Everyone's a Little Bit Biased: The Science

PSY:2105 Winning Hearts and Minds: Understanding Social Influence  1 s.h.
What social psychologists have discovered about changing people's attitudes and behavior; social influence strategies including applications to fundraising, public service campaigns, religious cults, sales, and political campaigns.

PSY:2130 Advanced Psychology for Pre-Medical Track  3 s.h.
Psychology as a behavioral science; elementary psychology in more depth, advanced topics. Prerequisites: PSY:1001. Requirements: non-psychology major.

PSY:2301 Introduction to Clinical Psychology  3 s.h.
Introduction to abnormal psychology; scientist-practitioner model, training, ethics, research methods in clinical psychology; current approaches to intellectual, personality, behavioral assessment; theories, research on treatment of psychological disorders. Prerequisites: PSY:1001. GE: Social Sciences.

PSY:2401 Introduction to Developmental Science  3 s.h.
Current research in developmental science; prenatal development, brain development, motor and physical development, perceptual development, language development, cognitive development, aspects of socio-emotional development; emphasis on modern theoretical approaches. Prerequisites: PSY:1001. GE: Social Sciences.

PSY:2501 Introduction to Social Psychology  3 s.h.
Research and theories on people's thoughts, feelings, and behaviors in social situations; attitudes, attributions, person perception, aggression, stereotypes and prejudice, attraction, relationships, social influence, group processes, altruism. Prerequisites: PSY:1001.

PSY:2601 Introduction to Cognitive Psychology  3 s.h.
Individual human cognition; perception, attention, memory, language, learning, problem solving, decision making, thought considered from viewpoint of information processing. Prerequisites: PSY:1001. GE: Social Sciences.

PSY:2701 Introduction to Behavioral Neuroscience  4 s.h.
Biological mechanisms of behavior; comparative study of behavior, behavioral organization, animal intelligence, social behavior, communication; behavioral neuroscience, how brain systems control sensation, movement, homeostasis, emotion, learning.

PSY:2811 Research Methods and Data Analysis in Psychology I  3 s.h.
Foundational knowledge in psychological research methods and corresponding statistical concepts; basic concepts of statistics, statistical inference, and research design as applied in psychological research; study of descriptive statistics, measurement, survey design, correlational analyses, and regression analysis; first in a sequence of two courses. Prerequisites: PSY:1001 or PSY:2701. GE: Quantitative or Formal Reasoning.

PSY:2812 Research Methods and Data Analysis in Psychology II  3 s.h.
Foundational knowledge in psychological research methods and corresponding statistical concepts; basic concepts of statistics, statistical inference, and research design as they are applied in psychological research; study of experimental control, experimental design, and hypothesis testing; second in a sequence of two courses. Prerequisites: PSY:2811 with a minimum grade of C-.
PSY:2920 The Damaged Brain  3 s.h.
Basic understanding of relationship between brain and behavior through examination of behavioral and cognitive consequences of brain damage from disease or trauma; foundations of neuropsychology, structure of the nervous system, functional specialization of the brain, cognitive functions, and assessments of brain disorders.

PSY:2930 Abnormal Psychology: Health Professions  3 s.h.
Introduction to psychological disorders; description of psychopathology; general issues in etiology and treatment; for non-psychology students in allied health professions. Prerequisites: PSY:1001. Requirements: non-psychology major.

PSY:2975 Introduction to Cognitive Neuroscience  3 s.h.
Analysis of brain systems and neuroanatomy that underlie cognitive tasks such as vision, hearing, emotion, attention, language, decision making, learning, and memory. Prerequisites: PSY:2811 with a minimum grade of C-.

PSY:3010 Health Psychology  3 s.h.
Psychological contributions to understanding etiology, prevention, treatment of physical illness; basic and clinical research that addresses reciprocal effects of behavior and physical health. Prerequisites: (PSY:2811 with a minimum grade of C- or PSY:2810 with a minimum grade of C-) and (PSY:2301 with a minimum grade of C- or PSY:2501 with a minimum grade of C- or PSY:2701 with a minimum grade of C-).

PSY:3020 Mind and Behavior  3 s.h.
Theories of what it is to act and know, of what intelligence might be in animals, humans, machines; perspectives from philosophy, psychology. Prerequisites: PSY:2811 with a minimum grade of C- and PSY:2701 with a minimum grade of C- or PSY:2601 with a minimum grade of C-). Requirements: junior or senior standing.

PSY:3030 Social and Personality Development  3 s.h.
Emotional, social, and personality development from infancy to adolescence; major theories and empirical research; child temperament, parent-child relationship, and social context as contributors to individual differences. Prerequisites: (PSY:2811 with a minimum grade of C- or PSY:2810 with a minimum grade of C-) and (PSY:2501 with a minimum grade of C- or PSY:2401 with a minimum grade of C-).

PSY:3035 Science of Emotion  3 s.h.
Scientific study of emotion from psychological and neuroscientific perspectives; theories, measurements, and mechanisms (e.g., physiological, psychological, neural); perception, expression, and function of emotion. Prerequisites: PSY:2811 with a minimum grade of C- and (PSY:2501 with a minimum grade of C- or PSY:2601 with a minimum grade of C- or PSY:2701 with a minimum grade of C-).

PSY:3040 Psychology of Learning  3 s.h.
Psychological science of acquired behavior; interests in experimental study of Pavlovian conditioning, operant conditioning, cognition in humans and nonhuman animals, relevance to behavioral adaptation. Prerequisites: (PSY:2811 with a minimum grade of C- or PSY:2810 with a minimum grade of C-) and (PSY:2701 with a minimum grade of C- or PSY:2601 with a minimum grade of C-).

PSY:3050 Applied Psychology: Addressing Real-World Problems  3 s.h.
Bridging the basic applied research divide in psychology; contributions of cognitive, clinical, social, and developmental psychology to understand real-world problems (e.g., traffic safety, screen time). Prerequisites: PSY:2301 with a minimum grade of C- or PSY:2401 with a minimum grade of C- or PSY:2501 with a minimum grade of C- or PSY:2601 with a minimum grade of C-.

PSY:3055 Interdisciplinary Science of Sound and Hearing  3 s.h.
Introduction to physics of sound, biology/psychology of hearing, and audio technology; theories and experimental methods; music, speech, and environmental sounds. Same as CSD:3119, MUS:3055.

PSY:3060 Sensation and Perception  3 s.h.
Principles of sensory processes in vision, audition, and other modalities; perception of objects and events.

Similarities and differences in human language and animal communication; contexts of communication, function of communication, cognitive bases of communication, and mechanisms of communication. Prerequisites: PSY:2811 with a minimum grade of C- and (PSY:2401 with a minimum grade of C- or PSY:2701 with a minimum grade of C-).

PSY:3090 Psychology of Workplace Behaviors  3 s.h.
Introduction to theory and research of workplace and work-related behaviors; focus on industrial and organizational psychology. Prerequisites: PSY:2811 with a minimum grade of C- and (PSY:2501 with a minimum grade of C- or PSY:2601 with a minimum grade of C-).

PSY:3230 Psychopharmacology  3 s.h.
How drugs act to influence behavior; general principles of drug action on the nervous system; licit and illicit drugs, use/abuse, historical perspective on drug use. Prerequisites: (PSY:2811 with a minimum grade of C- or PSY:2810 with a minimum grade of C-) or (HHP:1300 with a minimum grade of C- or HHP:3500 with a minimum grade of C- or HHP:3550 with a minimum grade of C-). Same as HHP:3230.

PSY:3250 Neuroscience of Learning and Memory  3 s.h.
Major topics in the neuroscience of learning and memory; focus on anatomical, cellular, molecular bases of various learning and memory processes. Prerequisites: (PSY:2701 with a minimum grade of C- or BIOL:2753 with a minimum grade of C-) and (PSY:2811 with a minimum grade of C- or PSY:2810 with a minimum grade of C-).

PSY:3265 Cognitive and Clinical Neuroscience of Executive Functions  3 s.h.
Major topics in cognitive and clinical neuroscience of executive functions; focus on attention, working memory, cognitive control, and executive dysfunction in psychiatric and neurological disorders. Prerequisites: (PSY:2811 with a minimum grade of C- or PSY:2810 with a minimum grade of C-) and PSY:2701 with a minimum grade of C-.
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<th>Course Code</th>
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<td>PSY:3270</td>
<td>Neurobiology of Stress</td>
<td>3 s.h.</td>
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<td>PSY:3275</td>
<td>The Science of Sleep</td>
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<td>PSY:3320</td>
<td>Abnormal Psychology</td>
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<td>Childhood Psychopathology</td>
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<td>PSY:3420</td>
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<td>PSY:3595</td>
<td>Psychology of Negotiation</td>
<td>3 s.h.</td>
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PSY:3620 Human Memory 3 s.h.
Contemporary psychological theory and research on short-term and long-term memory, acquisition processes, related topics in cognition. Prerequisites: (PSY:2811 with a minimum grade of C- or PSY:2810 with a minimum grade of C-) and PSY:2601 with a minimum grade of C-

PSY:3670 Language Processes 3 s.h.
Psychological processes involved in using languages, including speech perception and production, the meaning of words, understanding and producing sentences, and basics of discourse and pragmatics; developmental and neural bases of language processes. Prerequisites: ((PSY:2811 with a minimum grade of C- or PSY:2810 with a minimum grade of C-) and PSY:2601 with a minimum grade of C-) or CSD:1015 or LING:3001. Same as LING:3670.

PSY:3680 Introduction to Computational Cognitive Modeling 3 s.h.
Introduction to computational modeling as a methodology for studying cognition; role and use of computational models as a framework for thinking about cognition; emphasis on hands-on simulation exercises. Prerequisites: (PSY:2811 with a minimum grade of C- and (CS:1020 with a minimum grade of C- or CS:1110 with a minimum grade of C) and PSY:2601 with a minimum grade of C-) or (STAT:1020 and (CS:1020 with a minimum grade of C- or CS:1110 with a minimum grade of C-) and PSY:2601 with a minimum grade of C-)

PSY:3994 Research Practicum in Psychology arr.
Small-group participation in faculty research projects; literature review, study planning, data collection, analysis, interpretation, write-up.

PSY:3995 Advanced Research Practicum 1-3 s.h.
Individual participation in faculty research projects; significant reading and writing. Requirements: two semesters of PSY:3994 or HONR:3994.

PSY:3996 External Practicum in Psychology 1-3 s.h.
Student participation in career-related professional activities in community and University of Iowa agencies.

PSY:3997 Teaching/Advising Practicum in Psychology 1-3 s.h.
Participation in faculty teaching as undergraduate teaching assistant or the Psychology Peer Advisor Program.

PSY:3998 Individual Readings and Projects 1-3 s.h.
Requirements: psychology major and undergraduate standing.

PSY:3999 Independent Research in Neuroscience 2-3 s.h.
Independent scientific research related to the field of neuroscience. Same as BIOL:3999.

PSY:4020 Laboratory in Psychology 4 s.h.
Laboratory study of an aspect of behavior; topics in a particular area (e.g., learning and memory, perception, social behavior, operant behavior, physiological processes). Prerequisites: PSY:2701 and (PSY:2812 with a minimum grade of C- or PSY:2810 with a minimum grade of C-)

PSY:4025 Laboratory in Cognitive Neuroscience 4 s.h.
Practical, hands-on experience analyzing data from three of the most common methods of cognitive neuroscience—scalp electroencephalography (brain waves), functional magnetic resonance imaging (brain imaging), and transcranial magnetic stimulation (brain stimulation). Prerequisites: PSY:2975 and PSY:2812. Requirements: neuroscience major.

PSY:4090 Psychology Seminar 3 s.h.
Readings from original sources, presentations, papers, student participation. Prerequisites: PSY:2812 with a minimum grade of C- or PSY:2810 with a minimum grade of C-. Requirements: junior or senior standing.

PSY:4990 Honors Thesis Research 1-3 s.h.
Supervised original project; leads to written thesis, oral defense. Requirements: honors standing.

PSY:4995 Honors Research in Neuroscience arr.
Independent scientific research related to the field of neuroscience. Requirements: honors standing in neuroscience, UI g.p.a. of at least 3.33, and neuroscience g.p.a. of at least 3.33. Same as BIOL:4995.

PSY:5050 Quantitative Methods in Psychology 4 s.h.
Overview of statistical methods based on the general linear model, including ANOVA, ANCOVA, and multiple regression; how to conduct these analyses using SPSS. Requirements: first-year graduate standing in psychology.

PSY:5055 Mixed-Effects Modeling in Psychology 4 s.h.
Introduction to mixed-effects analysis of hierarchically structured and cross-classified psychological data using R. Prerequisites: PSY:5050.

PSY:5070 Programming for Psychologists 3 s.h.
Basics of programming; experiment design, stimulus delivery and response recording using Python; implementation of online testing using JavaScript; data analysis of behavioral data using Python; basic machine learning techniques and their applications to data analysis implemented using Python. Requirements: PSY:2812 or graduate standing.

PSY:5080 Foundations in Cognitive Neuroscience 4 s.h.
Key concepts and findings in human cognitive neuroscience.

PSY:5203 Fundamental Neurobiology I 3 s.h.
Neurobiology from molecular/cellular to systems levels, including cell biology of the neuron; membrane electrophysiology; synaptic transmission and plasticity, functional neuroanatomy, sensory, motor and autonomic systems; emotion, memory, sleep, language, attention and cognition, neuronal development; focus on systems and developmental neurobiology; first in a two-semester sequence. Same as BIOL:5653, NSCI:5653.

PSY:5204 Fundamental Neurobiology I Discussion 1 s.h.
Discussion of selected papers, including classics from neurobiology literature; coordinated with BIOL:5653 lecture material. Same as BIOL:5658, NSCI:5658.

PSY:5212 Foundations in Behavioral and Cognitive Neuroscience 4 s.h.
Concepts, methods, and findings in behavioral and cognitive neurosciences. Prerequisites: BIOL:3253. Same as NSCI:5212.

PSY:5320 Descriptive Psychopathology 3 s.h.
Psychiatric syndromes, including description, etiology, experimental and clinical research; development, function of classification systems.

PSY:5330 Principles of Psychological Assessment 3 s.h.
Assessment theory and basic psychometric principles in test construction, evaluation, application; ethical, social, psychological, and psychometric issues and controversies in assessment.

PSY:5365 Seminar: Neuropsychology and Neuroscience arr.
Clinical neuropsychology and cognitive neuroscience: cutting-edge research from scientific journals, case presentations in clinical neuropsychology, and current research. Same as NEUR:5365, NSCI:5365.
PSY:5410 Proseminar in Developmental Science  3 s.h.
Introduction to developmental process and developmental science; topics organized around mechanisms of development, with cross-disciplinary focus.

PSY:5610 Proseminar in Cognition and Perception 3 s.h.
Broad overview of study of cognition, including cognitive psychology, computer science and artificial intelligence, linguistics, neuroscience, philosophy of mind.

PSY:5710 Introduction to Health and Behavioral Science  3 s.h.
Evolution of health psychology; survey of major physiological systems in which pathology is affected by behavioral processes; review of theoretical approaches, experimental paradigms from behavioral science as they may apply to assessment of health problems; prevention, intervention, psychological adaptation to physical disease.

PSY:6101 Cognitive Science of Language Proseminar I  3 s.h.
Survey of five major disciplines within language sciences: formal linguistic, communication disorders, psychological, neuroscience, and computational approaches. Requirements: graduate standing in communication sciences and disorders, linguistics, psychology, or neuroscience. Same as CSD:6101, LING:6101.

PSY:6102 Cognitive Science of Language Proseminar II  3 s.h.
Survey of five major disciplines within language sciences: formal linguistic, communication disorders, psychological, neuroscience, and computational approaches. Requirements: graduate standing in communication sciences and disorders, linguistics, psychology, or neuroscience. Same as CSD:6102, LING:6102.

PSY:6210 Behavioral Pharmacology  3 s.h.
Behavioral analysis of drug action; emphasis on physiological and biological mechanisms underlying behavioral processes in experimental animals, humans.

PSY:6230 Foundations of Learning, Memory, and Cognition  3 s.h.
Determinants of adaptive behavior in humans and animals; emphasis on behavioral analysis of learning, memory, and cognition; relevance of laboratory research to real life activities.

PSY:6265 Neuroscience Seminar  0-1 s.h.
Research presentations. Same as ACB:6265, BIOL:6265, MPB:6265, NSCI:6265.

PSY:6280 Structural and Functional MRI Methods and Application  3 s.h.
Introduction to basic principles of magnetic resonance imaging and its application to psychology; imaging of brain structure; focus on functional MRI. Requirements: graduate-level introductory statistics.

PSY:6340 Psychological Therapies  3 s.h.
Historical development and current status of empirically based therapies for psychological disorders, including anxiety, depression, schizophrenia, childhood disorders; emphasis on critical evaluation of therapy techniques.

PSY:6370 Principles of Neuropsychology  3 s.h.
Principles of human neuropsychology, including foundations (history, methods, approaches), major functional systems (vision, memory, language, spatial processing), executive functions (emotional processing and personality), and applications (experimental, clinical). Recommendations: prior coursework in psychological assessment, psychopathology, and neuroanatomy.

PSY:6440 Developmental Cognitive Neuroscience  3 s.h.
Overview of current developmental cognitive neuroscience theory, research, and methods (PET, fMRI, optical imaging, EEG, ERPs); neural development, computational neuroscience, and methods.

PSY:6460 Translating Developmental Science to Applied Problems  3 s.h.
Relationship between basic and applied research in development; individual differences work and how applied work informs theory.

PSY:6480 Computational Approaches to Development  3 s.h.
Use of computational models to understand development; model development, specific approaches, model evaluation, and hands-on model work.

PSY:6580 Moral Psychology  3 s.h.
Research and theory on cognitive and affective processes that underpin moral judgment and moral behavior; neuroscience approaches to moral judgment; political differences in moral judgment; development, evolution, and clinical variation in morality.

PSY:6590 Judgment and Decision Making  3 s.h.
Theory and research on how people gather, perceive, and use information when making judgments and decisions; includes risky and uncertain contexts; social and nonsocial contexts.

PSY:7070 Seminar: Behavioral Biomedical Interface  1 s.h.
Ongoing seminar; discussion of research at behavioral-biomedical interface. Requirements: acceptance to Behavioral Biomedical Interface Training Program.

PSY:7110 Research Projects

PSY:7120 M.A. Thesis Research

PSY:7130 Ph.D. Dissertation Research

PSY:7150 Current Topics in Psychology  3 s.h.

PSY:7160 Problems in Psychology  arr.
Individual study.

PSY:7170 Teaching Practicum  arr.
Supervised practice in teaching.

PSY:7210 Seminar: Advanced Topics in Behavioral and Cognitive Neuroscience  3 s.h.

PSY:7270 Principles of Scholarly Integrity  1 s.h.
Training in responsible conduct of research; student/mentor responsibilities; authorship and reviewing; plagiarism/falsification/fabrication of data; intellectual property; conflict of interest; fiscal, institutional, societal; treatment of human and animal subjects; data handling. Requirements: enrollment in graduate psychology or biology program. Same as BIOL:7270.

PSY:7310 Seminar: Orientation to Clinical Research  0-1 s.h.
Issues in clinical research, including use of databases, advisor/advisee relationships, preparation of IRB proposals, paper presentation and publication, common early career problems, funding resources.

PSY:7330 Seminar: Acceptance and Commitment Therapy  1 s.h.
Core processes of acceptance and commitment therapy (ACT); case conceptualization and targeted intervention across a range of psychiatric and physical diagnoses; emphasis on therapeutic stance and theoretical underpinnings of ACT; readings, discussion, video review, therapist-patient role play, and discussion of ongoing cases.
PSY:7331 Seminar: Advanced Acceptance and Commitment Therapy 1 s.h.
Core processes of acceptance and commitment therapy (ACT) and implementation in clinical practice; theoretical underpinnings of ACT theory; ACT research; case conceptualization and targeted intervention across a range of psychiatric and physical diagnoses; reading, discussion, video review, therapist-patient role play, and discussion of ongoing cases. Prerequisites: PSY:7330.

PSY:7350 Introductory Practicum arr.
Orientation to Department of Psychology clinic, including instruction in interviewing, observation of clinic procedures, attendance at clinic rounds under supervision of clinical psychology faculty members.

PSY:7355 Assessment Practicum arr.
Supervised practice in psychological assessment techniques.

PSY:7360 Therapy Practicum arr.
Supervised practice and clinical experience in application and evaluation of psychological therapies.

PSY:7365 External Practicum arr.
Supervised practice and clinical experience in field setting; psychological assessment techniques and/or application, evaluation of psychological therapies.

PSY:7370 Supervision and Consultation Practicum arr.
Supervision and training of less advanced students; consultation to other programs and agencies.

PSY:7430 Seminar: Cognitive Development 0-3 s.h.
Theoretical, methodological issues focused on cognitive and perceptual development.

PSY:7604 Principles of Scholarly Integrity 0 s.h.
Training in responsible conduct of research and scholarly activities; student/mentor responsibilities; authorship; plagiarism/falsification/fabrication of data; intellectual property; conflict of interest; fiscal, institutional, societal; treatment of human and animal subjects; data handling. Requirements: postdoctoral standing in psychology or biology. Same as BIOL:7604.

PSY:7610 Seminar: Cognitive Psychology 2-3 s.h.

PSY:7620 Seminar: Human Perception and Performance 1 s.h.
Professional issues and current topics relevant to psychologists studying human perception and performance.