Methods 478

Behavioral Assessment 479

**PSYCHWORK:** Human Resources Manager 480

**BECOMING AN INFORMED CONSUMER OF PSYCHOLOGY:** Assessing Personality

Assessments 480





# Health Psychology: Stress, Coping, and Well-Being 484

## MODULE 43

## Stress and Coping 487

Stress: Reacting to Threat and Challenge 487

The High Cost of Stress 489 Coping with Stress 494

**APPLYING PSYCHOLOGY IN THE 21ST CENTURY:** What Doesn't Kill You Really Does Make You Stronger 495

**NEUROSCIENCE IN YOUR LIFE:** Stress and Social Support 497

BECOMING AN INFORMED CONSUMER OF PSYCHOLOGY: Effective Coping Strategies 498

## MODULE 44

## Psychological Aspects of Illness and Well-Being 500

The As, Bs, and Ds of Coronary Heart Disease 500 Psychological Aspects of Cancer 501 Smoking 502

**NEUROSCIENCE IN YOUR LIFE:** The Addictive Pull of Smoking 503 **EXPLORING DIVERSITY:** Hucksters of Death: Promoting Smoking Throughout the World 505

## MODULE 45

## Promoting Health and Wellness 507

Following Medical Advice 507 Well-Being and Happiness 510



#### **CHAPTER 15**

# Psychological Disorders 516

#### **MODULE 46**

## Normal Versus Abnormal: Making the Distinction 519

Defining Abnormality 519

Perspectives on Abnormality: From Superstition to Science 521

Classifying Abnormal Behavior: The ABCs of DSM 524

#### **MODULE 47**

## The Major Psychological Disorders 529

**Anxiety Disorders 529** 

**NEUROSCIENCE IN YOUR LIFE:** One Step Closer to Understanding OCD 533

Somatoform Disorders 534 Dissociative Disorders 534 Mood Disorders 536 Schizophrenia 540

**NEUROSCIENCE IN YOUR LIFE:** Brain Changes with Schizophrenia 543

Personality Disorders 545 Childhood Disorders 546 Other Disorders 547

#### **MODULE 48**

## Psychological Disorders in Perspective 549

The Social and Cultural Context of Psychological Disorders 550

**APPLYING PSYCHOLOGY IN THE 21ST CENTURY:** Psychological Problems Are Increasing Among College Students 552

**EXPLORING DIVERSITY:** *DSM* and Culture—and the Culture of *DSM* 553 **BECOMING AN INFORMED CONSUMER OF PSYCHOLOGY:** Deciding When You Need Help 554





# Treatment of Psychological Disorders 558

## MODULE 49

# Psychotherapy: Psychodynamic, Behavioral, and Cognitive Approaches to Treatment 561

Psychodynamic Approaches to Therapy 562 Behavioral Approaches to Therapy 564

**NEUROSCIENCE IN YOUR LIFE:** How Behavioral Therapy Changes Your Brain 568

Cognitive Approaches to Therapy 568

**NEUROSCIENCE IN YOUR LIFE:** How Cognitive Behavioral Therapy Changes

Your Brain 571

#### **MODULE 50**

# Psychotherapy: Humanistic, Interpersonal, and Group Approaches to Treatment 573

Humanistic Therapy 573

PSYCHWORK: Case Manager and Substance Abuse Counselor 574

Interpersonal Therapy 575 Group Therapies 575

Evaluating Psychotherapy: Does Therapy Work? 576

**EXPLORING DIVERSITY:** Racial and Ethnic Factors in Treatment: Should Therapists Be

Color Blind? 579

## MODULE 51

## Biomedical Therapy: Biological Approaches to Treatment 581

Drug Therapy 581

APPLYING PSYCHOLOGY IN THE 21ST CENTURY: Taking the Sting Out of Traumatic

Memories 584

Electroconvulsive Therapy (ECT) 585

Psychosurgery 585

Biomedical Therapies in Perspective 586

Community Psychology: Focus on Prevention 587

BECOMING AN INFORMED CONSUMER OF PSYCHOLOGY: Choosing the Right Therapist 588



## **CHAPTER 17**

# Social Psychology 592

#### **MODULE 52**

## Attitudes and Social Cognition 595

Persuasion: Changing Attitudes 595

APPLYING PSYCHOLOGY IN THE 21ST CENTURY: Advertising in the Information Age:

Aiming at Moving Targets 596

xxiii

**PSYCHWORK:** Advertising Agency Creator 598 Social Cognition: Understanding Others 600

**EXPLORING DIVERSITY:** Attributions Biases in a Cultural Context: How Fundamental

Is the Fundamental Attribution Error? 604

#### **MODULE 53**

## Social Influence and Groups 607

Conformity: Following What Others Do 607

Compliance: Submitting to Direct Social Pressure 610

Obedience: Following Direct Orders 612

#### MODULE 54

## Prejudice and Discrimination 615

The Foundations of Prejudice 616

**NEUROSCIENCE IN YOUR LIFE:** The Prejudiced Brain 617

Measuring Prejudice and Discrimination: The Implicit Association Test 618

Reducing the Consequences of Prejudice and Discrimination 618

#### MODULE 55

## Positive and Negative Social Behavior 621

Liking and Loving: Interpersonal Attraction and the Development of Relationships 621

**NEUROSCIENCE IN YOUR LIFE:** The Social Brain 623

Aggression and Prosocial Behavior: Hurting and Helping Others 624

Helping Others: The Brighter Side of Human Nature 627

**NEUROSCIENCE IN YOUR LIFE:** Moral Decisions and the Brain 629

**BECOMING AN INFORMED CONSUMER OF PSYCHOLOGY:** Dealing Effectively

with Anger 630





# Going by the Numbers: Statistics in Psychology A-2

#### **MODULE 56**

## Descriptive Statistics A-5

The Mean: Finding the Average A-6 The Median: Finding the Middle A-7

The Mode: Finding What Is Most Frequent A-7

Comparing the Three M's: Mean Versus Median Versus Mode A-8

## MODULE 57

## Measures of Variability A-11

The Range: Highest Minus Lowest A-11

The Standard Deviation: Differences from the Mean A-12