

the role of the nurse as leader and manager of care. Prerequisites: NUR 310, 304. Lab fee \$10.

- 411-3 Nursing Research Practicum. (2-3)** Seeks to develop an applied understanding of the research process. Fosters appreciation of nursing's systematic contributions to the body of scientific knowledge and improved public health. Prepares students to be critical consumers of and collaborators in research. Provides opportunities to critique published research and to participate in research projects led by faculty. Prerequisite: MATH 300 or 350 and NUR 315, 321. Pre- or corequisite: NUR 410. Lab fee \$10.
- 425-4 Population Health Nursing. (2-6)** Focuses on populations, aggregates, and geopolitical communities. The guiding concepts are epidemiology and health promotion, determinants of health, environmental justice and global health. Discussion points include primary, secondary, and tertiary public health prevention activities and system focused practices. Coordination of an effective public health response for the nation will be examined. Prerequisites: NUR 411. Course fee \$20. Lab fee \$10.
- 430-5 Dimensions of Rural Health Care Delivery. (1-12)** Involves study of factors influencing the health status of rural communities, features, of the health care delivery system in rural areas, and unique aspects of rural nursing. Focus is on tenets of rurality and how they impact rural nursing practice. Fosters synthesis and validation of concepts and experiences gained in prior semesters. Prerequisites: Successful completion of all required course work with the exception of concurrent enrollment in NUR 420 and 425. Course fee \$20. Lab fee \$10.
- 435-3 Issues and Trends in Professional Nursing. (3-0)** Focuses on the role of the professional nurse as member of a profession. Professional issues, legal, ethical, socioeconomic, political, cultural aspects of health care and nursing are examined. Professional empowerment through knowledge of nursing and self is encouraged. Prerequisite: Successful completion of all graduation requirements with the exception of concurrent enrollment in NUR 430 and 425. Course fee \$20.
- 458-v Nursing Seminar. (variable)** Design of course will focus on current topics and issues of interest to a group of students. May be repeated for credit as topic and/or objectives of the course change. Prerequisite: Upper-division standing in the nursing major or approval of department head.
- 486-v Nursing Problems. (variable)** This course allows the student to explore a topic of special interest while working independently under the guidance of an instructor. The student formulates objectives and a plan of evaluation of the project. May be repeated for credit, subject to approval by the head of the Department of Nursing. Prerequisite: Upper-division standing in the nursing major or approval of department head.

### PHILOSOPHY (PHIL)

- 101-3 Introduction to Philosophy. (3-0)** (TCCNS = PHIL 1301) A study of the writings of major philosophical authors.
- 201-3 Introduction to Logic. (3-0)** (TCCNS = PHIL 2303) This course will introduce the student to the basic principles and concepts of formal logic, formal and informal fallacies, deductive and inductive reasoning, truth tables, symbolic notation, Venn diagrams, and the logic of scientific method. It will also include consideration of the philosophical foundations of logic.

- 301-3 Ethics in the Professions. (3-0)** This course will consider both the responsibilities inherent in a profession as such and some of the specific ethical dilemmas that arise in particular professions: business, science, engineering, military, education, medicine, etc. Prerequisite: Junior classification.
- 304-3 World Religions. (3-0)** A study of the philosophical, ethical, and social dimensions of the religions of the world. Focuses on major religions but lesser known ones may be included. The course will emphasize the diversity of religious experience and traditions. Credit for both PHIL 304 and R S 304 will not be awarded.
- 403-3 Political Theory Through 1789. (3-0)** Philosophical ideas concerning basic political problems from the Greeks to 1789. Credit for both PHIL 403 and POLS 403 will not be awarded. Prerequisites: POLS 201, 202.
- 404-3 Political Theory Since 1789. (3-0)** Philosophical ideas concerning basic political problems since 1789. Credit for both PHIL 404 and POLS 404 will not be awarded. Prerequisites: POLS 201, 202.
- 485-3 Philosophy Seminar. (3-0)** An examination of major philosophical issues and theories. May be repeated for credit as topic varies. Prerequisite: Junior classification or approval of department head.
- 486-v Problems in Philosophy (Credit variable)** Independent reading, research, and discussion. Entry into this course will be arranged with the instructor and department head.
- 585-3 Philosophy Seminar. (3-0)** Content varies according to the needs and desires of students. When topic varies, course may be taken for credit more than once.

#### **PHYSICAL EDUCATION (P ED)**

- 200-3 Foundations of Exercise and Sport Studies. (3-0)** (TCCNS = PHED 1301) An introductory course in Exercise and Sport Studies. Included will be history of physical education and sport; health-related fitness concepts; nutrition for sport and athletics; stress management techniques; and objectives and principles of exercise and sport.
- 212-3 Introduction to Athletic Training. (2-2)** An introductory course required for entrance into the Athletic Training licensure program. It includes the study and application of the requirements and competencies necessary for licensure and the skills involved in the care of the athlete and physically active.
- 218-3 Theory of Gymnastics and Dance. (2-2)** Theory and practice of skills in basic gymnastics and tumbling; dance activities including square dance, folk, and country-western dance. Prerequisite: P ED 119. Lab fee \$5.
- 219-2 Coaching Football. (1-3)** Concentration on skills and techniques in coaching football.
- 220-2 Coaching Basketball. (1-3)** Concentration on skills and techniques in coaching basketball.
- 223-2 Coaching Track and Field. (1-3)** Concentration on skills and techniques in coaching track.
- 224-2 Coaching Baseball. (1-3)** Concentration on skills and techniques of coaching baseball.
- 226-2 Coaching Volleyball. (2-2)** Concentration on skills and techniques of coaching volleyball.
- 227-2 Sports Officiating. (2-2)** A course designed to teach the rules and mechanics of sports officiating in football, basketball, volleyball, and

baseball/softball. Students will be required to assist in a variety of officiating activities outside the formal classroom.

- 228-2 Coaching Softball. (2-2)** Concentration on skills and techniques of coaching softball.
- 230-3 Motor Behavior. (2-2)** A study of the behavioral characteristics for skill acquisition due to motor, physical, and neuromuscular development. Application of instructional techniques with children in a school setting is a part of this course. Prerequisite: P ED 200 or approval of department head. Lab fee \$5.
- 250-3 Games and Activities for Children. (3-0)** A course designed to acquaint the student with the underlying theory and principles of play activities for children and to introduce the student to a variety of games and activities for children.
- 310-3 Tests and Measurements. (2-2)** Use and function of tests in Exercise and Sport Studies. Test construction and interpretation will be studied. Statistical techniques will be reviewed. Prerequisite: 12 hours of Physical Education course work and junior classification. Lab fee \$5.
- 312-3 Prevention and Care of Athletic Injuries. (2-2)** The study and application of skills in the prevention and care of injuries affecting the athlete and physically active. Prerequisites: HLTH 231, BIOL 219. Lab fee \$15.
- 313-3 Assessment of Athletic Injuries and Illnesses. (2-2)** The study and application of principles and techniques for assessment of athletic injuries and illnesses including signs and symptoms, classification of injuries and illnesses, emergency assessment, and clinical assessment. Prerequisites: P ED 212, 312, BIOL 219, 220.
- 314-3 Therapeutic Exercise. (2-2)** The study and application of therapeutic exercise techniques in the rehabilitation of athletic injuries including restoration of range of motion, muscular strength and endurance, cardiorespiratory endurance, neuromuscular control, and balance. Prerequisites: P ED 212, 312, BIOL 219, 220.
- 320-3 Theory of Strength Training and Conditioning. (3-0)** The study and survey of contemporary strength training and conditioning. Successful completion of the course allows the student to sit for the appropriate examinations relative to being certified as a Strength and Conditioning Specialist. Prerequisites: BIOL 219 or 220, HLTH 231. Lab fee \$5.
- 326-3 Outdoor Adventure. (2-2)** Outdoor resources and adventure activities are utilized as opportunities for experiential learning. Activities can include the Tarleton Challenge Course, hiking, backpacking, camping, mountaineering, rock climbing, biking, canoeing, kayaking, orienteering, safety and first aid. Lab fee \$25.
- 340-3 Integrated Movement Activities. (3-0)** A study of movement experiences designed to integrate concepts of exercise and sport studies with language arts, mathematics, science, social studies, art, and music. Prerequisite: P ED 250 or approval of department head.
- 380-3 Adaptive, Corrective, and Developmental Exercise. (2-2)** A study of the behavioral characteristics, causes, needs, and corrective strategies for individuals with disabling conditions. Practical application with special needs individuals is a course requirement. Prerequisite: P ED 230. Lab fee \$5.
- 405-3 Practicum in Exercise and Sport Studies. (1-4)** Practicum in the exercise and sport studies activity program involving a demonstrated proficiency in a variety of activities related to exercise and sport. Prerequisites: Senior classification and approval of department head. Lab fee \$5. Field assignment fee \$50.

- 412-3 Therapeutic Modalities. (2-2)** The study and application of therapeutic modalities in the care of athletic injuries including psychological aspects, healing process, pain control, superficial cold and heat, electrotherapy, ultrasound, mechanical energy, and biofeedback. Prerequisites: P ED 212, 312, BIOL 219, 220.
- 413-3 Management in Athletic Training. (3-0)** A study of the principles and application of knowledge and skills necessary to manage an athletic training program including areas of finance, information, insurance, human resources, facilities, ethics, and legal considerations. Prerequisite: Approval of Director of Athletic Training Education Program.
- 414-3 Clinical Experience in Athletic Training. (1-9)** Clinical experience in athletic training under appropriate supervision of qualified professionals in collegiate, high school, and clinical settings. Prerequisite: Approval of Director of Athletic Training Education Program. Lab fee \$5.
- 416-3 Individual and Team Sport Skills. (2-2)** A course designed to acquaint the student with a variety of individual and team sport activities. Included will be history, strategies, and physical skills related to those activities along with foundations of exercise. Designed as a capstone course prior to student teaching. Prerequisites: 18 hours of P ED course work and EDU 330 or approval of department head. Lab fee \$5.
- 420-3 Physiology of Exercise. (2-2)** Effects of physical exercise on body processes. Prerequisites: BIOL 219, 220. Lab fee \$5.
- 430-3 Physiotherapy. (2-2)** Physiology of exercise in the treatment of the degenerative effects of sedentary lifestyles associated with chronic disease and/or disabilities. Prerequisite: P ED 420 or approval of department head. Lab fee \$5.
- 440-3 Exercise Electrocardiography. (2-2)** A study of the rate, rhythm, and axis of the heart obtained during graded exercise testing. Prerequisites: BIOL 219 or 220, HLTH 231, P ED 420, 430 or approval of department head. Lab fee \$5.
- 470-3 The Organization and Administration of Exercise and Sports Programs. (3-0)** Principles, practices, and procedures in the organization and administration of exercise and sports programs. Prerequisites: 12 hours of Physical Education and senior classification.
- 480-3 Kinesiology. (3-0)** Investigation and analysis of human motion in relationship to structure and function according to general mechanical laws and other factors. Prerequisites: BIOL 219, 220.
- 482-6 Internship in Exercise and Sport Studies. (1-19)** Supervised internship with selected agencies and organizations such as intramural sports, city recreation departments, YMCAs and YWCAs, Boys' Clubs, Girl and Boy Scouts, rehabilitation centers, and similar agencies and organizations. Prerequisites: Senior classification and approval of department head. Field experience fee \$75.
- 485-v Seminar. (Credit variable)** This course will focus on current topics and issues of interest in exercise and sport studies. It may be repeated for credit as topics change. Prerequisites: Junior level standing or approval of department head.
- 486-v Problems. (Credit variable)** Directed study of selected problems in Physical Education. May be repeated for credit with approval of department head. Restricted to Physical Education majors and minors.
- 500-3 Physical Education for the Elementary School Child. (3-0)** A study of the unique physical needs of the elementary school age child and current trends in meeting those needs. Emphasis upon the identification of appropriate

activities for each grade level, the role of the classroom and special teachers in physical education, and state and national standards and requirements. Prerequisite: Approval of department head.

- 501-3 Readings in Health and Physical Education. (3-0)** A study of published reports and research in the field of health and physical education.
- 505-3 Administration of Athletic Programs. (3-0)** A study of the administrative functions of directors of athletic programs. Liability laws, financial administration, personnel, public relations, and state laws governing athletic programs will be explored.
- 506-3 School and Community Health Programs. (3-0)** For teachers, coaches, and school administrators who desire an understanding of a well balanced program.
- 512-3 Contemporary Issues in Sports Medicine. (3-0)** A study of the contemporary issues in Sports Medicine. Content areas may include eating disorders, injury prevention, emergency care, drug education and testing, pre-participation physical exams, history, terminology, specific injury care, and legal and ethical issues.
- 526-3 Facilities of Physical Education. (3-0)** Principles, terminology, and standards for planning, constructing, and maintaining physical education facilities.
- 528-3 Adaptive Physical Education. (3-0)** A study of muscle re-education and the application of exercise to orthopedic, muscular, and neurological disorders. Principles of planning and directing therapeutic and adaptive programs in physical education activity.
- 5363 Advanced Tests and Measurements in Health and Physical Education. (3-0)** Methods of construction, validation, and statistical interpretation of tests and measurements in physical education.
- 540-3 Motor Learning and Control. (3-0)** A survey of the theories and practical applications of human motor performance and achievement.
- 570-3 History of Physical Education. (3-0)** A survey of physical education and sports from the origins in Ancient Greece to the present. The emphasis being social and cultural developments that contributed to the growth of physical education and sports in the modern world.
- 585-3 Seminar. (3-0)** Discussion of laws, certification, professional ethics, and other current programs relating to health and physical education. May be repeated for credit when topics vary.
- 586-v Problems. (Credit variable)** Directed study of elected problems in health and physical education. Prerequisite: P ED 501.
- 588-3 Thesis. (3-0)** Scheduled when the student is ready to begin the thesis. No credit until the thesis is completed. Prerequisites: P ED 501, EDU 557, and consent of major professor.

#### **PHYSICAL SCIENCES (P SC)**

- 1014. Physical Sciences Survey. (3-3)** A one-semester survey course of the physical sciences. Topics are selected from astronomy, meteorology, chemistry, geology and physics to illustrate the philosophic methods of science. This course does not count toward the university lab science requirement. Lab fee \$5.

#### **PHYSICS (PHYS)**

- 101-4 Great Ideas of Physics. (3-3)** Great Ideas of Physics is a laboratory science course designed to introduce the student to the concepts of physics in an

elementary mathematical setting, and to discuss their significance to science, technology, and society. Topics will be drawn from both classical and contemporary physics. Prerequisite: Two semesters of high school algebra or MATH 101. This course cannot be used for credit toward a degree in physics or mathematics. Course fee \$15. Lab fee \$8.

- 102-3 Essential Elements of Physics. (2-3)** This course introduces fundamental physics and astronomy concepts to students planning to become elementary and middle school teachers. Students are expected to design and conduct inquiry based experiments including the development of hypothesis, collection and analysis of data, and the use of appropriate laboratory equipment. Topics include motion, forces, energy, waves, light, electricity, magnetism, stellar and planetary evolution, and the atom. Enrollment in this course is restricted to Interdisciplinary Studies majors. Prerequisite: Math 107. Course fee \$15. Lab fee \$9.
- 103-3 Planetary Astronomy. (3-2)** A laboratory science course of study in topics of astronomy and astrophysics, including the history of astronomy, Kepler's laws, gravitation, formation of the solar system, asteroids, comets, meteors, a detailed survey of the planets and their evolution, and discussion on the possibility of extraterrestrial life in the universe. Prerequisites: Two semesters of high school algebra or MATH 101. Course fee \$15. Lab fee \$8.
- 104-4 General Physics I. (3-3)** An introduction to mechanics, heat, and wave motion. This course is a trigonometry-based physics course. A student cannot get credit for PHYS 104 if credit has been previously received for PHYS 122. Prerequisite: MATH 109 or 118 or concurrent enrollment. Course fee \$15. Lab fee \$8.
- 105-4 General Physics II. (3-3)** An introduction to electricity and magnetism, light, and modern physics. This is a trigonometry-based physics course. Prerequisite: PHYS 104. A student cannot get credit for PHYS 105 if credit has previously been received for PHYS 242. Course fee \$15. Lab fee \$8.
- 113-4 Stellar Astronomy. (3-3)** A laboratory science course of study in topics of astronomy and astrophysics, including the sun and its source of energy, stellar formation and evolution, black holes, galaxies, cosmology, and the creation and evolution of the universe. Prerequisites: two semesters of high school algebra or MATH 101. Course fee \$15. Lab fee \$8.
- 122-4 Principles of Physics I. (3-3)** This is an introduction to mechanics, heat, and wave motion. This is calculus-based physics course. Prerequisite: MATH 120 or concurrent registration. Course fee \$15. Lab fee \$8.
- 242-4 Principles of Physics II. (3-3)** This is an introduction to electricity, magnetism, optics, and modern physics. Prerequisites: PHYS 122 and MATH 209 or concurrent registration. Course fee \$15. Lab fee \$8.
- 331-3 Mechanics I. (3-0)** Particle dynamics in one, two, and three dimensions; conservation laws; dynamics of a system of particles; motion of rigid bodies; central force problems. Prerequisites: PHYS 242; MATH 306 and MATH 333 or concurrent registrations.
- 332-3 Electromagnetic Field Theory. (3-0)** Electrostatics; Laplace's equation; the theory of dielectrics; magnetostatic fields; electromagnetic induction; magnetic fields of currents; Maxwell's equations. Credit for both ENPH 332 and PHYS 332 will not be awarded. Prerequisites: PHYS 242, MATH 306 or concurrent registration, MATH 333 or concurrent registration.
- 333-3 Thermodynamics. (3-0)** Concept of temperature, equations of state; the first and the second law of thermodynamics; entropy; change of phase; the thermodynamics functions. Prerequisites: PHYS 242, MATH 333 or concurrent enrollment.

- 334-3 Modern Physics I. (3-2)** Foundations of the atomic theory of matter; kinetic theory; elementary particles; radiations; atomic model; atomic structure; atomic spectra and energy levels; quantum theory of radiation; x-rays; special theory of relativity. Prerequisites: PHYS 242; MATH 333 or MATH 306 or concurrent registration. Lab fee \$8.
- 350-3 Medical Physics I. (3-0)** The course will provide an introduction to the physics of human physiological processes as well as the physics used in the design of medical diagnostic tools and techniques. Prerequisite: PHYS 242 or consent of the instructor. Course fee \$15.
- 403-3 Astronomy and Astrophysics. (3-2)** A laboratory science course of study in the topics of astronomy and astrophysics, including Planetary Astronomy, Stellar Astrophysics, Galactic Astronomy, Cosmology and Astrobiology. Prerequisites: MATH 120, PHYS 122. Course fee \$15. Lab fee \$8.
- 430-3 Mathematical Methods for Physicists and Engineers. (3-0)** Mathematical techniques from the following areas: infinite series; integral transforming; applications of complex variables; vectors, matrices, and tensors; special functions; partial differential equations; Green's functions; perturbation theory; integral equations; calculus of variations; and groups and group representatives. Credit for both ENPH 430 and PHYS 430 will not be awarded. Prerequisite: MATH 306, 333.
- 432-3 Optics. (3-0)** Huygen's principle applied to geometric optics; interference; diffraction; polarization; crystal optics; electromagnetic theory of light; interaction of light with matter. Prerequisites: ENPH/PHYS 332, MATH 306 and MATH 333.
- 434-3 Modern Physics II. (3-2)** The constitution of the atomic nucleus; natural radioactivity; artificially induced nuclear transmutations; alpha, beta, and gamma decay; nuclear reactions; nuclear structure and nuclear forces; nuclear fission; neutron physics. Prerequisites: PHYS 334 and MATH 306. Lab fee \$8.
- 435-3 Quantum Physics. (3-0)** The Schroedinger equation; one dimensional systems; the Heisenberg uncertainty principle; magnetic moments and angular momentum; two and three dimensional systems; approximation methods; scattering theory. Prerequisite: PHYS 334 and MATH 306.
- 436-3 Solid State Physics. (3-0)** The basic ideas of physics are applied to the understanding of the properties of crystalline materials to include the definition of such materials, electrical and thermal conductivity, heat capacity, crystalline binding, the nature of metals, insulators, and semiconductors, dielectric properties, and magnetic properties. Credit for both ENPH 436 and PHYS 436 will not be awarded. Prerequisite: PHYS 334; MATH 306 or concurrent registration.
- 437-3 Nuclear Physics and Techniques (3-0)** The study of nuclear phenomena and properties including mass, stability, magnetic moment, radioactive decay processes and angular momentum. The use of nuclear techniques to analyze problems in other fields of engineering with a special emphasis on the characterization of electronic materials. Prerequisite: PHYS 334. Course fee \$15.
- 450-3 Medical Physics II. (3-2)** The course covers the physics of ionizing radiation and its application in areas of medical physics, radiation safety, and manufacturing. Prerequisite: PHYS 334 or consent of instructor. Course fee \$15. Lab fee \$8.
- 486-v Special Problems. (Credit variable)** This course is designed to develop the theoretical or experimental capabilities, or both, of individual senior physics

majors. Prerequisites: Senior classification and approval of department head.

- 488-v Undergraduate Research Project. (Credit variable)** Methods of research in physics or in physics education through a research project directed by a departmental faculty member. The student is required to prepare a final report and presentation. No credit is earned until the student has enrolled in at least 2 credit hours and the final report and presentation are certified as completed by the faculty member directing the project, at which time the student will receive 2 credit hours. Prerequisite: Physics major, junior standing and 14 semester hours of physics.
- 503-3 Astronomy. (3-0)** Selected topics in astronomy appropriate for public school teachers. Course may be repeated when topic changes.

### **POLITICAL SCIENCE (POLS)**

- 201-3 American National Government. (3-0)** (TCCNS = GOVT 2305 OR GOVT 2302) A study of the American national governmental system. This course with POLS 202 satisfies the legal requirement for graduation from state colleges and universities.
- 202-3 Texas Government. (3-0)** (TCCNS = GOVT 2306 OR GOVT 2301) A study of the constitution of the state of Texas and of the state and local governmental units created by the constitution. This course satisfies the TEA requirement for out-of-state teacher certification and, when taken with POLS 201, the legal requirement for graduation from state colleges and universities.
- 302-3 Elections and Political Parties. (3-0)** The study of the electoral process in American national, state, and local political systems. Emphasis will be placed on the evolution of the structure and functions of political parties, interest groups, the news media, and other participants in the electoral process. Prerequisites: POLS 201, 202.
- 303-3 Comparative State and Local Government and Politics. (3-0)** Variations and similarities in the practice of politics and in the administration of government in the states. Particular attention is given to local government and state-national relations. Prerequisites: POLS 201, 202.
- 304-3 The Executive. (3-0)** The study of the organization of executive power in American national, state, and local systems. Emphasis will be placed on the evolution of the structure and functions of the Presidency of the United States and national, state, and local bureaucracies, and the role of parties, legislatures, courts, interest groups, and other participants in the executive process. Prerequisites: POLS 201, 202.
- 305-3 Legislation. (3-0)** The study of the legislative process in American national, state, and local political systems. Emphasis will be placed on the evolution of the structure and functions of the Congress and the state legislatures, and the role of executives, courts, parties, interest groups, and other participants in the legislative process. Prerequisites: POLS 201, 202.
- 306-3 Political Economy. (3-0)** A study of the historical, philosophical, and theoretical relationships between the state and the economy. Credit for both POLS 306 and ECO 306 will not be awarded. Prerequisites: 3 hours of ECO and 6 hours of POLS or instructor's approval.
- 307-3 Public Administration. (3-0)** A survey of the concepts and practices of American public administration. Prerequisites: POLS 201, 202.
- 308-3 International Politics. (3-0)** The development of the national state system, the problems and issues which have arisen, international agencies created

to cope with these problems, and the principles of international conduct.  
Prerequisites: POLS 201, 202.

- 310-3 Environmental Politics. (3-0)** An introduction to the politics of environmental protection in America. The focus of the course is upon domestic environmental policy with particular attention paid to the federalism in shaping and implementing environmental policies. Prerequisites: POLS 201, 202.
- 320-3 Terrorism and Political Violence. (3-0)** A study of the causes of terrorism and other forms of political violence, with particular emphasis on measures of prevention and counter-terrorism.
- 401-3 Constitutional Law I. (3-0)** The origin and growth of the constitutional aspects of national power as shown by leading U.S. Supreme Court decisions on commerce, federalism, jurisdiction, money, monopolies, treaties, and war. Prerequisites: POLS 201, 202, HIST 201, 202.
- 402-3 Constitutional Law II. (3-0)** The origin and development of constitutional prohibitions as shown by leading U.S. Supreme Court decisions on civil rights, contracts, due process, economic regulation, eminent domain, labor relations, obscenity, political utterance, and religion. Prerequisite: POLS 401.
- 403-3 Political Theory Through 1789. (3-0)** Philosophical ideas concerning basic political problems from the Greeks to 1789. Credit for both PHIL 403 and POLS 403 will not be awarded. Prerequisites: POLS 201, 202.
- 404-3 Political Theory Since 1789. (3-0)** Philosophical ideas concerning basic political problems since 1789. Credit for both PHIL 404 and POLS 404 will not be awarded. Prerequisites: POLS 201, 202.
- 405-3 Comparative Government and Politics. (3-0)** The government and politics of the major world powers. Examples may be drawn from Asia, Africa, Europe and the Americas. Prerequisites: POLS 201, 202.
- 410-3 Environmental Policy. (3-0)** An introduction to the politics of environmental protection worldwide. The focus of this course is upon international environmental policy with particular attention paid to the agreements and treaties made by nations to shape and implement environmental policy. Prerequisites: POLS 201, 202.
- 415-3 Foreign Policy. (3-0)** The study of America's role in the modern world. Particular emphasis is placed on the policy makers, for example, the President, Congress, the State Department, and the Department of Defense, and on external factors such as other nations. Prerequisites: POLS 201, 202.
- 416-3 Conflict Studies. (3-0)** A study of the causes of international and civil conflict, historical changes in the nature of war, and predictions of future conflicts.
- 417-3 Peace Studies. (3-0)** A seminar on the causes of peace, covering bargaining and war termination, social conflict resolution, international cooperation, and the ethics of peace.
- 420-3 Weapons of Mass Destruction. (3-0)** A study of the causes, characteristics, and effects of civil wars, with particular emphasis on preventing the resumption of warfare after peace agreements. The effect of military intervention on the outcome and recurrence of civil war is studied in detail.
- 421-3 Civil Wars and Military Intervention. (3-0)** A study of the causes, characteristics, and effects of civil wars, with particular emphasis on preventing the resumption of warfare after peace agreements. The effect of military intervention on the outcome and recurrence of civil war is studied in detail.

- 480-3 Administration of Justice. (3-0)** Analyzes the structure, function, and interrelationship of the components of the criminal justice system at the federal, state, and local levels. The history and philosophy of criminal justice in a democratic society will be included. Credit for both POLS 480 and C J 480 will not be awarded.
- 484-v Internship. (Credit variable)** Application and integration of academic study and development of skills in a field setting. Field projects include direction of a political campaign, internship in a city or county administrative office, or in a not-for-profit organization for analyzing or carrying out governmental policy. Minimum of 200 hours of work required for 3 hours of credit. Prerequisites: 2.5 overall grade point average, advanced standing, and approval of department head. Field experience fee \$75.
- 485-v Political Science Seminar. (Credit variable)** Independent reading, research, discussion, and paper writing, under personal direction of instructor. Prerequisites: Senior classification, 18 hours POLS, or approval of department head. May be taken more than once for credit.
- 486-v Political Science Problems. (Credit variable)** Independent reading, research and discussion. Entry into this course will be arranged with the political science counselor.
- 490-3 Political Science Capstone Course. (3-0)** This course requires students to integrate and use fundamental concepts learned in previous political science courses to research and analyze real-world political phenomena and problems. Students will present oral and written reports on their research, supplemented by appropriate internet and multimedia materials, as well as portfolios documenting their research.
- 530-3 Public Management. (3-0)** The practical application of theories of public administration, the study of problems of administrative management in public organizations, and the use of law for administrative decision-making.
- 560-3 Political Culture. (3-0)** The study of political culture as it forms and is formed by public policy. Examples may include the culture of environmental policy, bureaucratic policy, foreign policy, and others.
- 561-3 Politics of Education. (3-0)** The study of the relationship between politics and education in America including K-12 and post-secondary systems.
- 562-3 Environmental Policy. (3-0)** The study of the politics of the natural environment with emphasis on the role of government in environmental protection.
- 585-3 Political Science Seminar. (3-0)** Contents vary according to the needs and desires of students. Independent reading, research, discussion, and writing under personal direction of instructor. May be repeated once for credit when topic varies.
- 586-v Political Science Problems. (Credit variable)** Conference course. Independent reading, research, discussion, under supervision of senior professor.
- 588-3 Thesis. (3-0)** Scheduled when student is ready to begin thesis. No credit until thesis is accepted. Prerequisites: 24 hours of graduate credit and approval of department head.
- 599-3 Practicum, Field Problem, or Internship. (3-0)** Supervised professional activities in school administration, counseling, supervision, college or public school teaching, or other public service professions. Major emphasis is placed on the student's involvement in successful practices in the area of professional interest. May be repeated once for credit. Field experience fee \$75.

## **PSYCHOLOGY (PSY)**

- 101-3 General Psychology. (3-0)** (TCCNS = PSYC 2301) An overview of psychology, the scientific study of human behavior and mental processes and the variables that influence these processes. Topics covered in the course include motivation, emotions, intelligence, sensory processes, perception, learning, thinking, mental health, and psychotherapy.
- 102-3 Psychology of Adjustment. (3-0)** (TCCNS = PSYC 2315) A study of human behavioral and mental processes that permit us to adjust or to meet the demands of a changing physical or psychological environment with an emphasis upon effective personal-social adjustment. Topics covered include social influence, stress, psychological factors and physical health, health-enhancing behaviors, addictive behaviors, methods of coping, gender roles and differences, and interpersonal attraction. Prerequisite: PSY 101.
- 201-3 Psychology of Human Development. (3-0)** (TCCNS = PSYC 2312) A lifespan study of the development of human beings from conception to death. The growth and developmental patterns of the eight age groups are studied with attention directed to experimental evidence, case studies, and contemporary theories. Prerequisite: PSY 101. PSY 201 may not be counted as part of the professional education component for teacher certification.
- 220-3 Child and Adolescent Psychology. (3-0)** (TCCNS = PSYC 2308) A study of children from infancy through adolescence with emphasis on the analysis of behavior based on experimental evidence and contemporary theory. Prerequisite: PSY 101.
- 301-3 Psychology of Learning. (3-0).** An investigation into the major theoretical approaches, concepts and principles, and experimental methods of learning. Prerequisites: PSY 101 and junior standing, or approval of the department head.
- 303-3 Educational Psychology. (3-0)** An application of psychological theories and principles to teaching and learning. Topics will include theories of human development, learning, and motivation, and how these impact the processes of teaching and learning. The course will also include the impact of cultural diversity on the learning process and standardized testing. Credit for both EDU 303 and PSY 303 will not be awarded. Students seeking teacher certification must be admitted to the Teacher Education Program. Prerequisite: PSY 101 and junior classification or approval of department head.
- 305-3 Human Cognitive Processes. (3-0)** A survey of human cognition and information processing, including perception, attention, memory, reasoning, and problem solving. Also included are the experimental methods and current theories of human cognition. Prerequisites: PSY 101 and junior standing or approval of department head.
- 307-3 The Human Lifespan. (3-0)** Surveys development from conception through adulthood with emphasis on social adaptation of individuals and roles in families, groups, and communities. Cognitive, social, personal and biological factors of the stages of development are included.
- 310-3 Abnormal Psychology. (3-0)** An overview of the history, causes, and treatments of deviant behavior. Psychological, social, and physiological factors as they relate to the development of abnormal behavior and its subsequent treatment. Prerequisites: Junior classification and PSY 101, 102, or approval of department head.
- 311-3 Behavior Analysis and Behavior Management. (3-0).** Examines the basic principles and methods of behavior analysis and behavior management

techniques. Includes a systematic review of behavioral and cognitive-behavioral methodologies for dealing with human problems such as disruptive behavior, personal adjustment difficulties, behavioral deficits, phobias and fears, developmental disorders, stress and maladaptive behavior in a variety of settings.

- 320-3 Psycholinguistics. (3-0)** The course emphasizes the study of language, understanding languages, producing language and speech, language development, and related topics such as reading, language and the brain, linguistic diversity, and universals. Prerequisite: Junior standing or permission of instructor.
- 330-3 Elementary Statistics for the Behavioral Sciences. (3-0)** Measures of central tendency, variability, and correlation. Applications of statistical inference to research in Psychology. Reliability and validity of psychological tests and measurement. Also included are analysis of variance, multiple analysis of variance, and regression. Prerequisites: PSY 101 and MATH 107 or equivalent.
- 332-3 Psychopharmacology. (3-0)** A study of the neuroscientific basis of the effects of drugs on behavior. Emphasis will be placed on major antipsychotic, antianxiety, and antidepressant drugs and their clinical use and side effects. Drug abuse such as alcohol, marijuana, and cocaine will also be reviewed. Prerequisites: PSY 101, 8 hours of Biology lab science preferably BIOL 219 and 220 or approval of department head.
- 335-4 Principles of Research for the Behavioral Sciences. (3-2).** A study of the various research designs used in the behavioral sciences. Laboratory experiences will be required to acquaint the student with experimental procedures. Instruction will also be provided in writing research reports according to the APA manuscript style and SPSS statistical applications. Prerequisites: ENGL 309 and PSY 330 or equivalent. Lab fee \$20.
- 350-3 Personality. (3-0)** An introduction to personality, the unique and relatively stable patterns of behavior, thoughts, and feelings that make individual human beings. The different theoretical approaches - psychodynamic, cognitive, behavioral, humanistic, and existential - will be covered and will be related to personality and personality development. Prerequisites: PSY 101, 102, or approval of department head.
- 360-3 Sport Psychology. (3-0)** This course will provide students with an overview of the theories and research related to sport and exercise behavior. Topics to be covered include the history of sport psychology, behavioral principles, anxiety, motivation, leadership, group dynamics, gender, and personality. The course will also be designed to relate these principles to exercise and sport performance. Prerequisite: PSY 101 or approval of department head.
- 401-3 Psychological Tests and Measurement. (3-0).** Principles of psychological testing. Uses and critical evaluation of tests of achievement, intelligence, aptitude, and personality.
- 402-3 Adaptive Psychology. (3-0)** A consideration of how adaptation has influenced social, cognitive and developmental processes in humans. Comparisons between humans and other species, and between different human cultures will be included.
- 403-3 Animal Behavior. (3-0)** A survey of the major areas of animal behavior research from a psychological perspective. Research examining the development and display of behaviors will include subject samples ranging from insects to humans conducted in natural, quasi-experimental, and experimental studies. Prerequisites: PSY 101, 8 hours of Biology lab science preferably BIOL 219 and 220 or approval of department head.

- 405-3 Social Psychology. (3-0)** Theory and phenomena of social psychology. The effect of social variables upon the behavior of individuals. Topics to be covered include socialization, language and communication, prejudice, social attitudes, attitude change, aggression, prosocial behavior, and group behavior. Prerequisites: PSY 101, 102 or approval of department head.
- 490-3 Special Topics. (3-0)** An examination of different topics each semester with a focus on contemporary issues in psychology. This course may be repeated for credit as the topic changes.
- 410-3 Industrial/Organizational Psychology. (3-0).** A survey of the basic theories and practices of Industrial/Organizational psychology including selection testing, job analysis, performance appraisal training, employment motivation, job satisfaction, leadership and group processes within organizations. Prerequisites: PSY 101, 102, or approval of department head.
- 412-3 Biological Foundations of Behavior. (3-0)** Surveys the biological basis of behavior. Includes an in-depth examination of the physical structure of the human body and the role of chemical and electrical operations within it. Emphasis will be placed on the developmental, cognitive, affective and behavioral effects of such operations. Recent research will also be reviewed. Prerequisites: PSY 101, 8 hours of Biology lab science preferably BIOL 219 and 220 or approval of department head.
- 420-3 History of Psychology. (3-0).** Historical analysis of prescientific psychology in philosophy and physiology through the period of the psychological schools of thought. Prerequisites: PSY 101 and PHIL 101 or 201 or approval of department head.
- 486-v Problems in Psychology. (variable)** Independent reading and research on various topics related to Psychology. Entry into the course will be arranged by the director of the Psychology program.
- 490-3 Special Topics. (3-0)** Independent reading and research on various topics related to Psychology. Prerequisite: Senior standing.
- 500-3 Behavioral Statistics. (3-0)** Review of descriptive statistics with emphasis on inferential statistics. Includes correlation, one-way and two-way analysis of variance, regression analysis and experimental design. Use of computer software with emphasis on experience with SPSS. Prerequisite: undergraduate statistics recommended.
- 501-3 Research Methods. (3-0)** A study of the scientific method of research, types of research and research design. Students are required to review, analyze and interpret research findings in their major field and develop a research project with the assistance of their instructor. This course should be taken after the completion of 12 graduate semester hours. Prerequisites: PSY 500 or equivalent graduate statistics course. Lab fee assessed.
- 502-3 Social Psychological Processes. (3-0)** An in-depth examination of the individual in a social and cultural context. Topics include: the behavior of groups, the roles of individuals within groups, and the influence of groups on an individual's perceptions, attitudes, emotions, and behavior. Major theories and supporting research are covered. Includes a selected emphasis on specific topics, with individual or team projects and/or original research.
- 503-3 Theories of Learning. (3-0)** Study of major theories of learning, factors which influence the process of learning, and application of these theories and processes to general and special populations. Prerequisite: Admission to Graduate School or approval of department head.
- 504-3 Human Development. (3-0)** A lifespan survey of the development of human beings from conception to death. Topics included will be research and theory

into physical, cognitive, social, and personality development in each of the different age groups: prenatal, infancy, childhood, adolescence, and adulthood.

- 505-3 Practicum I: Field Experience. (3-0)** Provides supervised experience in settings such as marriage and family, mental health, and/or counseling and guidance placements outside the University. The field experience will consist of 150 clock hours with 100 client contact hours. Prerequisites: CPSY 550, 553, 554, 557, 558 (or 551), and PSY 581 for LPC and LPA; CPSY 550, 509, 553, 554, 556, 557 for LMFT; PSY 560, 581, CPSY 582, 553, 557, 558 (or EDSP 505) for LSSP; 3.0 GPA; and consent of the practicum/internship director. Field experience fee \$75.
- 511-3 Cultural, Minority and Gender Issues. (3-0)** Study of interaction of social/cultural groups in America, problems of minorities and ethnic groups, problems related to gender and age, problems within family systems and contemporary sources of positive change.
- 513-3 Crisis Intervention and Management of Individuals. (3-0)** Examination of the dynamics and treatment of situational crises in various settings. Theories and approaches to crisis intervention and management are described and discussed. Prerequisite: CPSY 550 or approval of department head.
- 514-3 Assessment of Intelligence and Achievement. (3-0)** Introduces the selection, administration, and interpretation of selected tests used in the individual measurement of intelligence. Prerequisites: CPSY 558 and PSY 581, or approval of department head. Course Fee \$50.
- 515-3 Physiological Psychology. (3-0)** An examination of the biological basis of behavior with an emphasis on the structure and biochemistry of the human nervous system. Includes an exploration of the interactive relationships between biological processes, psychopharmacology, genetics, neurological disorders, normal growth and maturation, perception, memory, emotion, stress, mental disorders, consciousness, and communication. Contemporary theories and research are investigated and critiqued.
- 516-3 Advanced Quantitative Methods and Experimental Design. (3-0)** This course provides an overview of advanced statistical techniques to analyze quantitative data resulting from experimental and quasi-experimental research designs. This course is a continuation of PSY 500 and 501 and requires students to demonstrate proficiency in the use of SPSS for data analysis. The course reviews One-Way and Two-Factor ANOVA. Other topics include ANCOVA, MANOVA, MANCOVA, multiple regression, logistic regression, data reduction techniques (factor analysis and principal components analysis), and non-parametric analyses appropriate for two- and multi-group designs. The course emphasizes the integration of multivariate and advanced statistical design with applicable research paradigms.
- 520-3 History and Systems. (3-0)** Historical analysis of the development of the science of psychology from early philosophical theories through the establishment of psychology as a science to modern theoretical positions.
- 521-3 Evolutionary Psychology. (3-0)** In-depth evaluation of the current theories of adaptation with a large focus on how adaptation has influenced social, cognitive and developmental processes in humans. Evidence from cross-cultural studies as well as cross species studies will be reviewed and discussed.

- 560-3 Foundations of School Psychology. (3-0)** Introduces the foundations, professional standards, ethics, and laws related to the delivery of school psychological services. Prerequisite: admission to graduate school or approval of department head.
- 580-3 Personality and Social Assessment. (3-0)** Instruction and supervision in the assessment of emotional, motivational, interpersonal, and attitudinal characteristics of children and adults. Includes the administration, scoring, and interpretation of many widely-used tests. Prerequisites: CPSY 558 and 581, or approval of the department head. Lab fee \$50.
- 581-3 Assessment and Evaluation Fundamentals. (3-0)** Examines the nature and development of standardized tests, with emphasis on ethical standards, psychometric theory, test standards, and test construction. Selection criteria and utilization of standardized or other instruments in various environments are considered. Includes evaluations and critiques of published tests and experiential exposure to different types of psychological tests. Prerequisite: Admission to the Graduate School.
- 582-3 Behavior Management and Therapy. (3-0).** Examines basic theories of human learning, major approaches to behavior management and therapy and principles of applied behavior analysis. Formal treatment planning application and evaluation of programs for management of specific behavioral/psychological problems. Includes case review and practice in individual interventions
- 583-3 Consultation and Supervision. (3-0)** Introduces the application of psychological principles of consultation and supervision in selected settings. Emphasis is on analysis of client and consultee/supervisor behaviors, individual and group communications, program evaluation and possible intervention options in selected environments. Prerequisites: CPSY 550 or PSY 560, and CPSY 553, or approval of department head.
- 584-3 Practicum II: Field Experience. (3-0)** Continues Practicum I. The field experience will consist of 150 clock hours with 100 client contact hours. Prerequisite: PSY 505, 3.0 GPA, and consent of the practicum/internship director. Field experience fee \$75.
- 586-v Problems. (variable)** Directed independent study or research under the supervision of a member of the psychology faculty. Prerequisites: graduate standing and approval of department head.
- 587-3 Practicum III: Field Experience. (3-0)** Continues Practicum II. The field experience will consist of 200 clock hours with 100 client contact hours. Prerequisites: PSY 584, 3.0 GPA, and consent of practicum/internship director. Field experience fee \$75.
- 588-3 Thesis. (3-0).** Scheduled when the student is ready to begin the thesis. No credit until the thesis is completed. Prerequisites: Completion of all course work required by the degree and consent of the major professor.
- 590-v Special Topics. (variable)** An examination of different topics each semester with a focus on contemporary issues in counseling. This course may be repeated for credit as the topic changes.
- 595-3 Internship I. (3-0)** Supervised professional activities in psychology. Major emphasis is placed on the student's involvement in successful practices in the area of interest. Students must have met all academic and professional standards of practice before placement. Lab experiences are included. Prerequisites: Completion of all course work required by the degree and application for internship. Field experience fee \$75.
- 596-3 Internship II. (3-0)** Continued supervised experience of professional activities in psychology in the student's area of interest. Major emphasis is

placed on the integration of theoretical and conceptual principles, as well as professional and personal skill development. Prerequisites: PSY 595 and application for internship. Field experience fee \$75.

### **RANGE AND RANCH MANAGEMENT (R&RM)**

- 221-3 Wildlife Habitat and Range Management. (3-0)** An introduction to wildlife and range resources of the United States with special reference to Texas. The importance of animals, forests, and rangelands in our economic and cultural life; the symbiotic phenomena between wildlife and range/forest management. Credit for both R&RM 221 and WLDM 221 will not be awarded. Prerequisites: ENGL 111, 112, and MATH 107 or higher. Course fee \$5.
- 300-3 Rangeland and Forest Plants. (2-2)** Comprehensive study of native and naturalized North American plants used for range, habitat, and wood products. Major domesticated pasture plants. Detailed treatment of systematics, nomenclature, morphological features, and ecology with emphasis on economically important range, lumber-pulp, and watershed species. Prerequisites: AGRN 105 and BIOL 120. Lab fee \$2.
- 301-3 Principles of Range Management. (2-2)** Principles and practices for managing native grazing lands. Use of the Cardinal Principles for conservation of range resources. Sustained forage, animal, water, etc., production and ranching profitability. Application of ecology and plant physiology to grazing management. Land-vegetation manipulations to restore deteriorated ranges and watersheds. Prerequisites: AGRN 105 and BIOL 120. Lab fee \$2.
- 302-3 Range Plants (2-2)** Nomenclature and classification of range plants in the U.S. with emphasis on distribution, ecology, and economic value of species important in Texas. Prerequisite: Completion of all required freshman agriculture courses. Lab fee \$5.
- 305-3 GIS for Natural Resource Managers. (2-2)** An introductory course on the use of geographic information systems (GIS) in natural resource management. Laboratory exercises will apply knowledge learned in lectures to solve real world problems in natural resource management using GIS software. Cross-listed with AGRN 305 and WLDM 305: credit will not be given for multiple enrollments in these cross-listed courses. Lab fee \$15.
- 310-3 Wildlife Management Techniques. (2-2)** Field and laboratory techniques used in wildlife management and research. Determining age, food habits, population analysis, habitat analysis, and introduction to research. Credit for both R&RM 310 and WLDM 310 will not be awarded. Modest cost of field trips will be borne by student Prerequisite: R&RM 221 or W S 221. Course fee \$5.
- 315-3 Range Ecology. (2-2)** Introduction of the physical and biological components of rangeland ecosystems and their influence on plant and animal growth. Field study of range ecosystems in the Cross Timbers area with emphasis on dynamics, interactions, and manipulation. Prerequisites: AGRN 105, ANSC 107, and R&RM 302. Lab fee \$7.
- 320-3 Watershed Management. (3-0)** Management and planning of range and forest land watersheds for maintenance or improvement of water and soil resources. Effects of vegetation and land management practices on water quality and quantity, erosion, and sedimentation. Prerequisite: R&RM 301.
- 399-v Cooperative Education. (Credit variable; 1-3 for each hour)** This course is designed to offer students the opportunity to integrate academic study