Cognitive Science

CGS 1100 First Year Seminar (1 semester hour) This course is designed to introduce incoming freshmen to the intellectual and cultural environment of the School of Behavioral and Brain Sciences (BBS). Students will learn about plans of study and career paths for majors in Psychology, Neuroscience, Speech Language Pathology and Audiology, Child Learning and Development, and Cognitive Science. Required for all freshman Behavioral and Brain Sciences majors; open to all non-BBS majors. Corequisite: UNIV 1010. (Same as CLDP 1100 and NSC 1100 and PSY 1100 and SPAU 1100) (1-0) Y

CGS 2301 Cognitive Science (3 semester hours) An introduction to the study of the brain and behavior from the point of view of cognitive science, including approaches from psychology, philosophy, neuropsychology, and computational modeling. Includes phenomena involving sensory systems, memory, decision making, language, and communication. (3-0) Y

CGS 3325 Historical Perspectives on Psychology: Mind and Machines since 1600 (3 semester hours) Basic frames of reference in 20th-century psychology and their historical development in Western thought since 1600 with an emphasis on issues involved with minds, brains, and machines. Includes behaviorism, learning theory, artificial intelligence, and gestalt, structural and cognitive approaches. Prerequisite: PSY 2301 or CGS 2301. (Same as PSY 3360) (3-0) Y

CGS 3340 Experimental Projects in Cognitive Science (3 semester hours) Laboratory and field experience in designing and conducting research, with a major emphasis on writing research reports. (This course fulfills the advanced writing requirement for Cognitive Science majors and 3 hours of the Communication component of the Core Curriculum). Prerequisite: PSY 3392 or PSY 3490. (Same as PSY 3393) (3-0) S

CGS 3342 Cognitive and Neural Modeling Laboratory (3 semester hours) Computational Neuroscience, Cognitive Neural Modeling, and Mathematical Psychology modeling methodologies are introduced through the use of computer-based simulation modeling experiments. Linear Algebra (MATH 2418) and Computer Programming experience are recommended but not required. (3-0) T

CGS 3361 Cognitive Psychology (3 semester hours) Theory and research on perception, learning, thinking, psycholinguistics, and memory. Prerequisite: CGS 2301 or PSY 2301. (Same as PSY 3361) (3-0) Y

CGS 4188 Dean's Scholars' Seminar (1 semester hour) A course for students enrolled in the Dean's Scholars' Program (minimum 3.600 GPA and 30 graded hours at UTD) who wish to pursue doctoral-level professional careers. The seminar introduces scholars to the quality and demands of doctoral-level careers and includes service activities in BBS. Aims of the seminar include 1) learning about requirements for admission into doctoral level programs, 2) meeting with professionals to learn how they built their careers and with BBS faculty to learn about research and internship opportunities, 3) introduction to demands of doctoral-level careers, and 4) participation in BBS service activities. This course is required for all students seeking to graduate as BBS Dean's Scholars. Offered only in fall semester. (Same as CLDP 4188 and PSY 4188 and NSC 4188 and SPAU 4188) (1-0) Y

CGS 4312 Computational Modeling Methods for Language Understanding (3 semester hours) Probabilistic-based methods for natural language understanding using the MATLAB programming language. (3-0) T
**CGS 4313** Neural Net Mathematics (3 semester hours) Vector calculus and vector calculus-based probability theory with artificial neural network modeling applications. Intended to provide mathematics preparation for **CGS 4314** and **CGS 4315**. Prerequisite: **CGS 3342** and (**MATH 2418** and **MATH 2451**) and (either **STAT 4351** or **STAT 3341**) or instructor consent required. (3-0) T

**CGS 4314** Intelligent Systems Analysis (3 semester hours) Mathematical tools for investigating the asymptotic behavior of both deterministic and stochastic nonlinear dynamical systems for the purposes of building computational models in the fields of neuroscience, psychology, and artificial intelligence. Topics include: artificial neural network architectures, Lyapunov stability theory, nonlinear optimization theory, stochastic approximation theory, and the Gibbs Sampler. Prerequisite: **CGS 4313** or equivalent or instructor consent required. (Same as **CS 4314**) (3-0) T

**CGS 4315** Intelligent Systems Design (3 semester hours) Mathematical tools for the design and evaluation of artificially intelligent deterministic and stochastic nonlinear dynamical systems for the purposes of building computational models in the fields of neuroscience, psychology, and artificial intelligence. Topics include: (1) Markov Random Field probability representations, and (2) asymptotic mathematical statistical theory for: parameter estimation, model selection, and hypothesis testing. Prerequisite: (**CGS 4314** or **CS 4314**) or instructor consent required. (Same as **CS 4315**) (3-0) T

**CGS 4352** Human Computer Interactions I (3 semester hours) Methods and principles of human-computer interaction (HCI), user-centered design (UCD), and usability evaluation. Provides broad overview of HCI and how HCI informs UCD processes throughout product development lifecycle. (Same as **CS 4352**) (3-0) T

**CGS 4353** Human Computer Interactions II (3 semester hours) Detailed exploration of human-computer interaction (HCI) through readings in journal articles and research reports. Practical experience in methodology typically used in the design of usable systems. Prerequisite: (**CGS 4352** or **CS 4352**) or instructor consent required. (Same as **CS 4353**) (3-0) T

**CGS 4355** Human Computer Interactions Lab (3 semester hours) Provides students with resources to learn and perform hands-on lab-based techniques such as usability testing and cognitive walkthroughs. Prerequisite or corequisite: (**CGS 4352** or **CGS 4353**) or instructor consent required. (3-0) T

**CGS 4359** Cognitive Neuroscience (3 semester hours) Examines how modern cognitive neuroscientists explore the neural underpinnings of perception, memory, attention, language and emotion. Investigates how the brain-bases of these functions are uncovered by ingenious observations of clinical populations (including brain-damaged and schizophrenic patients), animal and human electrophysiological techniques, and powerful new functional neuroimaging tools. Prerequisite: **PSY 2301**. (Same as **NSC 4359** and **PSY 4359**) (3-0) Y

**CGS 4362** Perception (3 semester hours) Considers the processes by which the individual gathers information from the external world, the physiological basis of those processes, and how they develop throughout the life span of the individual. Prerequisite: **CGS 2301** or **PSY 2301** (Same as **PSY 4362**) (3-0) Y

**CGS 4364** Attention and Memory (3 semester hours) Factors influencing the capacity to pick up, organize, and remember complex information. Prerequisite: (**CGS 3361** or **PSY 3361**) or instructor consent required. (Same as **PSY 4364**) (3-0) R

**CGS 4375** Honors Seminar (3 semester hours) A course for students enrolled in the Honors Program
(minimum 3.500 GPA and 30 graded hours at UTD) who will conduct undergraduate thesis research in BBS. The seminar attempts to hone skills of critical thinking, creativity, and effective written and oral communication. By the end of the seminar, all students will have determined 1) a thesis approach, 2) a research question(s), and 3) a faculty sponsor and second reader. This course is required for students seeking BBS School Honors (see Honors Program Manual for more information). Permission of Director of the Honors Program required. Offered only in spring semester. (Same as CLDP 4375 and NSC 4375 and PSY 4375 and SPAU 4375) (3-0) Y

**CGS 4385** Neuropsychology (3 semester hours) This course is a comprehensive introduction of the relationship between brain and behavior. Topics include the foundations of neuropsychology, the brain's organization and functional systems, and neuropsychological perspectives of memory, attention, language, emotion, and spatial functions, and their related disorders. Prerequisite: NSC 3361. (Same as NSC 4385 and PSY 4385) (3-0) T

**CGS 4386** Adult Development and Aging (3 semester hours) This course is designed to provide an overview of theories, methods, and research on the psychological, social, and biological aspects of adult development and aging. A selection of topics to be covered includes lifespan developmental theories, research methodology, cognitive aging, compensation and successful aging, personality development, health, coping, social-emotional development, and to understand the nature and multiple influences of development throughout the adult lifespan. Prerequisite: PSY 2301. (Same as NSC 4386 and PSY 4386 and SPAU 4386) (3-0) T

**CGS 4394** Internship in Cognitive Science (3 semester hours) Students earn course credit for field experience in an applied setting. Requires working at least 8 hours per week at an approved community agency or business of the student's choice. Students keep daily job diaries, attend one class meeting per month, and write brief papers relevant to their experiences. Open to students in good academic standing with a GPA of at least 2.500 who have reached junior or senior standing (more than 53 hours). Apply for placements on the BBS website. Graded Credit/No Credit only. (Same as CLDP 4394 and NSC 4394 and PSY 4394 and SPAU 4396) (3-0) S

**CGS 4395** Co-op Fieldwork (3 semester hours) Students earn course credit for field experience in an approved business or government setting. Requires working at least 8 hours per week. Students will keep a journal of their workplace experience, maintain contact with the instructor, and prepare a written report that focuses on the accomplishments and insights gained through their co-op experience. Open to students in good academic standing with a GPA of at least 2.500. Credit will not be awarded retroactively. Apply for placements through the Career Center office. May be repeated for credit (6 hours maximum). Graded Credit/No Credit only. (Same as CLDP 4395 and PSY 4395) (3-0) Y

**CGS 4397** Thesis Research (3 semester hours) An independent study in which the student writes a thesis under faculty supervision. Instructor and Associate Dean consent required. (3-0) S

**CGS 4v90** Special Topics in Cognitive Science (1-6 semester hours) May be repeated for credit as topics vary (9 hours maximum). (3-0) R

**CGS 4v96** Teaching Internship (1-3 semester hours) Students work individually with faculty member in preparing and presenting course materials and tutoring students. Must have completed the relevant course with a grade of at least B and have a UT Dallas GPA of at least 3.000. Instructor and Associate Dean
consent required. Graded Credit/No Credit only. May be repeated (6 hours maximum). ([1-3]-0) S

**CGS 4v98** Directed Research (1-3 semester hours) Student assists faculty with research projects or conducts a research project under weekly faculty supervision. Instructor consent required. Taken on a credit/no credit basis. May be repeated for credit (6 hours maximum). Instructor consent required. ([1-3]-0) S

**CGS 4v99** Individual Study (1-3 semester hours) Student studies advanced topics under weekly faculty direction. Instructor and Associate Dean consent required. Graded Credit/No Credit only. May be repeated for credit (6 hours maximum). ([1-3]-0) S

# Child Learning and Development

**CLDP 1100** First Year Seminar (1 semester hour) This course is designed to introduce incoming freshmen to the intellectual and cultural environment of the School of Behavioral and Brain Sciences (BBS). Students will learn about plans of study and career paths for majors in Psychology, Neuroscience, Speech Language Pathology and Audiology, Child Learning and Development, and Cognitive Science. Required for all freshman Behavioral and Brain Sciences majors; open to all non-BBS majors. Corequisite: **UNIV 1010**. (Same as **CGS 1100** and **NSC 1100** and **PSY 1100** and **SPAU 1100**) (1-0) Y

**CLDP 3303** Normal Language Development (3 semester hours) The development of language and communication, including phonology, syntax, semantics, pragmatics, and literacy. (Same as **SPAU 3303**) (3-0) S

**CLDP 3305** Language and Literacy Development (3 semester hours) Examines research trends, theories and best practices as they relate to the development of language and literacy in school aged children. Considers brain development, development of spoken language competence, normal literacy development, literacy disorders, motivation, influence of parents and socio-cultural issues. Current research in reading and written language instructional strategies will be reviewed. (Same as **SPAU 3305**) (3-0) S

**CLDP 3310** Child Development (3 semester hours) Introduction to psychological theory and research on physical, cognitive, social, and emotional development from birth to adolescence. Students can take either (CLDP 3310 or **PSY 3310**) or (CLDP 4334 or **PSY 4334**). (Same as **PSY 3310**) (3-0) Y

**CLDP 3332** Social and Personality Development (3 semester hours) The study of the forces affecting the socialization of children. Emphasis will be placed on children's interactions with others and how this influences their development in such areas as self-concept, identity, and morality. Prerequisite: (CLDP 3310 or **PSY 3310**) or (CLDP 3339 or **PSY 3339**) or (CLDP 4334 or **PSY 4334**) or equivalent. (Same as **PSY 3332**) (3-0) S

**CLDP 3336** Infancy (3 semester hours) Review of relevant developmental theories and processes as well as skills acquired in motor, sensory-perceptual, cognitive, and social domains from birth through two years of age. Prerequisite: (CLDP 3310 or **PSY 3310**) or (CLDP 3339 or **PSY 3339**) or (CLDP 4334 or **PSY 4334**) or equivalent. (Same as **PSY 3336**) (3-0) R

**CLDP 3338** Adolescence (3 semester hours) Covers physical, cognitive, and socio-emotional development
of adolescents. Topics include puberty, identity development, family processes, peers, schools, achievement and adolescent problems. (Same as PSY 3338) (3-0) Y

CLDP 3339 Educational Psychology (3 semester hours) This course focuses on the psychological foundations of education and teaching. Topics include development, individual variations, learning and cognitive processes, motivation, classroom management, and assessment. Emphasis will be on applications in actual teaching behavior. (Same as PSY 3339) (3-0) S

CLDP 3342 Exceptional Children (3 semester hours) Examines the characteristics of exceptional children and their education, including children with disabilities (learning, emotional/behavioral, communication and physical) as well as those who are gifted. The causes and assessment of exceptionality are examined, along with educational and social policy considerations. Prerequisite: (CLDP 3310 or PSY 3310) or (CLDP 3339 or PSY 3339) or (CLDP 4334 or PSY 4334) or equivalent. (Same as PSY 3342 and SPAU 3342) (3-0) S

CLDP 3343 Children in a Changing World (3 semester hours) Issues relevant to childhood in the 20th century. Topics include day care, divorce, parenting styles, and parental leave. The influence of social policy, socioeconomic factors, and family structure on childrearing will be discussed. (3-0) Y

CLDP 3362 Cognitive Development (3 semester hours) A contrast of Piagetian, behaviorist, and information-processing approaches to the development of cognitive processes throughout childhood. Prerequisite: (CLDP 3310 or PSY 3310) or (CLDP 3339 or PSY 3339) or (CLDP 4334 or PSY 4334) or equivalent. (Same as PSY 3362) (3-0) S

CLDP 3365 Child Learning (3 semester hours) Examines the nature of child learning and implications for improving the teaching and learning process. Major theories and research on conditioning paradigms, learning and remembering, attention, knowledge representation and retrieval, and problem solving. Illustrations of how these processes relate to teaching and the acquisition of expertise in content areas such as reading, mathematics, and science. Child assessment, identification of learning styles, and tests and measurements are also considered. Prerequisite: (CLDP 3310 or PSY 3310) or (CLDP 3339 or PSY 3339) or (CLDP 4334 or PSY 4334) or equivalent. (3-0) Y

CLDP 3366 Motivation and Achievement (3 semester hours) Examines theories and research on achievement and achievement motivation. Topics include methods of assessing school achievement, theories of achievement motivation, socio-cultural and situational influences. Also explores classroom applications. Prerequisite: CLDP 3339 or PSY 3339. (Same as PSY 3366) (3-0) Y

CLDP 3494 Research and Evaluation Methods (4 semester hours) This is a 3-hour lecture course with a required 2-hour lab. Students gain experience in all phases of behavior science research, including study design, measurement, sampling, data collection, data analysis, and report writing. The course covers the fundamental concepts of the psychometrics of measurement and testing, as well as foundations of experimental and non-experimental designs in research and evaluation. Prerequisite: PSY 2317 or STAT 1342. Note: The day/time and room of the lab session is different than the day/time and room of the lecture sessions. (3-1) S

CLDP 4188 Dean's Scholars' Seminar (1 semester hour) A course for students enrolled in the Dean's Scholars' Program (minimum 3.600 GPA and 30 graded hours at UTD) who wish to pursue doctoral-level professional careers. The seminar introduces scholars to the quality and demands of doctoral-level careers and includes service activities in BBS. Aims of the seminar include 1) learning about requirements for
admission into doctoral level programs, 2) meeting with professionals to learn how they built their careers and with BBS faculty to learn about research and internship opportunities, 3) introduction to demands of doctoral-level careers, and 4) participation in BBS service activities. This course is required for all students seeking to graduate as BBS Dean’s Scholars. Offered only in fall semester. (Same as PSY 4188 and CGS 4188 and NSC 4188 and SPAU 4188) (1-0) Y

CLDP 4308 Language Disorders in Children (3 semester hours) Language impairment in children, including etiology, characteristics, evaluation, and treatment procedures with special emphasis on factors that interfere with normal development of language skills. Prerequisite: CLDP 3303 or SPAU 3303 or instructor consent required. (Same as SPAU 4308) (3-0) Y

CLDP 4334 Lifespan Development (3 semester hours) Covers physical, cognitive, and socio-emotional development throughout the human life span. Topics include development of the brain, information processing, self development, attachment family processes, and aging. Students can take either (CLDP 3310 or PSY 3310) or (CLDP 4334 or PSY 4334). (Same as PSY 4334) (3-0) S

CLDP 4344 Child Psychopathology (3 semester hours) Present various views of clinical issues in childhood from sociological, anthropological, and psychological perspectives. Historical views of children are examined in terms of the evolution of current perspectives in childhood psychopathology. Prerequisite: (CLDP 3310 or PSY 3310) or (CLDP 3339 or PSY 3339) or (CLDP 4334 or PSY 4334) or equivalent. (Same as PSY 4344) (3-0) Y

CLDP 4345 Violence in the Family (3 semester hours) Explores the area of family violence with primary emphasis on the problems of spouse abuse and child abuse. Analysis of each of these areas of family violence focuses specifically on the epidemiology of the problem, characteristics of the families, etiological theories, and treatment approaches. (Same as PSY 4345) (3-0) Y

CLDP 4347 Marriage and Family Psychology (3 semester hours) Examines family life styles from socio-psychological viewpoint with stress on personal awareness, growth and satisfaction in interpersonal relations. Research topics include dating, mate selection, communication, sexual adjustment, parenting, cohesion and adaptability, and divorce. (Same as PSY 4347) (3-0) Y

CLDP 4375 Honors Seminar (3 semester hours) A course for students enrolled in the Honors Program (minimum 3.500 GPA and 30 graded hours at UTD) who will conduct undergraduate thesis research in BBS. The seminar attempts to hone skills of critical thinking, creativity, and effective written and oral communication. By the end of the seminar, all students will have determined 1) a thesis approach, 2) a research question(s), and 3) a faculty sponsor and second reader. This course is required for students seeking BBS School Honors (see Honors Program Manual for more information). Permission of Director of the Honors Program required. Offered only in spring semester. (Same as CGS 4375 and NSC 4375 and PSY 4375 and SPAU 4375) (3-0) Y

CLDP 4394 Internship (3 semester hours) Students earn course credit for field experience in an applied setting. Requires working at least 8 hours per week at an approved community agency or business of the student’s choice. Students keep daily job diaries, attend one class meeting per month, and write brief papers relevant to their experiences. Open to students in good academic standing with a GPA of at least 2.500 who have reached junior or senior standing (more than 53 hours). Apply for placements on the BBS website. Graded Credit/No Credit only. (Same as CGS 4394 and NSC 4394 and PSY 4394 and SPAU 4396)
CLDP 4395 Co-op Fieldwork (3 semester hours) Students earn course credit for field experience in an approved business or government setting. Requires working at least 8 hours per week. Students will keep a journal of their workplace experience, maintain contact with the instructor, and prepare a written report that focuses on the accomplishments and insights gained through their co-op experience. Open to students in good academic standing with a GPA of at least 2.500. Credit will not be awarded retroactively. Apply for placements through the Career Center office. May be repeated for credit (6 hours maximum). Graded Credit/No Credit only. (Same as CGS 4395 and PSY 4395) (3-0) Y

CLDP 4397 Thesis Research (3 semester hours) An independent study in which the student writes a honors thesis under faculty supervision. Instructor and Associate Dean consent required. (3-0) S

CLDP 4v90 Special Topics in Child Learning and Development (1-6 semester hours) Topics vary from semester to semester. The class schedule for the current semester will list the special topic that will be offered. May be repeated for credit as topics vary (9 hours maximum). ([1-6]-0) R

CLDP 4v96 Teaching Internship (1-3 semester hours) Students work individually with faculty member in preparing and presenting course materials and tutoring students. Must have completed the relevant course with a grade of at least B and have a UT Dallas GPA of at least 3.000. Instructor and Associate Dean consent required. Taken on a credit/no credit basis. Can be repeated for a total of 6 semester hours. ([1-3]-0) S

CLDP 4v98 Directed Research (1-3 semester hours) Student assists faculty with research projects or conducts a research project under weekly faculty supervision. Instructor consent required. Taken on a credit/no credit basis. May be repeated for credit (6 hours maximum). ([1-3]-0) S

CLDP 4v99 Individual Study (1-3 semester hours) Student studies advanced topics under weekly faculty direction and writes a paper turned in to the Associate Dean. Instructor consent required. Graded Credit/No Credit only. May be repeated for credit (6 hours maximum). ([1-3]-0) S

### Neuroscience

**NSC 1100** First Year Seminar (1 semester hour) This course is designed to introduce incoming freshmen to the intellectual and cultural environment of the School of Behavioral and Brain Sciences (BBS). Students will learn about plans of study and career paths for majors in Psychology, Neuroscience, Speech Language Pathology and Audiology, Child Learning and Development, and Cognitive Science. Required for all freshman Behavioral and Brain Sciences majors; open to all non-BBS majors. Corequisite: **UNIV 1010**. (Same as CLDP 1100 and CGS 1100 and PSY 1100 and SPAU 1100) (1-0) Y

**NSC 3344** Anatomy and Physiology of Speech and Hearing (3 semester hours) Study of anatomic and physiologic mechanisms underlying speech: respiration, phonation, and articulation. Overview of the peripheral auditory system, neuroanatomy, and normal swallowing. (Same as SPAU 3344) (3-0) Y

**NSC 3345** Neural Basis of Communication (3 semester hours) Organization and function of cortical and subcortical structures that underlie speech, language and hearing. Special consideration of structures and pathways typically affected in neurogenic disorders of communication. (Same as SPAU 3345) (3-0) Y
**NSC 3361** Behavioral Neuroscience (3 semester hours) Introductory course that explores the nature of the brain processes underlying behavior, including consideration of basic neurophysiology and the physiology of sensation, learning, and emotion. (3-0) S

**NSC 4188** Dean's Scholars' Seminar (1 semester hour) A course for students enrolled in the Dean's Scholars' Program (minimum 3.600 GPA and 30 graded hours at UTD) who wish to pursue doctoral-level professional careers. The seminar introduces scholars to the quality and demands of doctoral-level careers and includes service activities in BBS. Aims of the seminar include 1) learning about requirements for admission into doctoral level programs, 2) meeting with professionals to learn how they built their careers and with BBS faculty to learn about research and internship opportunities, 3) introduction to demands of doctoral-level careers, and 4) participation in BBS service activities. This course is required for all students seeking to graduate as BBS Dean's Scholars. Offered only in fall semester. (Same as CLDP 4188 and CGS 4188 and PSY 4188 and SPAU 4188) (1-0) Y

**NSC 4351** Medical Neuroscience (3 semester hours) Discussions of major topics in the medical neurosciences (including coma, stroke, dementia, muscle diseases, etc.) with discussion of neurologic symptoms, signs, and diseases. Coverage of their diagnosis, evaluation, and treatment for students considering advanced medical training. Prerequisite: NSC 3361. (0-3) Y

**NSC 4352** Cellular Neuroscience (3 semester hours) The cell biology and cellular physiology of the neuron. Growth and maintenance of dendrites, axons and synapses, and the underlying processes of macromolecule synthesis, packaging, and transport are the central biological issues. Electrical signaling, ion channel functions, and synaptic transmission are covered. Prerequisite: NSC 3361. (3-0) Y

**NSC 4353** Neuroscience Laboratory Methods (3 semester hours) This laboratory course provides hands-on experience with the use of electrophysiological techniques for the analysis of living neural preparations. (This course fulfills the advanced writing requirement for Neuroscience majors and 3 hours of the Communication component of the Core Curriculum). Prerequisites: NSC 3361 and (NSC 4352 or NSC 4356). (0-3) S

**NSC 4354** Integrative Neuroscience (3 semester hours) Examines the collective behavior of neuronal systems with respect to sensory processing, motor control, and the plasticity regulating more advanced behavioral, motivational, and cognitive functions. Prerequisite or corequisite: NSC 3361. (3-0) Y

**NSC 4355** Advanced Neuroscience Laboratory (3 semester hours) This laboratory course exposes students to a structured research project, with topics selected in consultation with the instructor. It requires students to develop a rationale for experiments and to interpret their results. Each student writes a publication-style paper with reference to the scientific literature. Prerequisite: NSC 4353. (0-3) R

**NSC 4356** Neurophysiology (3 semester hours) This course focuses on the elements of neural functions ranging from the kinetics of channels in excitable membranes to the collective behavior of real neural networks. Prerequisite: NSC 4352. (3-0) Y

**NSC 4357** Neurobiology of Learning and Memory (3 semester hours) Current research and theory on modifications in the nervous system that may underlie memory. Includes overviews of synaptic physiology and behavioral pharmacology, and concepts of neural plasticity revealed from research findings. Prerequisite: NSC 4354. (3-0) T
NSC 4358  Neurobiology of Pain (3 semester hours) A review of the anatomical and physiologic basis for different forms of pain, with an emphasis on similarities and differences between different forms of pain. Basic neural processing of pain signals in the dorsal horn of the spinal cord and the brain, including the anatomy and function of the ascending and the descending systems are covered. Prerequisite: NSC 3361. (3-0) T

NSC 4359  Cognitive Neuroscience (3 semester hours) Examines how modern cognitive neuroscientists explore the neural underpinnings of perception, memory, attention, language and emotion. Investigates how the brain-bases of these functions are uncovered by ingenious observations of clinical populations (including brain-damaged and schizophrenic patients), animal and human electrophysiological techniques, and powerful new functional neuroimaging tools. Prerequisite: PSY 2301. (Same as CGS 4359 and PSY 4359) (3-0) Y

NSC 4362  Molecular Neuroscience (3 semester hours) Examines the regulation and expression of major macromolecules of neurons and glia, including DNA, RNA and proteins. Interdependence of major pathways, and the effects of development and experience on molecular mechanisms will be explored. Prerequisite: NSC 4352. (3-0) T

NSC 4363  Neuropharmacology (3 semester hours) A survey of neurotransmitter functions with special emphasis on effects in the central nervous system. Emphasizes on ion channels and receptors, and on neurotransmitter metabolism, transport and release. Mechanisms of action from the subcellular to whole organism level are discussed. Prerequisite: NSC 4352 or NSC 4354. (3-0) Y

NSC 4366  Neuroanatomy (3 semester hours) Introduction to the anatomical organization and basic functional principles of the major sensory, motor, associational, and modulatory systems of the human brain. Students learn to identify visually specific structures on slides, magnetic resonance images (MRI), and dissected brain specimens in relation to neural pathways and system interconnections. This course provides a basis for a general understanding of the human brain and its functions in relation to disease and behavior. Prerequisite: NSC 3361 or BIOL 2311. (3-0) Y

NSC 4367  Developmental Neurobiology (3 semester hours) Examines the processes guiding the proliferation, differentiation and migration of neurons as they form transient or long-lasting connections and circuits. Prerequisite: NSC 4352 or NSC 4354. (3-0) Y

NSC 4370  Neuroendocrinology (3 semester hours) A detailed examination of central nervous system regulation of the endocrine system, primarily via the hypothalamic-pituitary-adrenal axis. Examines feedback effects of hormonal actions on neuronal function. Prerequisite: NSC 4366. (3-0) T

NSC 4371  Neural Plasticity (3 semester hours) Review of the basic principles of neural plasticity. Special emphasis on cortical or subcortical plasticity related to development, recovery from injury and adaptations to the external world involved in learning and memory. Prerequisite: NSC 3361. (3-0) T

NSC 4373  Sensory Neuroscience (3 semester hours) Review of the basic principles of neural information processing, with emphasis on the central nervous system processes underlying one or more sensory modalities. Readings and discussion of classic and modern primary papers. Prerequisite: NSC 3361. (3-0) T

NSC 4374  Neuroplasticity in Disorders of the Nervous System (3 semester hours) The symptoms and signs of multiple disorders caused by reorganization or plasticity of the central nervous system. A review of the
neural plasticity underlying the pathophysiology of disorders such as chronic pain, tinnitus, balance disorders, spasticity, etc., i.e. a "dark side" of plasticity not widely recognized. Prerequisite: NSC 4352. (3-0) T

**NSC 4375** Honors Seminar (3 semester hours) A course for students enrolled in the Honors Program (minimum 3.500 GPA and 30 graded hours at UTD) who will conduct undergraduate thesis research in BBS. The seminar attempts to hone skills of critical thinking, creativity, and effective written and oral communication. By the end of the seminar, all students will have determined 1) a thesis approach, 2) a research question(s), and 3) a faculty sponsor and second reader. This course is required for students seeking BBS School Honors (see Honors Program Manual for more information). Permission of Director of the Honors Program required. Offered only in spring semester. (Same as CLDP 4375 and CGS 4375 and PSY 4375 and SPAU 4375) (3-0) Y

**NSC 4376** Neurobiology of Stress (3 semester hours) Studies of the effects of stressors (specific and nonspecific) on bodily systems, with respect to health and disease and maintenance of homeostatic equilibria. Neural, endocrine, and immune interactions will be assessed. Prerequisite: NSC 4354. (3-0) T

**NSC 4378** Neurotoxicology (3 semester hours) An overview of modern toxicology as it affects the nervous system. Adverse effects of xenobiotics and neurotoxins, hypo or hyperactivation of neuromodulatory and hormonal systems. Prerequisite: NSC 4352 or NSC 4363. (3-0) T

**NSC 4385** Neuropsychology (3 semester hours) This course is a comprehensive introduction of the relationship between brain and behavior. Topics include the foundations of neuropsychology, the brain's organization and functional systems, and neuropsychological perspectives of memory, attention, language, emotion, and spatial functions, and their related disorders. Prerequisite: NSC 3361. (Same as CGS 4385 and PSY 4385) (3-0) T

**NSC 4386** Adult Development and Aging (3 semester hours) This course is designed to provide an overview of theories, methods, and research on the psychological, social, and biological aspects of adult development and aging. A selection of topics to be covered includes lifespan developmental theories, research methodology, cognitive aging, compensation and successful aging, personality development, health, coping, social-emotional development, and to understand the nature and multiple influences of development throughout the adult lifespan. Prerequisite: PSY 2301. (Same as CGS 4386 and PSY 4386 and SPAU 4386) (3-0) T

**NSC 4394** Internship in Neuroscience (3 semester hours) Students earn course credit for field experience in an applied setting. Requires working at least 8 hours per week at an approved community agency or business of the student's choice. Students keep daily job diaries, attend one class meeting per month, and write brief papers relevant to their experiences. Open to students in good academic standing with a GPA of at least 2.500 who have reached junior or senior standing (more than 53 hours). Apply for placements on the BBS website. Graded Credit/No Credit only. (Same as CGS 4394 and CLDP 4394 and PSY 4394 and SPAU 4396) (3-0) S

**NSC 4397** Thesis Research (3 semester hours) An independent study in which the student writes a thesis under faculty supervision. Instructor and Associate Dean consent required. (3-0) S

**NSC 4y90** Special Topics in Neuroscience (1-6 semester hours) May be repeated for credit as topics vary (9 hours maximum). ([1-6]-0) R
NSC 4v95  Externship in Neuroscience (1-3 semester hours) Students earn course credit for directed research performed at approved laboratories at UT Southwestern or other local neuroscience centers. Student must obtain permission from a supervising NSC faculty member at UT Dallas. Taken on a credit/no credit basis. May be repeated for credit (9 hours maximum). ([1-3]-0) R

NSC 4v96  Teaching Internship (1-3 semester hours) Students work individually with faculty member in preparing and presenting course materials and tutoring students. Must have completed the relevant course with a grade of at least B. Instructor and Associate Dean consent required. Taken on a credit/no credit basis. May be repeated for credit (6 hours maximum). ([1-3]-0) S

NSC 4v98  Directed Research (1-3 semester hours) Student assists faculty with research projects or conducts a research project under weekly faculty supervision. Instructor consent required. Taken on a credit/no credit basis. May be repeated for credit (9 hours maximum). ([1-3]-0) S

NSC 4v99  Independent Study (1-3 semester hours) Student studies advanced topics under weekly faculty supervision. Instructor and Associate Dean consent required. Taken on a credit/no credit basis. May be repeated for credit (6 hours maximum). ([1-3]-0) S

Psychology

PSY 1100  First Year Seminar (1 semester hour) This course is designed to introduce incoming freshmen to the intellectual and cultural environment of the School of Behavioral and Brain Sciences (BBS). Students will learn about plans of study and career paths for majors in Psychology, Neuroscience, Speech Language Pathology and Audiology, Child Learning and Development, and Cognitive Science. Required for all freshman Behavioral and Brain Sciences majors; open to all non-BBS majors. Corequisite: UNIV 1010. (Same as CLDP 1100 and CGS 1100 and NSC 1100 and SPAU 1100) (1-0) Y

PSY 2301 (PSYC 2301) Introduction to Psychology (3 semester hours) Overviews the major theories and scientific research examining the human mind and behavior. The topics range from studies of perception, cognition, memory, language, and thought to studies of development, personality, relationships, motivation, abnormal patterns of thought and behavior, and cultural differences. (3-0) S

PSY 2317 (PSYC 2317) Statistics for Psychology (3 semester hours) Introduces concepts and calculations of descriptive statistics, including mean, sum of squares, variance, standard deviation, correlation and regression. It also includes the logic of statistical decision making, the use of binomial and Gaussian distributions, and fundamental considerations in the design of psychological experiments. Prerequisite: MATH 1306 or MATH 1314 or equivalent. (3-0) S

PSY 3100  Careers in Psychology (1 semester hour) A one-credit course examining the professions that utilize the theories, research findings, and practices from the field of psychology. Students gain information and skills that will help them select and pursue a career in psychology or a related field. Course information will be conveyed through readings, homework assignments, exercises, internet searches, guest speakers, in-class exercises and group discussions. It is recommended that all Psychology majors take this course during their sophomore year. Prerequisite: PSY 2301. (1-0) Y

PSY 3310  Child Development (3 semester hours) Introduction to psychological theory and research on physical, cognitive, social, and emotional development from birth to adolescence. Students can take either
PSY 3322 Psychology of Adjustment (3 semester hours) Students gain a broad understanding of effective living and coping, combining basic scientific and applied perspectives to help students sort through the best approaches to personal adjustment. Among the topics covered are coping, stress, personality, the self and identity, interpersonal communication, work and career development, adult development, health, abnormal psychology, love and intimacy, and therapies. (3-0) Y

PSY 3324 Psychology of Gender (3 semester hours) Examines gender as it is expressed in the personality of the individual and in the social relations of dyads and groups. Topics include gender identity, sexual orientation, gender differences in intellectual abilities and personality characteristics, gender as it is expressed in friendships, marriage, and sexuality, and cultural gender stereotypes as they affect individual psychology and personal relationships. (Same as GST 3301) (3-0) Y

PSY 3331 Social Psychology (3 semester hours) Theory and research on social perception, socialization, attitude change and social influence, aggression, interpersonal attraction, deviance and control, alienation, and commitment. (3-0) Y

PSY 3332 Social and Personality Development (3 semester hours) The study of the forces affecting the socialization of children. Emphasis will be placed on children's interactions with others and how this influences their development in such areas as self-concept, identity, and morality. Prerequisite: (CLDP 3310 or PSY 3310) or (CLDP 3339 or PSY 3339) or (CLDP 4334 or PSY 4334) or equivalent. (Same as CLDP 3332) (3-0) S

PSY 3333 Approaches to Clinical Psychology (3 semester hours) A survey of therapeutic approaches used in modern psychotherapy. Covers a variety of psychotherapeutic approaches, including psychodynamic, behavioral, humanistic, cognitive, and medical. Prerequisite: PSY 2301. (3-0) Y

PSY 3336 Infancy (3 semester hours) Review of relevant developmental theories and processes as well as skills acquired in motor, sensory-perceptual, cognitive, and social domains from birth through two years of age. Prerequisite: (CLDP 3310 or PSY 3310) or (CLDP 3339 or PSY 3339) or (CLDP 4334 or PSY 4334) or equivalent. (Same as CLDP 3336) (3-0) R

PSY 3338 Adolescence (3 semester hours) Covers physical, cognitive, and socio-emotional development of adolescents. Topics include puberty, identity development, family processes, peers, schools, achievement and adolescent problems. (Same as CLDP 3338) (3-0) Y

PSY 3339 Educational Psychology (3 semester hours) This course focuses on the psychological foundations of education and teaching. Topics include development, individual variations, learning and cognitive processes, motivation, classroom management, and assessment. Emphasis will be on applications in actual teaching behavior. (Same as CLDP 3339) (3-0) S

PSY 3342 Exceptional Children (3 semester hours) Examines the characteristics of exceptional children and their education, including children with disabilities (learning, emotional/behavioral, communication and physical) as well as those who are gifted. The causes and assessment of exceptionality are examined, along with educational and social policy considerations. Prerequisite: (CLDP 3310 or PSY 3310) or (CLDP 3339 or PSY 3339) or (CLDP 4334 or PSY 4334) or equivalent. (Same as CLDP 3342 and SPAU 3342) (3-0) S
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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
<th>Prerequisites</th>
<th>Corequisite</th>
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<tbody>
<tr>
<td>PSY 3350</td>
<td>Psychology of Communication (3 semester hours) A survey of psychological theories, concepts and principles that bear on processes of human communication ranging from intrapersonal to interpersonal, group, organizational, intercultural, international and mass communication. (3-0)</td>
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<tr>
<td>PSY 3351</td>
<td>Mass Communication and Behavior (3 semester hours) Examines the role mass communication plays in creating, maintaining, and changing human behavior. Topics include the psychological processes through which media effect social, religious, political, and consumer behavior. (3-0)</td>
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<tr>
<td>PSY 3355</td>
<td>Psychology of Creativity (3 semester hours) Examines psychological theories and research focusing on creative thinking and accomplishment. Students also develop techniques and skills for innovation and effective problem solving applied to real life issues. As the world changes in complexity, creativity becomes increasingly one of the most important personal and business strategies for survival and success. (3-0)</td>
<td>Y</td>
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<tr>
<td>PSY 3356</td>
<td>The Creative Process (3 semester hours) Explores the relationship between human development and creative process. Personal and societal perspectives are examined through the use of assessments, inventories, and interviews. Integration and application of concepts and skills are emphasized. (3-0)</td>
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<td>PSY 3360</td>
<td>Historical Perspectives on Psychology: Mind and Machines since 1600 (3 semester hours) Basic frames of reference in 20th-century psychology and their historical development in Western thought since 1600 with an emphasis on issues involved with minds, brains, and machines. Includes behaviorism, learning theory, artificial intelligence, and gestalt, structural and cognitive approaches. Prerequisite: PSY 23 01 or CGS 2301. (Same as CGS 3325)</td>
<td>Y</td>
<td>(3-0)</td>
<td>PSY 23 01 or CGS 2301. (Same as CGS 3325)</td>
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<tr>
<td>PSY 3361</td>
<td>Cognitive Psychology (3 semester hours) Theory and research on perception, learning, thinking, psycholinguistics, and memory. Prerequisite: PSY 2301 or CGS 2301. (Same as CGS 3361)</td>
<td>Y</td>
<td>(3-0)</td>
<td>PSY 2301 or CGS 2301. (Same as CGS 3361)</td>
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<tr>
<td>PSY 3362</td>
<td>Cognitive Development (3 semester hours) A contrast of Piagetian, behaviorist, and information-processing approaches to the development of cognitive processes throughout childhood. Prerequisite: CLDP 3310 or PSY 3310 or (CLDP 3339 or PSY 3339) or (CLDP 4334 or PSY 4334) or equivalent. (Same as CLDP P 3362)</td>
<td>Y</td>
<td>(3-0) S</td>
<td>CLDP 3310 or PSY 3310 or CLDP 3339 or PSY 3339 or CLDP 4334 or PSY 4334 or equivalent. (Same as CLDP P 3362)</td>
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<tr>
<td>PSY 3363</td>
<td>Evolution of Behavior (3 semester hours) This course places human behavior in an evolutionary framework, showing how much human behavior has been subject to natural selection and is genetically transmitted. Emphasizes the continuities between human and non-human behavior. Classic ethological theories and sociobiology are discussed. (3-0)</td>
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<td>PSY 3364</td>
<td>Animal Communication (3 semester hours) Surveys the diverse forms of communication used throughout the animal kingdom. Topics include the social contexts of communication, the sensory and neural mechanisms involved in signal production and perception, as well as the evolutionary and ecological forces that shape these systems in their natural environments. (3-0)</td>
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<td>PSY 3366</td>
<td>Motivation and Achievement (3 semester hours) Examines theories and research on achievement and achievement motivation. Topics include methods of assessing school achievement, theories of achievement motivation, socio-cultural and situational influences. Also explores classroom applications. Prerequisite: CLDP 3339 or PSY 3339. (Same as CLDP 3366)</td>
<td>Y</td>
<td>(3-0) Y</td>
<td>CLDP 3339 or PSY 3339. (Same as CLDP 3366)</td>
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<tr>
<td>PSY 3392</td>
<td>Research Design and Analysis (3 semester hours) Advanced techniques for research design and analysis.</td>
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https://catalog.utdallas.edu/2013/undergraduate/courses/school/bbs
data analysis in the behavioral sciences, with an emphasis on analysis of variance and the general linear model. Prerequisite: PSY 2317 or STAT 1342. (3-0) Y

**PSY 3393** Experimental Projects in Psychology (3 semester hours) Laboratory and field experience in designing and conducting research, with a major emphasis on writing research reports. (This course fulfills the advanced writing requirement for Psychology majors and 3 hours of the Communication component of the Core Curriculum). Prerequisite: PSY 3392 or PSY 3490. (Same as CGS 3340) (3-0) S

**PSY 3490** Accelerated Quantitative Methods (4 semester hours) An honors-level survey of statistical methods in psychology. Presents measurement techniques, basic research designs, and statistical analyses developed in terms of the general linear model. Draws upon examples primarily from cognitive and social psychology to illustrate methods in behavioral research. Prerequisite: (Grade of B+ or better in MATH 1306 or MATH 1314 or higher) or instructor consent required. (4-0) R

**PSY 4188** Dean's Scholars' Seminar (1 semester hour) A course for students enrolled in the Dean's Scholars' Program (minimum 3.600 GPA and 30 graded hours at UTD) who wish to pursue doctoral-level professional careers. The seminar introduces scholars to the quality and demands of doctoral-level careers and includes service activities in BBS. Aims of the seminar include 1) learning about requirements for admission into doctoral level programs, 2) meeting with professionals to learn how they built their careers and with BBS faculty to learn about research and internship opportunities, 3) introduction to demands of doctoral-level careers, and 4) participation in BBS service activities. This course is required for all students seeking to graduate as BBS Dean's Scholars. Offered only in fall semester. (Same as CLDP 4188 and CGS 4188 and NSC 4188 and SPAU 4188) (1-0) Y

**PSY 4323** Cultural Diversity and Psychology (3 semester hours) Explores cultural diversity and multiculturalism from both scientific research and practical perspectives. Emphasis is placed on increasing students' awareness of differing world views, privilege, the experience of self, and the interactions between different cultures. (3-0) Y

**PSY 4324** The Psychology of Prejudice (3 semester hours) Examines prejudice and discrimination, applying social-psychological theory and research to various social and historical issues, including stereotypes and prejudice in the media, old-fashioned and modern prejudice, sexism, heterosexism, classism, acculturation, inter-group contact, and the application of theory to policies including public housing, Affirmative Action, drug laws and welfare. Prerequisite: PSY 2301. (3-0) Y

**PSY 4327** Stress Management (3 semester hours) This course examines stress management from scientific and practical perspectives. Topics include stress psychopathology, stress and illness/disease, interventions to reduce stress, relaxation techniques, and strategies of decreasing stressful behavior. Prerequisites: NSC 3361 and PSY 2301. (3-0) Y

**PSY 4328** Health Psychology (3 semester hours) An examination of psychological factors as they influence physical disease; the involvement of personality variables and stress in heart disease, diabetes, and cancer. Behavioral interventions and their effects are discussed. Prerequisites: NSC 3361 and PSY 2301. (3-0) Y

**PSY 4331** Personality (3 semester hours) A comparative survey and analysis of theories of personality, including consideration of research and research techniques. Prerequisite: PSY 2301. (3-0) Y

**PSY 4332** Psychology in the Workplace (3 semester hours) Examines scientific knowledge about effective
behavior in the workplace and provides practical ways to improve behavioral skills. Topics include communication, leadership, motivation, decision-making, teamwork, conflict and stress management, and abuse in the workplace, including sexual harassment. Prerequisite: PSY 2301. (3-0) Y

**PSY 4333** Human Relations (3 semester hours) Overviews theory and research on human relations across the lifespan. Topics include relationships development and maintenance, intimacy, conflict, conflict resolution and other aspects of human relationships. Four areas of the lifespan are highlighted: childhood, adolescence, early/middle adulthood, and later adulthood. Prerequisite: PSY 2301. (3-0) Y

**PSY 4334** Lifespan Development (3 semester hours) Covers physical, cognitive, and socio-emotional development throughout the human life span. Topics include development of the brain, information processing, self development, attachment family processes, and aging. Students can take either (CLDP 3310 or PSY 3310) or (CLDP 4334 or PSY 4334). (Same as CLDP 4334) (3-0) S

**PSY 4343** Abnormal Psychology (3 semester hours) Considers patterns of abnormal human behavior, approaches to psychotherapy, and related research. (3-0) S

**PSY 4344** Child Psychopathology (3 semester hours) Present various views of clinical issues in childhood from sociological, anthropological, and psychological perspectives. Historical views of children are examined in terms of the evolution of current perspectives in childhood psychopathology. Prerequisite: (CLDP 3310 or PSY 3310) or (CLDP 3339 or PSY 3339) or (CLDP 4334 or PSY 4334) or equivalent. (Same as CLDP 4344) (3-0) Y

**PSY 4345** Violence in the Family (3 semester hours) Explores the area of family violence with primary emphasis on the problems of spouse abuse and child abuse. Analysis of each of these areas of family violence focuses specifically on the epidemiology of the problem, characteristics of the families, etiological theories, and treatment approaches. (Same as CLDP 4345) (3-0) Y

**PSY 4346** Human Sexuality (3 semester hours) Covers a wide range of issues concerning behavioral and biological aspects of sexuality. Topics include how to judge sexual research, values and sex, love and intimacy, male and female sexual anatomy and physiology, sexually transmitted diseases, patterns of sexual response, sexual problems and therapies, the development of sexuality, sexual orientation, reproductive sexuality, forcible sexual behavior, and social issues in sexuality. (3-0) S

**PSY 4347** Marriage and Family Psychology (3 semester hours) Examines family life styles from socio-psychological viewpoint with stress on personal awareness, growth and satisfaction in interpersonal relations. Research topics include dating, mate selection, communication, sexual adjustment, parenting, cohesion and adaptability, and divorce. (Same as CLDP 4347) (3-0) Y

**PSY 4359** Cognitive Neuroscience (3 semester hours) Examines how modern cognitive neuroscientists explore the neural underpinnings of perception, memory, attention, language and emotion. Investigates how the brain-bases of these functions are uncovered by ingenious observations of clinical populations (including brain-damaged and schizophrenic patients), animal and human electrophysiological techniques, and powerful new functional neuroimaging tools. Prerequisite: PSY 2301. (Same as CGS 4359 and NSC 4359) (3-0) Y

**PSY 4362** Perception (3 semester hours) Considers the processes by which the individual gathers information from the external world, the physiological basis of those processes, and how they develop
throughout the life span of the individual. Prerequisite: CGS 2301 or PSY 2301. (Same as CGS 4362) (3-0) Y

**PSY 4364** Attention and Memory (3 semester hours) Factors influencing the capacity to pick up, organize, and remember complex information. Prerequisite: (CGS 3361 or PSY 3361) or instructor consent required. (Same as CGS 4364) (3-0) R

**PSY 4365** Psychology of Music (3 semester hours) An examination of the psychological bases for musical understanding, emotional responses to music, musical creativity, and the dramatic use of music, including relationships between musical structure and the representation of psychological states. (3-0) R

**PSY 4370** Industrial and Organizational Psychology (3 semester hours) Overview of psychological theory and research bearing on recruitment, personnel selection, training and development, job design, work group design, work motivation, leadership, performance assessment, and job satisfaction measurement. Prerequisite: PSY 2301. (3-0) Y

**PSY 4372** Forensic Psychology (3 semester hours) Explores forensic psychology as a profession and a field of study. Topics may include criminal profiling, lie detection, insanity and competency, spouse and child abuse, child custody, and police selection, training, and interrogation. Course content varies with expertise of instructor. Prerequisite: PSY 2301. (3-0) Y

**PSY 4373** Psychological Assessment (3 semester hours) Explores both theory and application of psychological assessment, especially concerning individual differences in ability and personality, as well as for diagnostic purposes. Test construction and validation will be discussed and specific examples of tests will be presented. Prerequisite: PSY 2301. (3-0) T

**PSY 4374** Judgment and Decision Making (3 semester hours) Processes of human judgment are examined from the perspective of cognitive, and social psychological theories and research. Focus is on specific domains of judgment, such as attitude formation and change, biases and prejudices, decision making in organizations, and marketing strategies to illustrate basic principles of decision making. (3-0) Y

**PSY 4375** Honors Seminar (3 semester hours) A course for students enrolled in the Honors Program (minimum 3.500 GPA and 30 graded hours at UTD) who will conduct undergraduate thesis research in BBS. The seminar attempts to hone skills of critical thinking, creativity, and effective written and oral communication. By the end of the seminar, all students will have determined 1) a thesis approach, 2) a research question(s), and 3) a faculty sponsor and second reader. This course is required for students seeking BBS School Honors (see Honors Program Manual for more information). Permission of Director of the Honors Program required. Offered only in spring semester. (Same as CLDP 4375 and CGS 4375 and NSC 4375 and SPAU 4375) (3-0) Y

**PSY 4377** Conflict Resolution (3 semester hours) Examines theory, research and practice of negotiation, mediation, and conflict resolution. Topics include origins of aggression and conflict, techniques of negotiation, and methods of conflict resolution. Students gain practical experience in dispute resolution. Includes 40 hours of required Texas Mediator training. (3-0) Y

**PSY 4378** Advanced Conflict Resolution: Family Mediation (3 semester hours) Advanced course covers the mediation of complex disputes using the joint session as well as caucus methods. Collaborative and transformative modes of mediation are introduced. Course topics include family law, family dynamics, child development, family violence, practice considerations and skill sets required for successful family
mediation. Role plays involving topics such as child custody, support, spousal maintenance and property division, are conducted. Successful completion of course qualifies students as family mediators under Texas law. Prerequisite or corequisite: **PSY 4377**, (3-0) Y

**PSY 4385** Neuropsychology (3 semester hours) This course is a comprehensive introduction of the relationship between brain and behavior. Topics include the foundations of neuropsychology, the brain’s organization and functional systems, and neuropsychological perspectives of memory, attention, language, emotion, and spatial functions, and their related disorders. Prerequisite: **NSC 3361**, (Same as **CGS 4385** and **NSC 4385**) (3-0) T

**PSY 4386** Adult Development and Aging (3 semester hours) This course is designed to provide an overview of theories, methods, and research on the psychological, social, and biological aspects of adult development and aging. A selection of topics to be covered includes lifespan developmental theories, research methodology, cognitive aging, compensation and successful aging, personality development, health, coping, social-emotional development, and to understand the nature and multiple influences of development throughout the adult lifespan. Prerequisite: **PSY 2301**, (Same as **CGS 4386** and **NSC 4386** and **SPAU 4386**) (3-0) T

**PSY 4393** Language in Culture and Society (3 semester hours) Influence of languages on nonlinguistic aspects of culture and society. Topics include patterns of communication, speech community, communication and social structure, varieties of language, and the analysis of communicative competence and communicative performance. (Same as **SPAU 4393**) (3-0) Y

**PSY 4394** Internship in Psychology (3 semester hours) Students earn course credit for field experience in an applied setting. Requires working at least 8 hours per week at an approved community agency or business of the student's choice. Students keep daily job diaries, attend one class meeting per month, and write brief papers relevant to their experiences. Open to students in good academic standing with a GPA of at least 2.500 who have reached junior or senior standing (more than 53 hours). Apply for placements on the BBS website. Graded Credit/No Credit only. (Same as **CGS 4394** and **CLDP 4394** and **NSC 4394** and **SPA U 4396**) (3-0) S

**PSY 4395** Co-op Fieldwork (3 semester hours) Students earn course credit for field experience in an approved business or government setting. Requires working at least 8 hours per week. Students will keep a journal of their workplace experience, maintain contact with the instructor, and prepare a written report that focuses on the accomplishments and insights gained through their co-op experience. Open to students in good academic standing with a GPA of at least 2.500. Credit will not be awarded retroactively. Apply for placements through the Career Center office. May be repeated for credit (6 hours maximum). Graded Credit/No Credit only. (Same as **CLDP 4395** and **CGS 4395**) (3-0) Y

**PSY 4397** Thesis Research (3 semester hours) Student writes a thesis under faculty supervision. Instructor and Associate Dean consent required. (3-0) S

**PSY 4v90** Special Topics in Psychology (1-6 semester hours) May be repeated for credit as topics vary (9 hours maximum). ([1-6]-0) R

**PSY 4v96** Teaching Internship (1-3 semester hours) Students work individually with faculty member in preparing and presenting course materials and tutoring students. Must have completed the relevant course with a grade of at least B and have a UT Dallas GPA of at least 3.000. Instructor and Associate Dean
consent required. Taken on a credit/no credit basis. Can be repeated for a total of 6 semester hours. ([1-3]-0) S

**PSY 4v98** Directed Research (1-3 semester hours) Student assists faculty with research projects or conducts a research project under weekly faculty supervision. Taken on a credit/no credit basis. May be repeated for credit (12 hours maximum). ([1-3]-0) S

**PSY 4v99** Individual Study (1-3 semester hours) Student studies advanced topics under weekly faculty direction. Instructor and Associate Dean consent required. Topics may vary. Graded credit/no credit only. May be repeated for credit (6 hours maximum). ([1-3]-0) S

### Speech-Language Pathology & Audiology

**SPAU 1100** First Year Seminar (1 semester hour) This course is designed to introduce incoming freshmen to the intellectual and cultural environment of the School of Behavioral and Brain Sciences (BBS). Students will learn about plans of study and career paths for majors in Psychology, Neuroscience, Speech Language Pathology and Audiology, Child Learning and Development, and Cognitive Science. Required for all freshman Behavioral and Brain Sciences majors; open to all non-BBS majors. Corequisite: **UNIV 1010**. (Same as **CLDP 1100** and **CGS 1100** and **NSC 1100** and **PSY 1100**) (1-0) Y

**SPAU 3301** Communication Disorders (3 semester hours) Overview of the field of communication disorders with emphasis on speech-language pathology and audiology as a profession; state and national certification requirements; professional ethics; definition, identification, and classification of disorders of hearing, speech, language, cognition and swallowing. (3-0) Y

**SPAU 3303** Normal Language Development (3 semester hours) The development of language and communication, including phonology, syntax, semantics, pragmatics, and literacy. (Same as **CLDP 3303**) (3-0) S

**SPAU 3304** Communication Sciences (3 semester hours) Fundamentals of speech and hearing science: introductory acoustics, basic auditory phenomena, and acoustic aspects of speech. (3-0) Y

**SPAU 3305** Language and Literacy Development (3 semester hours) Examines research trends, theories and best practices as they relate to the development of language and literacy in school aged children. Considers brain development, development of spoken language competence, normal literacy development, literacy disorders, motivation, influence of parents and socio-cultural issues. Current research in reading and written language instructional strategies will be reviewed. (Same as **CLDP 3305**) (3-0) Y

**SPAU 3340** Articulation Disorders (3 semester hours) Etiology, symptomatology, evaluation, and treatment of articulation disorders. Prerequisite or corequisite: **SPAU 3343**. (3-0) Y

**SPAU 3341** Audiology (3 semester hours) Clinical application and interpretation in audiology. Emphasis on instrumentation and calibration considerations for air and bone conduction test, speech audiometry, cerumen management, infection control, and basic masking principles. Prerequisites or corequisites: **SPAU 3304** and **SPAU 3344** or instructor consent required. (3-0) Y
SPAU 3342 Exceptional Children (3 semester hours) Examines the characteristics of exceptional children and their education, including children with disabilities (learning, emotional/behavioral, communication and physical) as well as those who are gifted. The causes and assessment of exceptionality are examined, along with educational and social policy considerations. Prerequisite: (CLDP 3310 or PSY 3310) or (CLDP 3339 or PSY 3339) or (CLDP 4334 or PSY 4334) or equivalent. (Same as CLDP 3342 and PSY 3342) (3-0) S

SPAU 3343 Phonetics (3 semester hours) The study of speech sounds. Phonetic transcription and description of articulatory, acoustic, and linguistic properties of speech. (3-0) Y

SPAU 3344 Anatomy and Physiology of Speech and Hearing (3 semester hours) Study of anatomic and physiologic mechanisms underlying speech: respiration, phonation, and articulation. Overview of the peripheral auditory system, neuroanatomy, and normal swallowing. (Same as NSC 3344) (3-0) Y

SPAU 3345 Neural Basis of Communication (3 semester hours) Organization and function of cortical and subcortical structures that underlie speech, language and hearing. Special consideration of structures and pathways typically affected in neurogenic disorders of communication. (Same as NSC 3345) (3-0) Y

SPAU 3388 Clinical Observation in Speech-Language Pathology (3 semester hours) Guided observation and study of assessment procedures and intervention strategies used with individuals who have communication disorders. Must take on a credit/no credit basis. (3-0) S

SPAU 3390 Clinical Practicum in Speech-Language Pathology (3 semester hours) Guided observation and supervised participation in evaluation and therapeutic management of individuals with communication disorders. Weekly clinical conference required. Must be taken on a credit/no credit basis. May be repeated for credit. Prerequisites: Instructor consent required and SPAU 3303 and SPAU 3388 and SPAU 3340 and SPAU 3343 and SPAU 4308. (3-0) S

SPAU 4188 Dean's Scholars' Seminar (1 semester hour) A course for students enrolled in the Dean's Scholars' Program (minimum 3.600 GPA and 30 graded hours at UTD) who wish to pursue doctoral-level professional careers. The seminar introduces scholars to the quality and demands of doctoral-level careers and includes service activities in BBS. Aims of the seminar include 1) learning about requirements for admission into doctoral level programs, 2) meeting with professionals to learn how they built their careers and with BBS faculty to learn about research and internship opportunities, 3) introduction to demands of doctoral-level careers, and 4) participation in BBS service activities. This course is required for all students seeking to graduate as BBS Dean's Scholars. Offered only in fall semester. (Same as CLDP 4188 and CGS 4188 and NSC 4188 and PSY 4188) (1-0) Y

SPAU 4308 Language Disorders in Children (3 semester hours) Language impairment in children, including etiology, characteristics, evaluation, and treatment procedures with special emphasis on factors that interfere with normal development of language skills. Prerequisite: CLDP 3303 or SPAU 3303 or instructor consent required. (Same as CLDP 4308) (3-0) Y

SPAU 4342 Assessment Procedures in Speech-Language Pathology (3 semester hours) Principles and procedures in the diagnosis of communication disorders in preschool- and school-aged children and adults. Included will be a blend of philosophical issues with practical clinical methodology. Emphasis will be on application of diagnostic information to rehabilitation planning and techniques. Professional report writing skills included. Prerequisite: SPAU 3301 or instructor consent required. (3-0) Y
**SPAU 4366** Clinical Report Writing (3 semester hours) Foundations of professional and technical writing that accompany each step of the therapeutic process as well as the basic rules for grammar and punctuation necessary for acceptable writing. Included will be the writing requirements necessary for their practicum experiences. Students will be required to write and will receive feedback throughout the semester. (3-0) Y

**SPAU 4367** Development and Design of Therapeutic Resources (3 semester hours) Techniques necessary to design, create, modify or individualize therapeutic materials for use in various clinical settings. Students develop and design lesson plans and materials for children, adolescents and adults, for use with common treatment goals found in communication disorders. Students will learn about extrinsic and intrinsic reinforcement and design appropriate materials. (3-0) Y

**SPAU 4375** Honors Seminar (3 semester hours) A course for students enrolled in the Honors Program (minimum 3.500 GPA and 30 graded hours at UTD) who will conduct undergraduate thesis research in BBS. The seminar attempts to hone skills of critical thinking, creativity, and effective written and oral communication. By the end of the seminar, all students will have determined 1) a thesis approach, 2) a research question(s), and 3) a faculty sponsor and second reader. This course is required for students seeking BBS School Honors (see Honors Program Manual for more information). Permission of Director of the Honors Program required. Offered only in spring semester. (Same as **CLDP 4375**, **CGS 4375** and **NSC 4375** and **PSY 4375**) (3-0) Y

**SPAU 4386** Adult Development and Aging (3 semester hours) This course is designed to provide an overview of theories, methods, and research on the psychological, social, and biological aspects of adult development and aging. A selection of topics to be covered includes lifespan developmental theories, research methodology, cognitive aging, compensation and successful aging, personality development, health, coping, social-emotional development, and to understand the nature and multiple influences of development throughout the adult lifespan. Prerequisite: **PSY 2301**. (Same as **CGS 4386** and **NSC 4386** and **PSY 4386**) (3-0) T

**SPAU 4393** Language in Culture and Society (3 semester hours) Influence of languages on nonlinguistic aspects of culture and society. Topics include patterns of communication, speech community, communication and social structure, varieties of language, and the analysis of communicative competence and communicative performance. (Same as **PSY 4393**) (3-0) Y

**SPAU 4394** Multicultural Aspects of Communication Disorders (3 semester hours) Service delivery issues in culturally and linguistically diverse populations with the goal of developing sensitivity to the special needs of multiculturalism in schools and in the clinical practice of Speech-Language Pathology. Therapeutic management of foreign dialect, language differences, and the effects of cultural diversity upon learning will be discussed. (3-0) Y

**SPAU 4395** Issues in the Management of Persons with Hearing Impairment (3 semester hours) Assessment of hearing disorders, individual and group amplification, assistive listening devices, auditory and visual speech recognition, communication strategies, and service delivery to adults and children with hearing loss. (3-0) T

**SPAU 4396** Internship (3 semester hours) Students earn course credit for field experience in an applied setting. Requires working at least 8 hours per week at an approved community agency or business of the
student's choice. Students keep daily job diaries, attend one class meeting per month, and write brief papers relevant to their experiences. Open to students in good academic standing with a GPA of at least 2.500 who have reached junior or senior standing (more than 53 hours). Apply for placements on the BBS website. Graded Credit/No Credit only. (Same as CGS 4394 and CLDP 4394 and NSC 4394 and PSY 4394) (3-0) S

**SPAU 4397** Thesis Research (3 semester hours) An independent study in which the student writes a thesis under faculty supervision. Instructor and Associate Dean consent required. (3-0) S

**SPAU 4v90** Special Topics in Speech-Language Pathology and Audiology (1-6 semester hours) May be repeated for credit as topics vary (9 hours maximum). ([1-6]-0) R

**SPAU 4v96** Teaching Internship (1-4 semester hours) Students work individually with faculty member in preparing and presenting course materials and tutoring students. Must have completed the relevant course with a grade of at least B. Instructor and Associate Dean consent required. Taken on a credit/no credit basis. Can be repeated for a total of 6 semester hours. ([1-4]-0) S

**SPAU 4v99** Individual Study (1-3 semester hours) Student studies advanced topics under weekly faculty direction and writes a paper turned in to the Associate Dean. Graded credit/no credit only. Topics may vary. May be repeated for credit (6 hours maximum). ([1-3]-0) S