

Physics (PHYS)

In the College of Sciences

LOWER DIVISION COURSES

NOTE: Maximum credit 12 units for any combination of Physics 107, 170, 180A-180B, 182A-182B, 195, 195L, 196, 196L, 197, 197L.

PHYS 107. Introductory Physics with Laboratory (4) [GE] I, II

Three lectures and three hours of laboratory.

How physics concepts describe everyday events, and frontier phenomena. Classical mechanics, thermodynamics, electromagnetism, and selected topics from atomic, relativistic, and radioactivity physics. Not open to students with credit in Physics 180A or 195.

PHYS 149. Special Study (1-2) Cr/NC I, II

Prerequisite: Consent of supervising instructor.

Individual study and laboratory work in area of student's major interest. Students will be assigned a member of the staff who will supervise their work. Maximum credit two units.

PHYS 170. Preparation for Physics (3)

Prerequisite: Two years of high school algebra.

Elemental principles of physics approached from problem-solving and critical thinking perspectives necessary for success in Physics 180A and Physics 195. Not open to students with credit in Physics 107, 180A, or 195.

PHYS 180A-180B. Fundamentals of Physics (3-3) I, II

Prerequisite: Satisfaction of the Entry-Level Mathematics requirement and qualification on the Mathematics Departmental Placement Examination, Part IA. Physics 180A is prerequisite to 180B.

Recommended: For Physics 180A, concurrent registration in Physics 182A; for Physics 180B, concurrent registration in Physics 182B.

Semester I: Mechanics, wave motion, sound, and fluids. Semester II: Electricity, magnetism, optics, and modern physics. Presented in a two-semester algebra/trigonometry based sequence. Physics 180A not open to students with credit in Physics 195. Physics 180B not open to students with credit in Physics 196.

PHYS 182A-182B. Physical Measurements (1-1) I, II

Three hours of laboratory.

Prerequisite for 182A: Credit or concurrent registration in Physics 180A.

Prerequisite for 182B: Credit or concurrent registration in Physics 180B.

A laboratory course to accompany Physics 180A-180B. Semester I: Properties of matter, mechanics, sound, and wave motion. Semester II: Electricity, DC circuits, oscilloscope measurement techniques, electric and magnetic fields, and optics. 182A: Not open to students with credit in Physics 195L. 182B: Not open to students with credit in Physics 196L.

PHYS 195. Principles of Physics (3) I, II

Prerequisites: High school physics or Physics 107 or 170. Mathematics 150.

Fundamental principles of physics in areas of mechanics and oscillatory motion. Designed for students requiring calculus-based physics.

PHYS 195L. Principles of Physics Laboratory (1) I, II

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Physics 195.

Experiments in mechanics, wave motion, resonance phenomena using precision air tracks. Not open to students with credit in Physics 182A.

PHYS 196. Principles of Physics (3) I, II

Prerequisites: Physics 195 and Mathematics 151.

Fundamental principles of physics in areas of electricity and magnetism. Designed for students requiring calculus-based physics.

PHYS 196L. Principles of Physics Laboratory (1) I, II

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Physics 196.

Experiments in DC circuits, AC circuits, electrical resonance, oscilloscope measurement techniques, and electric and magnetic fields. Not open to students with credit in Physics 182B.

PHYS 197. Principles of Physics (3) I, II

Prerequisite: Physics 196.

Fundamental principles of physics in areas of wave motion, sound, electromagnetic waves, optics, relativity, and modern physics. Designed for students requiring calculus-based physics.

PHYS 197L. Principles of Physics Laboratory (1) I, II

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Physics 197.

Experiments in optics, lasers, holography, and nuclear counting.

PHYS 296. Experimental Topics (1-4)

Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

UPPER DIVISION COURSES (Intended for Undergraduates)

PHYS 301. Energy and the Environment (3) [GE]

Prerequisite: Completion of the General Education requirements in Communication and Critical Thinking and Foundations II.A., Natural Sciences and Quantitative Reasoning.

Fundamental physical concepts underlying energy, its conversion, and impact on the environment.

PHYS 311. Electronics for Scientists (4)

Three lectures and three hours of laboratory.

Prerequisites: Physics 180B and 182B, or 196 and 196L.

AC and DC circuits, diodes, transistors, conventional and operational amplifiers, analog to digital conversion, pulse and digital electronics. Introduce science majors to modern electronic devices and their utilization in scientific instrumentation.

PHYS 317. Introduction to Computational Physics (2)

Six hours of laboratory.

Prerequisites: Physics 197 and Mathematics 342A.

Numerical methods applied to a variety of physics topics. Use of computers to solve and plot problems involving differential equations, matrices, root finding, numerical integration.

PHYS 333. Physics Perspectives (3)

Prerequisite: Physics 180B or 197.

Theoretical physics emphasizing basic themes cutting across separate traditional subject divisions. Visualize three-dimensional vector fields, forces and torques. Balance between derivations, conceptual understanding, numerical problem-solving, estimations, and proportional reasoning.

PHYS 350. Classical Mechanics (3)

Prerequisites: Physics 195 with a minimum grade of C and Physics 197. Credit or concurrent registration in Mathematics 342A.

Newtonian mechanics, gravitation, small oscillations, collisions, motion of rigid bodies, Lagrangian mechanics.

PHYS 354. Modern Physics (3)

Prerequisites: Physics 197 with a minimum grade of C. Credit or concurrent registration in Mathematics 342A.

Special theory of relativity. Particle properties of electromagnetic radiation, and wave properties of particles. Introduction to quantum theory with applications to atomic structure.

PHYS 357. Advanced Physical Measurements (3)

One lecture and six hours of laboratory.

Prerequisites: Physics 311, 354 and Chemistry 200.

Stresses both laboratory experiments and techniques of data and error analysis. Experiments are taken from major areas of physics.

PHYS 360. Thermal Physics (3)

Prerequisites: Physics 350, Mathematics 342A, Physics 354 or Chemistry 410A.

Classical thermodynamics and statistical mechanics. Applications of equilibrium thermodynamics. Statistical mechanics, including concepts from probability and statistics. Maxwell-Boltzmann, Fermi-Dirac, and Bose-Einstein statistics. Applications of statistical mechanics in calculating macroscopic properties of simple systems.

PHYS 400A-400B. Classical Electromagnetism (3-3)

Prerequisites for Physics 400A: Physics 196 with a minimum grade of C; Physics 197 and Mathematics 342A. Physics 400A is prerequisite to Physics 400B.

Electrostatics, magnetostatics, electromagnetic induction, Maxwell's equations, radiation and wave propagation.

PHYS 406. Optics (3)

Prerequisites: Physics 197, 197L, Mathematics 342B.

Reflection, refraction, matrix methods, dispersion, polarization, double refraction, interference, diffraction, Fourier optics, coherence theory, lasers, and holography with applications to optical instruments, wave propagation, and the nature of light.

PHYS 410. Quantum Mechanics (3)

Prerequisites: Physics 350, Mathematics 342B, Physics 354 or Chemistry 410A.

Mathematical and physical foundations of quantum theory in terms of wave and matrix mechanics. Applications to properties of atoms and solids.

PHYS 496. Selected Topics in Physics (1-4)

Prerequisite: Consent of instructor.

Selected topics in classical and modern physics. May be repeated with consent of instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units.

PHYS 498A. Senior Research (1) Cr/NC

One discussion period and two additional hours per week to be arranged.

Prerequisites: Physics 357 and consent of instructor.

Selection and design of individual research project. Oral and written progress reports.

PHYS 498B. Senior Research (2)

Two discussion periods and four additional hours per week to be arranged.

Prerequisite: Physics 498A.

Laboratory work, progress reports, oral and written final reports.

PHYS 499. Special Study (1-3)

Individual study or laboratory work on a special problem in physics selected by the student. Each student will be assigned a member of the staff who will supervise his/her work. Credit, hours and topics to be arranged in each case. Maximum credit six units.

UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)

PHYS 516. Theory of Scientific Instrumentation (3)

Prerequisites: Physics 311, Mathematics 342B.

Fourier analysis with applications to scientific instrumentation, spectroscopy, and image processing; Z transforms and digital filtering; detection systems and their optimization of the signal-to-noise ratio.

PHYS 532. Condensed Matter Physics (3)

Prerequisite: Credit or concurrent registration in Physics 410.

Elastic, thermal, electric, magnetic and optical properties of solids. Introduction to the energy band theory of solids, with applications to semiconductors and metals.

PHYS 533. Experimental Techniques in Condensed Matter Physics (3)

One lecture and six hours of laboratory.

Prerequisites: Physics 357 and credit or concurrent registration in Physics 532.

Experiments in various fields of condensed matter such as x-ray diffraction, Hall effect, superconductivity, and electron paramagnetic resonance.

PHYS 534. Colloquium in Condensed Matter Physics (1) Cr/NC

Prerequisite: Credit or concurrent registration in Physics 532.

Student and faculty research project presentations. Maximum credit three units.

PHYS 538. Polymer Science (3)

(Same course as Chemistry 538.)

Prerequisites: Chemistry 200 or 202; and Chemistry 410B or Physics 360 or Mechanical Engineering 350 or 352.

Structure, synthesis, physical properties, and utilities of polymers.

PHYS 552. Modern Optics and Lasers (3)

Prerequisites: Physics 406 with minimum grade of C; credit or concurrent registration in Physics 400B.

Electromagnetic theory, matrix methods of optics, propagation of Gaussian beams, optical resonators, interaction of radiation and atomic systems, theory of laser oscillation, nonlinear optics, specific laser systems, optical detectors, applications of lasers in physics.

PHYS 553. Modern Optics Laboratory (3)

One lecture and six hours of laboratory.

Prerequisites: Physics 357 with minimum grade of C; Physics 406 with minimum grade of C; credit or concurrent registration in Physics 552.

Experiments in various fields of modern optics such as holography, physics of lasers, Fourier transform spectroscopy, Raman spectroscopy, light modulation techniques, fiber optics, spatial filtering, diffraction grating spectroscopy, radiometry, and nonlinear optics.

PHYS 554. Colloquium in Optics Research (1) Cr/NC

Prerequisites: Concurrent registration in Physics 498A or 498B or 797 and consent of instructor.

Student and faculty research project presentations. Maximum credit three units.

PHYS 560. Radiological Physics and Dosimetry (3)

Prerequisite: Credit or concurrent registration in Physics 354.

Ionizing radiation fields, interactions of radiation with matter, cavity theory, external radiation dosimetry.

PHYS 561. Nuclear Instrumentation (3)

One lecture and six hours of laboratory.

Prerequisites: Physics 311 and 560.

Radiation detection, measurement, and spectroscopy. Ionization chambers, GM and proportional counters, scintillation and semiconductor detectors, and thermoluminescent dosimetry.

PHYS 564. Nuclear Physics (3)

Prerequisite: Credit or concurrent registration in Physics 410.

Nuclear and elementary particle phenomena including nuclear structure, decay, and radioactivity. Nuclear reactions and devices. Experimental methods and applications.

PHYS 570. Relativity (3)

Prerequisites: Physics 354 and 400B.

Relative coordinates, Lorentz transformation, covariant formulation of the laws of physics, applications of special relativity, introduction to curved space time, cosmology.

PHYS 580. Computational Physics (3)

Prerequisites: Physics 354; Computer Engineering 160 or Computer Science 106; and credit or concurrent registration in Physics 400A.

Computer programming for numerical solution of problems in classical mechanics, electromagnetism, optics, and quantum mechanics. Use of Fortran and C programming languages and the UNIX operating system. Incorporation of standard subroutines for linear algebra and differential equations into student written programs.

PHYS 596. Special Topics in Physics (1-4)

Prerequisite: Consent of instructor.

Selected topics in classical and modern physics. May be repeated with the consent of the instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the *Graduate Bulletin*.

Policy Studies in Language and Cross-Cultural Education (PLC)

In the College of Education

UPPER DIVISION COURSES
(Intended for Undergraduates)

PLC 397. Problems in Education (Credit to be arranged) I, II (Offered only in Extension)

Prerequisite: Consent of instructor.

Class study of specially selected problems in education. Does not apply to pattern requirements for credentials. Credit earned in this course not applicable to a bachelor's degree.

PLC 400. The Secondary School and Bilingual Education (3) II

Prerequisite: Upper division standing.

Bilingual education at the secondary levels, including roles, curricular models, organization, and legal justification. Must demonstrate bilingual competencies before conclusion of course and admission to program. Taught in Spanish.

PLC 415. Fieldwork in Bilingual Community Context (3)

Two lectures and two hours of activity.

Prerequisite: Upper division standing.

Analysis of culturally and linguistically diverse school communities. Participation in bilingual classrooms/schools in preparation for entering B/CLAD credential program.

PLC 496. Experimental Topics (1-4) I, II

Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

PLC 499. Special Study (1-3) I, II

Prerequisite: Consent of instructor. Open only to senior and graduate students in education who have shown ability to work independently.

Individual study. Maximum credit six units.

UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)

PLC 515. Theories and Practices in Multilingual Education (3)

Theoretical, legal, and historical context for multilingual education; policies and practices in bilingual programs; school and community profiles. Fieldwork required. Some sections taught in Spanish.

PLC 553. Language Assessment and Evaluation in Multicultural Settings (3)

Theories and methods of assessment and evaluation of diverse student populations including authentic and traditional models. Procedures for identification, placement, and monitoring of linguistically diverse students. Theories, models, and methods for program evaluation, achievement, and decision making.

PLC 596. Special Topics in Bilingual and Multicultural Education (1-3)

Prerequisite: Consent of instructor.

Selected topics in bilingual, cross-cultural education and policy studies. See Class Schedule for specific content. Maximum credit of six units of 596 applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES
Refer to the *Graduate Bulletin*.

Political Science (POL S)

In the College of Arts and Letters

LOWER DIVISION COURSES

POL S 101. Introduction to American Politics in Global Perspective (3) [AI] I, II

Politics and basic political concepts as applied to the American political system. American political system as a constitutional democracy viewed in comparative perspective and within context of the global system. When taken with Political Science 102 will satisfy graduation requirement in American Institutions.

POL S 102. Introduction to American and California Government and Politics (3) [AI] I, II

Political processes and institutions in the United States and California. Considers a variety of public policy issues such as environmental quality, health, education, relation between government and business, taxation, and foreign affairs as reflected in the dynamics of national and state politics. When taken with Political Science 101 will satisfy graduation requirement in American Institutions. Credit will not be allowed for both Political Science 102 and 320.

POL S 103. Introduction to Comparative Politics (3) [GE] I, II

Analytical models and techniques for examination of problems of decision making and control in various political systems. Emphasis on patterns of political action in various cultural contexts.

POL S 201. Elementary Statistics for Political Science (3) [GE] I, II

Prerequisites: Satisfaction of the Entry-Level Mathematics requirement; course in intermediate algebra; Political Science 101 and 102.

Quantitative methods in political science. Tabular and graphic presentation, measures of central tendency, simple correlation and sampling techniques. Students with credit or concurrent registration in the following lower division statistics courses will be awarded a total of four units for the two (or more) courses: Political Science 201; Administration, Rehabilitation and Postsecondary Education 201; Biology 215; Civil Engineering 160; Economics 201; Psychology 270; Sociology 201; Statistics 119, 250.

POL S 296. Experimental Topics (1-4)

Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

PLC

Field I: Political Theory**UPPER DIVISION COURSES
(Intended for Undergraduates)****POL S 301A-301B. History of Western Political Thought (3-3) [GE]**

Prerequisites: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for non-majors.

Development of political ideas from the Golden Age of Greece until the French Revolution. Relevance of theory to a critical understanding of concrete political and social problems involving power, freedom, equality, justice and action. 301A emphasizes Plato, Aristotle, Augustine, Aquinas, and Marsilius of Padua. 301B stresses major political theorists such as Machiavelli, Hobbes, Locke, and Rousseau.

POL S 302. Modern Political Thought (3) [GE]

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for non-majors.

Major writers of political thought in the last two centuries, including Burke, J.S. Mill, Freud, Marx, Weber and Sartre. The following topics may be covered: conservatism, liberalism, utilitarianism, socialism, fascism, positivism and existentialism.

POL S 305. American Political Thought (3) [AI]

The origin and development of American political ideas from colonial times to the present. Meets the graduation requirement in the United States Constitution. When taken with Political Science 320, 321 or 422, will also satisfy graduation requirements in American Institutions.

POL S 406. Democracy and Mass Society (3)

Origin and development of theories of democracy and application of democratic ideas to contemporary political life.

**UPPER DIVISION COURSES
(Intended for Senior and Graduate Students)
(Also Acceptable for Advanced Degrees)****POL S 507. Marx and Marxism (3)**

Prerequisite: Three units in political theory.

Marxism as an important tradition in political theory and with its history as a political movement. Theoretical and political debates in development of Marxism.

POL S 510. Contemporary Political Thought (3)

Prerequisite: Political Science 301B or 302 or 305 or 406.

Contemporary political questions and theoretical attempts to address them. Debates about justice, citizenship, and multiculturalism; as well as controversies over nature and scope of politics. (Formerly numbered Political Science 410.)

Field II: American Politics**UPPER DIVISION COURSES
(Intended for Undergraduates)****POL S 321. State Politics (3) [AI]**

Politics and policy making at the state and local levels, relations among national, state, and local governments. Emphasis on California problems and politics. Meets the graduation requirement in California government. When taken with Political Science 305 or 320, will also satisfy graduation requirements in American Institutions.

POL S 322. Politics and Conflict (3)

Prerequisite: Political Science 102.

Nature of interpersonal, group, and societal conflict and mechanisms that can facilitate conflict resolution and bargained agreement.

POL S 334. Politics of the Environment (3)

Analysis of political process as it shapes environmental policy in a world characterized by finite resources. Emphasis on expanding national and international claims made upon these resources. May include a substantial amount of material about foreign political systems.

POL S 335. Public Policy (3)

Prerequisite: Political Science 101 and 102.

Theory and practice of process of formulating public policy; roles of administrators, legislators, courts, interest groups, and political parties; public agencies and public interest; case studies in formulating public policies. May include a substantial amount of material about foreign political systems.

POL S 336. Women's Issues in the American Political Process (3) [GE]

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for non-majors.

American politics and public policy debates around women participating in politics, including support of and restrictions to feminism, legal strategies, and new understandings of public and private issues.

POL S 338. The Legislative Process (3)

Detailed analysis of legislatures. Special attention devoted to impact of dynamic factors on formal procedures. May include a substantial amount of material about foreign political systems.

POL S 346. Law and the Political System (3)

Forces influencing the making of law; relationship between social and legal change; nature and limits of the judicial function.

POL S 347A-347B. American Constitutional Law (3-3)

Substantive principles of American constitutional law. Rights and liberties protected by the Constitution against action of federal and state governments. May include problems of judicial review, federal system, separation of powers, nature of selected congressional-presidential powers. Satisfies graduation requirement in United States Constitution. (Formerly numbered Political Science 547A-547B.)

POL S 348. The Supreme Court and Contemporary Issues (3)

Recent decisions of the Supreme Court of the United States and their relationship to contemporary political and social issues. Not open to students with credit in both Political Science 347A and 347B.

POL S 422. Urban Politics (3) [AI]

Prerequisite: Political Science 101 or 102.

The processes by which social conflicts in American urban areas are represented and regulated. Urban political culture; ecology; group development and activity; power structures; and reform movements are surveyed. The character of the urban political "problem" and proposed solutions are evaluated. Meets graduation requirement in California state and local government. When taken with Political Science 305 or 320, will also satisfy all requirements in American Institutions.

POL S 425. Political Behavior (3)

Prerequisite: Political Science 102.

Social and attitudinal variables in political behavior. Quantitative research data as used in electoral studies. May include a substantial amount of material about foreign political systems.

POL S 426. Political Communication (3)

Communication as a political process; the effects of political communication on individuals and groups. May include a substantial amount of material about foreign political systems.

POL S 428. Campaigns and Elections (3)

Prerequisite: Political Science 102.

Campaigns and elections are essential to proper functioning of democracy. Theories concerning decision-making processes of individual voters, actors who seek to influence electoral outcomes, and the strategies used by organized political campaigns in attempt to affect voting behavior.

POL S 430. Immigration and Border Politics (3)

(Same course as Latin American Studies 430.)

Prerequisite: Completion of the American Institutions requirement.

U.S. immigration and border politics within a global and historical perspective. Transformations of sovereignty, communities, identity, and rights within an era of mass migration and economic interdependence. Policy and popular debates about admission, border control, and the incorporation of migrants.

POL S 435. Power and Poverty in the United States (3)

Prerequisites: Political Science 101 and 102.

Impact of government upon income inequality and poverty in the United States. Examines programs of U.S. welfare state in comparative perspective and their successes and failures. Minimum standards for distributional justice and inquiries into obligations we have toward our fellow citizens.

POL S 436. The American Presidency (3)

Prerequisites: Political Science 101 and 102.

Analysis of principal institutions, functions and problems of the presidency and federal executive branch. Attention given to presidential leadership, staffing, executive-legislative relations and policy formation.

POL S 454. Special Problems in Public Law (3)

Prerequisites: Political Science 101 and 102, and three upper division units within Field II.

Exploration of selected issues in the field of law.

**UPPER DIVISION COURSES
(Intended for Senior and Graduate Students)
(Also Acceptable for Advanced Degrees)**

POL S 530. Political Parties (3)

Prerequisite: Political Science 102 or 320.

The political party as a part of the process of government; party organization and activities; nominating and campaign methods; theories and functions of the party system; party responsibility. The functioning of political parties in the American political system. May include a substantial amount of material about foreign political systems.

POL S 531. Interest Groups and Political Movements (3)

Prerequisite: Political Science 101 or 102.

Pressure group activity, lobbies, mass movements; factors which explain origins and motivations of group behavior; votes, money, information, protest as political resources; theories of pluralism, power elite and mass society; class and ethnic politics. May include a substantial amount of material about foreign political systems.

POL S 533. Democracy in America (3)

Prerequisite: Political Science 102 or 320.

Quality and quantity of democratic experience in contemporary America. Construction of American regime, arrangement of power within that regime, expansion and contraction of citizen participation, and principles that Americans generally espouse.

POL S 535. Gender and Politics (3)

Prerequisites: Political Science 101 and 102.

How gender matters in understanding key political science concepts including democracy, public/private participation and representation. Women involved in political institutions as elected officials, activists, and policy makers from U.S. and comparative perspectives.

Field III: Comparative Politics

**UPPER DIVISION COURSES
(Intended for Undergraduates)**

POL S 356. Governments of Continental Europe (3) [GE]

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for non-majors.

The political systems of countries of western continental Europe.

POL S 357. Politics of England (3)

The structure and functioning of the English parliamentary system with emphasis on present-day political principles and parties.

POL S 359. Government and Politics of Russia and the Commonwealth (3) [GE]

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for non-majors.

Contemporary developments in Russia and states of former Soviet Union. Focus on Gorbachev era and post-Gorbachev transformations of political, economic, and social systems.

POL S 361. Governments and Politics of the Developing Areas (3) [GE]

Prerequisites: Political Science 101 or 103; and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for nonmajors.

Internal political systems, governmental structures and the foreign policies of developing nations.

POL S 362. Governments and Politics of East Asia (3) [GE]

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for non-majors.

The internal political structure and foreign policies of China, Japan, and Korea.

POL S 363. Governments and Politics of the Middle East (3) [GE]

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for non-majors.

The governmental and political structures of representative states in the Middle East including Turkey, Israel and the Arab states.

POL S 364. Political Change in Modern Africa (3)

Dynamics of social and political change in modern Africa.

POL S 366. Latin American Politics (3)

(Same course as Latin American Studies 366.)

Prerequisite: Completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for non-majors.

Introduction to Latin American Politics. Knowledge of political change and political systems in Latin America, viewed historically and comparatively, using concepts and theories applicable to more general political analysis.

POL S 370. Political Violence (3) [GE]

Prerequisites: Political Science 101, 102 or 103; and completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required for non-majors.

Underlying conditions, expressions and consequences of violence within political systems.

POL S 468. Nations and Nationalism (3)

Prerequisite: Upper division standing.

Development and continuing appeal of national identities. How groups construct collective memories for political purposes. Relationship of nationalism to modernity, industrialization, colonialism, and globalization. (Formerly numbered Political Science 408.)

**UPPER DIVISION COURSES
(Intended for Senior and Graduate Students)
(Also Acceptable for Advanced Degrees)**

POL S 555. Comparative Political Systems (3)

Prerequisite: Political Science 103.

An examination of selected political and governmental systems for purposes of comparative study and analysis to determine similarities, differences and general patterns and universals among political systems.

POL S 560. Comparative Public Policy (3)

Prerequisite: Political Science 103 or 335.

Ways that political and social factors shape policy choices, implementation strategies, and policy outcomes in selected countries, emphasis on industrialized nations. Policy areas chosen from: education, health, nutrition, crime, transportation, housing, energy, population control, poverty, unemployment, inflation.

POL S 564. Environmental Politics in Global Perspective (3)

Prerequisite: Upper division or graduate standing.

Comparative examination of environmental politics and policy in major world regions. Considers environmental politics with related policy challenges of economic growth, equity, and social justice. Course content varies with regional focus.

POL S 566. Political Change in Latin America (3)

Prerequisite: Political Science 101 or 103.

General pattern of politics and political development in Latin America with an emphasis on those features which condition domestic and foreign policy making.

POL S 567. Political Systems of Latin America (3)

Prerequisite: Political Science 566.

Domestic and international politics of selected Latin American states.

POL S 568. Mexican Politics (3)

Prerequisite: Political Science 101 or 103.

Principal factors in Mexican governmental decision making. Ideology, political groups, tactics of leaders and governmental structure.

Field IV: International Politics**UPPER DIVISION COURSES
(Intended for Undergraduates)****POL S 375. International Relations (3)**

Dynamics of conflict and cooperation among national, international and transnational actors; contributing political, economic, and social factors.

POL S 380. Human Rights in a Global Perspective (3)

Historical development of international human rights standards and global, political, moral, and legal debates concerning when and how to implement human rights standards.

POL S 393. Institute on World Affairs (3)

Weekly lectures by visiting experts on contemporary international relations. Speakers may include scholars, diplomats, government officials, journalists, military officers and international business executives.

POL S 478. Conduct of American Foreign Relations (3)

Institutional arrangements by which American foreign policy decisions are formulated and implemented. Issues confronted by American foreign policy decision makers.

POL S 479. National Security Policy (3)

Objectives, instruments, and consequences of national security policy.

POL S 482. International Relations of the Latin American States (3)

Foreign policies of Latin American states; the Organization of American States; relationships with the United Nations and the United States.

POL S 485. Politics of Globalization (3)

Prerequisite: Political Science 103 or six units of political science.

Ideas and practice of globalization since end of World War II, focusing on political debate around contemporary changes in trade, production, and global social relations, and on impact of globalization on political institutions such as state, civil society, social movements, and democracy.

**UPPER DIVISION COURSES
(Intended for Senior and Graduate Students)
(Also Acceptable for Advanced Degrees)****POL S 575. International Relations of the Pacific Rim (3)**

Prerequisite: Political Science 362 or 375.

Dynamics of conflict and cooperation among nations of the Pacific Rim. Stress on political and economics factors that shape interstate relations.

POL S 577. Principles of International Law (3)

The function of law in the international community. The historical development of the ideas and rules of international law and their place in the modern diplomatic and legal structure.

Elective Courses**UPPER DIVISION COURSES
(Intended for Undergraduates)****POL S 320. American Institutions (3) [AI] I, II**

The principles of the Constitution of the United States of America, and a survey of the political and social institutions which have developed under the Constitution. Meets the graduation requirement in the United States Constitution and California state and local government. When taken with Political Science 305, 321 or 422, will also satisfy graduation requirements in American Institutions. Credit will not be allowed for both Political Science 102 and 320.

POL S 495. Internship in Local Politics (3) I, II

Prerequisites: Limited to senior political science majors; three upper division units within Field II.

Seniors in the major choose internships within San Diego County in government agencies, offices of elected officials, or others approved by instructor. Requires 80 hours of fieldwork and periodic analytical essays.

POL S 496. Experimental Topics (1-4)

Selected topics. May be repeated with new content and used for field-specific credits for the major as approved by the department. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

POL S 497. Senior Thesis (3) I, II

Prerequisite: Limited to senior political science majors with a cumulative 3.0 in upper division political science courses.

Senior thesis. Analysis of special topics.

POL S 498. Internship in National Politics (12) I, II

Prerequisite: Consent of instructor.

Students will be assigned to political agencies in Washington, D.C., such as congressional staffs, interest groups, executive agencies, legal/judicial offices and political party committees. For information on internship opportunities, especially state politics, refer to the internship section on the department Web site. Maximum credit six units applicable to the major in political science; maximum credit three units applicable to the minor in political science.

POL S 499. Special Study (1-3) I, II

Prerequisites: Twelve upper division units in political science and consent of the instructor.

Individual study. Maximum credit six units.

**UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)****POL S 515. Research Design and Analysis in Political Science (3)**

Prerequisite: Political Science 201.

Does not fulfill undergraduate capstone major requirement. Modeling and design of formal research projects. Theoretical underpinnings and logic of social science analysis. Issues in measurement and scaling. Introduction to testing, including elementary statistical analysis of behavioral data.

POL S 516. Statistics for Political Scientists (3)

Prerequisite: Political Science 201.

Does not fulfill undergraduate capstone major requirement. Basic concepts, theories, and methods that are utilized by political and other social scientists using statistics and microcomputers. Intermediate level introduction to statistical methods in political science.

POL S 596. Topics in Political Science (1-3)

Prerequisite: Upper division or graduate standing.

Selected topics in political science. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596. Maximum credit of three units of 596 applicable to a master's degree. Maximum credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES

Refer to the *Graduate Bulletin*.

Portuguese

*In the Department of Spanish and Portuguese
Languages and Literatures
In the College of Arts and Letters*

LOWER DIVISION COURSES

Native speakers of Portuguese will not receive credit for taking lower division courses in Portuguese except with advance approval from the department.

All lower division courses in Portuguese are taught in Portuguese.

No credit will be given for lower division courses taken after successfully completing any upper division Portuguese course. No credit will be given for Portuguese 101, 201, 301 taken out of sequence.

PORT 101. Elementary/Intensive Portuguese I (5) [GE] I

Five lectures and one hour of laboratory.

Prerequisite: Three years of high school Romance language or two semesters of college romance language.

Pronunciation, oral practice, reading on Luso-Brazilian culture and civilization, essentials of grammar. Not open to students who have completed three years of high school Portuguese unless the third course was completed five or more years ago. Not open to students with credit in Portuguese 201, 301, or higher-numbered Portuguese course.

PORT 201. Elementary/Intensive Portuguese II (5) [GE] II

Prerequisite: Portuguese 101.

Continuation of Portuguese 101. Not open to students who have completed four years of high school Portuguese unless the fourth course was completed five or more years ago. Not open to students with credit in Portuguese 301 or higher-numbered Portuguese course.

PORT 296. Experimental Topics (1-4)

Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

PORT 299. Special Study (1-3)

Prerequisite: Consent of instructor.

Individual study. Maximum credit six units.

**UPPER DIVISION COURSES
(Intended for Undergraduates)**

All upper division courses in Portuguese are taught in Portuguese unless otherwise stated.

No credit will be given for lower division courses taken after successfully completing any upper division Portuguese course.

PORT 301. Intermediate Portuguese Grammar and Composition (3) [GE]

Prerequisites: Portuguese 201; and completion of the General Education requirement in Foundations II.C., Humanities.

Oral and written composition in Portuguese, based on models from modern Portuguese and Brazilian texts.

PORT 307. Brazilian Music and Culture (3) [GE]

(Same course as Latin American Studies 307.)

Prerequisites: Upper division standing; and completion of the General Education requirement in Foundations II.C., Humanities required for nonmajors.

Brazilian music and culture with emphasis on religious and cultural practices of *candomblé*, *capoeira*, carnival, and notions of race and class in contemporary Brazilian funk and hip-hop. Taught in English.

PORT 401. Advanced Portuguese Grammar and Composition (3) [GE]

Prerequisites: Portuguese 301; and completion of the General Education requirement in Foundations II.C., Humanities.

Oral and written composition in Portuguese, based on models from modern Portuguese and Brazilian texts.

PORT 443. Contemporary Luso-Brazilian Civilization (3)

Prerequisite: Portuguese 401.

Historical, cultural socioeconomic, ethnic, geographic, and political factors of modern Brazil and Portugal.

PORT 496. Selected Studies in Portuguese (3)

Topics in Lusophone language, literature, culture, and linguistics. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units.

PORT 499. Special Study (1-3) I, II

Prerequisite: Consent of instructor.

Individual study. Maximum credit six units.

PORT

**UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)****PORT 534. Portuguese Literature (3)**

Prerequisite: Portuguese 401.

Important movements, authors, and works in the literature of Portugal from its beginnings to the present.

PORT 535. Brazilian Literature (3)

Prerequisite: Portuguese 401.

Important movements, authors, and works of the literature of Brazil from the colonial period to modern times.

Professional Studies and Fine Arts (PSFA)

*Offered by the College of Professional Studies
and Fine Arts*

LOWER DIVISION COURSE**PSFA 296. Experimental Topics (1-4)**

Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

**UPPER DIVISION COURSES
(Intended for Undergraduates)**

PSFA 320. Creativity and Communication in the Arts (3) [GE]

Two lectures and two hours of activity.

Prerequisite: Completion of the General Education requirement in Foundations II.C., Humanities.

Common elements shared by various artistic forms. Focus on creativity and communication as exemplified in subject, form, function, medium, organization, and style. Attendance at dance, drama, film, music, television, and visual art events required.

PSFA 330. Artistic Practice in the Digital Age (3)

Two lectures and two hours of activity.

Prerequisite: Upper division standing.

Multidisciplinary artistic practice related to digital technologies with emphasis on works that encourage new media collaboration and interaction with audiences. Critical issues pertinent to art and technology that seek to depict, question, and transform our cultural landscape.

PSFA 430. Art and Technology Workshop (3)

Six hours of activity

Prerequisite: Grade of C or better in Professional Studies and Fine Arts 330.

Collaborative and/or interdisciplinary practical experience in digital media using various approaches to the creative process in the arts. Maximum credit six units.

PSFA 496. Experimental Topics (1-4)

Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

Psychology (PSY)

In the College of Sciences

NOTE: Many psychology courses have enforced prerequisites, meaning the student must provide proof of having completed the prerequisite to the instructor in order to remain enrolled. Students who have not completed an enforced prerequisite and who fail to drop the class officially will be assigned the grade of "WU," which is equivalent to an "F." Before enrolling in psychology courses, students should consult the catalog to determine that they have completed any enforced prerequisites.

LOWER DIVISION COURSES

PSY 101. Introductory Psychology (3) [GE] I, II

Facts, principles, and concepts which are basic to understanding human behavior.

PSY 201. Academic and Career Opportunities in Psychology (1) Cr/NC

Prerequisites: Psychology 101 and completion of 30 units.

Information about careers in psychology. Includes identification of career-related strengths and interests and information on post-baccalaureate options in psychology and related fields. Introduction to resources in Psychology Undergraduate Advising and Career Services.

PSY 211. Learning (3) I, II

Prerequisite: Psychology 101.

Basic principles and research in animal and human learning.

PSY 230. Developmental Psychology (3) I, II

Prerequisite: Psychology 101. **Proof of completion of prerequisite required:** Copy of transcript.

Psychological development of normal individual from conception through childhood, adolescence, and maturity. Emphasis on interdependence of various periods of the individual's life. Not open to students with credit in Child and Family Development 170, 270, or Teacher Education 170.

PSY 250. Faculty Student Mentoring Program (1) Cr/NC

Provides upper class mentors for freshman and community college transfer students. Mentors assist students in locating campus resources, linking them with departmental advisers, identifying tutors in science courses and encouraging students to participate in workshops. Maximum credit two units.

PSY 260. Introduction to Physiological Psychology (3) I, II

Prerequisites: Psychology 101 and Biology 100. **Proof of completion of prerequisites required:** Copy of transcript.

Elementary physiology of the nervous system. Physiological mechanisms underlying the psychological phenomena of sensation, perception, emotion, arousal, motivation, learning and memory, and cortical specialization.

PSY 270. Statistical Methods in Psychology (3) [GE] I, II

Prerequisites: Psychology 101; concurrent registration in Psychology 271; satisfaction of the Entry-Level Mathematics requirement.

Proof of completion of prerequisites required: Copy of ELM score or verification of exemption, and verification of registration in Psychology 271.

Quantitative methods in psychology for producing, analyzing, and interpreting data. Sampling, basic research designs, describing distributions through graphs and quantitative indices, linear correlation and regression, applications of normal probability curve, confidence intervals, and tests of significance. Students with credit or concurrent registration in the following lower division statistics courses will be awarded a total of four units for the two (or more) courses: Psychology 270; Administration, Rehabilitation and Postsecondary Education 201; Biology 215; Civil Engineering 160; Economics 201; Political Science 201; Sociology 201; Statistics 119 and 250.

PSY 271. Data Analysis in Psychology (1) I, II

Two hours of activity in computer laboratory.

Prerequisite: Satisfaction of the Entry-Level Mathematics requirement and credit or concurrent registration in Psychology 270. **Proof of completion of prerequisite required:** Verification of registration in Psychology 270 or copy of transcript.

Statistical and graphic analysis and interpretation of psychological data using computer technology. Activities involve statistical software such as SPSS for Macintosh (Windows) as well as standard spreadsheets.

PSY 296. Experimental Topics (1-3)

Selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree.

**UPPER DIVISION COURSES
(Intended for Undergraduates)**

NOTE: To declare the psychology major, students must report in person to the Psychology Undergraduate Advising Office and provide the Undergraduate Adviser with evidence of having completed the requirements. Informal transcripts may be used by the Psychology Undergraduate Office to determine declaration of the major. Students should declare the major as soon as they have completed the necessary requirements and should complete no more than 12 units of upper division psychology courses prior to declaring the major. Students who are planning to transfer to SDSU should visit the Psychology Undergraduate Office and develop a plan for declaring the major during the semester prior to enrolling.

PSY 301. Introduction to Research Methods in Psychology (4) I, II

Three lectures and two hours of activity.

Prerequisites: Completion of the Graduation Writing Assessment Requirement or the eligibility to enroll in an upper division writing course. Psychology 101, 270, and 271. **Proof of completion of prerequisites required:** Copy of transcript. Open only to psychology majors.

Methods used to answer questions in psychology, including case study, observation, survey, experimental, and field study procedures. Class projects using these methods, interpreting results and report writing; critically evaluating research findings.

PSY 316. Behavior Modification (3)
(Offered only at IVC)

Prerequisite: Psychology 101. Recommended: Psychology 211.

Contingencies of reinforcement, stimulus control, response shaping, aversive control, and other basic principles of operant behavior applied to understanding and modification of human behavior.

PSY 319. Industrial and Organizational Psychology (3) I, II

Prerequisites: Psychology 101 and 270. **Proof of completion of prerequisites required:** Copy of transcript.

Broad-based survey of various content areas of industrial (e.g. selection, appraisal) and organizational (e.g. motivation, leadership) psychology. Underlying psychological principles that influence human behavior in the workplace. Not open to students with credit in Psychology 320 or 321.

PSY 320. Personnel and Industrial Psychology (3) I, II

Prerequisites: Psychology 319. **Proof of completion of prerequisites required:** Copy of transcript.

Psychological principles applied to industrial problems of selection, placement and training.

PSY 321. Organizational Psychology (3) I, II

Prerequisite: Psychology 319. **Proof of completion of prerequisites required:** Copy of transcript.

Human behavior in context of organizational life. Factors related to effectiveness of individuals and groups within organizations, including organization design, leadership and control, motivation, cooperation, and conflict. Not open to students with credit in Management 350 or Public Administration 340.

PSY 331. Psychology of Infant and Child Development (3) I, II

Prerequisite: Psychology 101 and 230. **Proof of completion of prerequisite required for Psychology 230:** Copy of transcript.

Psychological development of normal child from infancy through childhood focusing on physical, social, cognitive, and linguistic aspects of development.

PSY 332. Psychology of Adolescent and Early Adult Development (3) I, II

Prerequisites: Psychology 101 and 230. **Proof of completion of prerequisite required for Psychology 230:** Copy of transcript.

Psychological development of normal individual from adolescence through early adulthood focusing on physical, social, and cognitive aspects of development.

PSY 333. Developmental Psychopathology (3)

Prerequisites: Psychology 101 and 230. **Proof of completion of prerequisite required for Psychology 230:** Copy of transcript.

Cognitive, affective, and social aspects of abnormal development from childhood through adolescence. Consideration, within a developmental framework, of etiological theories and factors, problem expression and treatment issues.

PSY 340. Social Psychology (3) [GE] I, II

Prerequisites: Psychology 101; completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required.

The major problems and findings concerning group behavior and group membership, the socialization of the individual, and processes of social interaction.

PSY 344. Psychology and Culture (3)

Prerequisite: Psychology 101.

Impact of culture in each of psychology's major areas, theories, and empirical findings.

PSY 345. Chicana and Chicano Psychology (3)

Prerequisite: Psychology 101.

Evolution of psychology of Chicanos with emphasis on understanding underlying roots and foundations. Empirical research conducted with Chicanos in areas of psychology, psychiatry, and mental health.

PSY 350. Abnormal Psychology (3) I, II, S

Prerequisites: Psychology 101; completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required.

Causes and treatment of abnormal behavior with emphasis on major behavior disorders.

PSY 351. Psychology of Personality (3) [GE] I, II, S

Prerequisites: Psychology 101; completion of the General Education requirement in Foundations II.B., Social and Behavioral Sciences required.

Major theoretical approaches to individual differences and the study of the person. Techniques of personality assessment. Selected research findings.

PSY 355. Psychology of Human Sexual Behavior (3)

Prerequisite: Psychology 101.

Evaluation of behavioral and physiological data of normal, aberrant, and dysfunctional human sexual behavior, including description of available treatment methods.

PSY 360. Behavioral Neuroscience (3)

Prerequisites: Psychology 101 and 260. **Proof of completion of prerequisites required:** Copy of transcript.

Biological and physiological underpinnings of behavior: genetics, hormones, transmitters, plasticity/regeneration, development, and metabolism/nutrition. Analysis of their role in normal behavior, psychopathology, neurological disorders, and treatment of behavioral disturbances.

PSY 361. Neuropsychology (3)

Prerequisites: Psychology 101 and 260. **Proof of completion of prerequisites required:** Copy of transcript.

Characterization of human brain-behavior relationships derived from neuropsychometric studies of healthy, neuropsychiatric and brain damaged populations. Emphasis on functional neuroanatomy and the effects of abnormal brain development and disease on processes such as cognition, memory, language, visual-spatial, and other functions.

PSY 362. Cognitive Neuroscience (3)

Prerequisites: Psychology 101 and 260. **Proof of completion of prerequisites required:** Copy of transcript.

Functional organization of the human brain, including sensorimotor and cognitive systems and their functional interactions; development and evolution; normal and pathological plasticity. Approaches applied to healthy human brain, such as neuroimaging and event-related potentials.

PSY 365. Drugs and Behavior (3)

Prerequisite: Psychology 260.

Fundamentals of regulation, administration, tolerance, dependence, and physiological activity of drugs. Effects of stimulants, depressants, opiates, psychedelics, and psychotherapeutic drugs on the nervous system and on cognitive, personality, and behavioral functioning.

PSY 370. Psychological Testing and Measurement (3) I, II

Prerequisites: Grade of B or better in Psychology 270 or equivalent statistics course; grade of B or better in Psychology 301. **Proof of completion of prerequisite required:** Copy of transcript. Note: Students electing to take Psychology 410 for the methods requirement may petition waiver of the Psychology 301 prerequisite by permission of the undergraduate adviser.

Measurement theory and the basic principles of testing. Selection, construction and critical evaluation of group tests of intelligence, personality, aptitude, interest and achievement.

PSY 380. Cognitive Psychology (3)

Prerequisite: Psychology 101. Recommended: Psychology 211.

Theory and research on attention, learning, memory, thinking, understanding, and language.

PSY 388. Sensation and Perception (3)

Prerequisites: Psychology 101 and 260.

Theory and research in sensory and perceptual processes.

PSY 407. Health Psychology (3) I, II

Prerequisites: Psychology 211 and 270. **Proof of completion of prerequisites required:** Copy of transcript.

Behavioral components of major illnesses and causes of death and disability. Primary prevention of health problems through behavior change and psychological features of the health care system.

PSY 410. Laboratory in Experimental Psychology (5) I, II

Two lectures and six hours of activity.

Prerequisites: Completion of the Graduation Writing Assessment Requirement or the eligibility to enroll in an upper division writing course. Psychology 211, a grade of B or better in Psychology 270 or equivalent statistics course, and Psychology 271. **Proof of completion of prerequisites required:** Copy of transcript.

Understanding of experimental design, quantitative methods, and experimental reports as they are applied to all areas of psychology.

PSY 412. Advanced Laboratory in Social Psychology (5) (Offered only at IVC)

Two lectures and six hours of activity.

Prerequisite: Psychology 410. **Proof of completion of prerequisites required:** Copy of transcript.

Experimental literature, assigned and original laboratory projects in the field of social psychology.

PSY 442. Prejudice and Stereotypes (3)

Prerequisite: Psychology 340. **Proof of completion of prerequisite required:** Copy of transcript.

Classic and contemporary theories and research on prejudice and stereotyping to include origin and forms of phenomena, consequences, and approaches aimed at reducing them.

PSY 446. Advanced Topics in Social Psychology (3)

Prerequisite: Psychology 340. **Proof of completion of prerequisite required:** Copy of transcript.

Selected areas in social psychology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

PSY 452. Introduction to Counseling and Therapy (3)

Prerequisite: Psychology 350 or 351. **Proof of completion of prerequisite required:** Copy of transcript.

Theory, methods, and research in psychological approaches to personality and behavior change. Not open to students with credit in Counseling and School Psychology 660.

PSY 456. Psychology of Death and Bereavement (3)

Latest psychological research and clinical practice in the area of death and dying, geared to assisting the student in appropriate ways of aiding both the dying and the bereaved in coming to terms with death.

PSY 470. Intermediate Statistics for Psychological Research (3)

Prerequisites: Grade of B or better in Psychology 270 and 271; grade of B or better in Psychology 301 or 410.

Theoretical foundations of statistics including probability theory, distribution theory, and statistical inference. Model-based statistical comparisons. Application of statistical theory to psychological research questions.

PSY 491. Academic or Psychological Counseling Experiences (3) Cr/NC

Prerequisites: Upper division psychology major with a 3.0 minimum grade point average and consent of the psychology undergraduate coordinator.

Individual supervision of academic or psychological counseling experiences, geared to acquisition of counseling and communication skills. May be repeated with approval of psychology undergraduate coordinator. Maximum credit six units. No more than 12 units of courses numbered Psychology 491, 494, 495, 497, 499 may be counted toward the major.

PSY 492. Responsible Conduct in Scientific Research (1) Cr/NC

Prerequisite: At least one introductory level science course.

Responsible conduct in scientific research. Topics include conflict of interest, plagiarism, reporting of scientific results, authorship, responsible use and care of animals, responsible use of human subjects.

PSY 494. Special Study: Techniques for Teaching and Tutoring in Psychology (2) Cr/NC

Prerequisite: Consent of instructor.

Practical knowledge and experience in psychology instruction and advanced content in a specific area of psychology. May be repeated with new content. Maximum credit four units. No more than 12 units of courses numbered Psychology 491, 494, 495, 497, 499 may be counted toward the major.

PSY 495. Readings and Practice in Companionship Therapy (3) Cr/NC I, II

Prerequisites: Psychology 350 and three units from Psychology 230, 340, or 351. **Proof of completion of prerequisites required:** Copy of transcript.

Work with troubled or potentially troubled clients from selected community agencies. May be repeated with approval of psychology undergraduate coordinator. Maximum credit six units. No more than 12 units of courses numbered Psychology 491, 494, 495, 497, 499 may be counted toward the major.

PSY 496. Selected Topics in Psychology (1-4)

Prerequisite: Psychology 101.

Intensive study in specific areas of psychology. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units.

PSY 497. Senior Project (1-3) I, II

Prerequisites: Twelve units of psychology and consent of instructor.

Individual investigation and APA-style report on a research project. Maximum credit six units. No more than 12 units of courses numbered Psychology 491, 494, 495, 497, 499 may be counted toward the major.

PSY 498. Undergraduate Honors Thesis (3-6)

Prerequisites: Psychology 410, 3.5 overall GPA, 3.75 GPA in major, and consent of honors coordinator.

Directed research in psychology and completion of honors thesis. Required of students graduating with a Certificate of Recognition of Psychology Honors Thesis. May be repeated for a maximum of six units.

PSY 499. Special Study (1-3) Cr/NC I, II

Individual study, including library or laboratory research and a written report. Maximum credit six units. No more than 12 units of courses numbered Psychology 491, 494, 495, 497, 499 may be counted toward the major.

**UPPER DIVISION COURSES
(Also Acceptable for Advanced Degrees)**

PSY 501. History of Psychology (3)

Limited to graduate students or psychology majors with senior standing.

The historical background of modern psychology.

PSY 502. Philosophical Issues in Psychology (3)

Prerequisite: Six units of psychology.

Mind-brain relationship and other topics at the interface of psychology and philosophy.

PSY 561. Advanced Neuropsychology (3)

Prerequisite: Psychology 360 or 361 or grade of B or better in Psychology 260.

Biological bases of neuropsychological function and dysfunction, relationships between brain structure and function, neuropsychological assessment tools.