408. Special Problems  
Fall, Winter, Spring, Summer. 1 to 5 credits. Approval of department.

497. Principles of Endocrinology  
Fall, Winter. 4(4-0). Organic chemistry, ZOLO 317. Interdepartmental with and administered by the Zoology Department.  
Endocrine principles, illustrated by experimental observations, in vertebrates and invertebrates. Emphasis on cellular endocrinology, group discussion, background in organic chemistry and cell biology strongly recommended. Term paper required.

500A. Introductory Physiology for Medicine  
Fall, Winter, Spring, Summer. 3(3-0) or 5(3-0)  
Admission to the professional program in a college of medicine.  
Concepts and problems in physiology to be followed by supplemental physiology instruction during subsequent phases of medical training.

500B. Introductory Physiology for Medicine  
Fall, Winter, Spring, Summer. 3(3-0) or 4(3-1)  
Admission to the professional program in a college of medicine.  
Classical concepts and problems in physiology which form a base of clinical physiology training in subsequent terms.

500C. Introductory Physiology for Medicine  
Fall, Spring, Summer. 3(3-0) or 4(3-1)  
Admission to the professional program in a college of medicine.  
Continuation of 500A.

501. Advanced Mammalian Physiology  
Fall, Winter. 5(5-0)  
Approval of department.  
Basic aspects of cellular physiology; membrane permeability, ionic equilibria, bioelectric phenomena, fluid and electrolyte environment of cells. Neuro-muscular physiology; reflexes, central and autonomic nervous systems; sensory physiology. Endocrine gland systems; digestion and metabolism.

502. Advanced Mammalian Physiology  
Spring. 6(5-4) 501.  
Continuation of 501; reproduction, blood and cardiovascular system; respiration and kidney.

508. Advanced Endocrinology  
Winter. 3(3-0)  
Approval of department.  
Current developments on anatomy, physiology, chemistry, and regulation of the major endocrine glands; nervous and hormonal control of reproduction and lactation.

510. Kidney Physiology and Electrolyte Metabolism  
Spring. 3(3-0) 502.  
Critical study of the literature on classical and contemporary principles of renal physiology and related aspects of body fluid and electrolyte metabolism.

535. Neurophysiology  
Winter of odd-numbered years. 4(2-4)  
Approval of department.  
Functions and properties of the peripheral and central nervous systems.

536. Physical Principles of Biological Systems  
Winter. 3(3-0)  
Application of laws and methods of physics to measurement and description of physiological phenomena.

537. Radiobiology  
Fall. 3(3-0)  
Approval of department.  
Application of radioactive tracer techniques to study of biological functions. Determination of turnover rates and time constants by isotope dilution. Control of radiation hazards.

539. Analysis of Hormone Action  
Spring. 4(4-0) ZOLO 317, or approval of department.  
Interdepartmental with and administered by the Zoology Department.  
Discussion of recent work on the molecular and developmental aspects of hormone action in vertebrates and invertebrates. Selected topics to vary from year to year.

570. Research Problems and Techniques in Pathologic Physiology  
Summer. 3(3-0) 501, 502.  
Description of mechanisms of human disease states. Stimulation of research where especially needed. Development of animal models to study these disease states. Lecture demonstrations illustrate methods of producing disease models.

585. Vertebrate Neural Systems I  
Fall of odd-numbered years. 5(3-4)  
Approval of department; ANT 815 and BFY 825 recommended. Interdepartmental with the Zoology, Biophysics, and Psychology Departments and administered by the Psychology Department.  
Structure and function of major component systems of vertebrate brains, their evolution, ontogeny and comparative analysis in mammals, birds, reptiles, amphibians and fish. Interrelation of behavioral, anatomical and physiological studies.

586. Vertebrate Neural Systems II  
Winter of even-numbered years. 5(3-4)  
PSY 885. Interdepartmental with the Psychology, Biophysics and Zoology Departments and administered by the Zoology Department.  
Continuation of 585. Major component systems of vertebrate brains, their evolution, ontogeny, and comparative analysis in mammals, birds, reptiles, amphibians and fish. Interrelation of behavioral, anatomical, and physiological studies.

599. Research  
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

910. Seminar  
Fall, Winter, Spring. 1(1-0)  
May re-enroll for a maximum of 2 credits for the Master's program and a maximum of 4 additional credits for either the Ph.D. or the diploma program.

915. Respiratory Physiology  
Fall. 5(3-2) 502, approval of department.  
Development of ideas leading to our present state of knowledge in respiration.

919. Cardiovascular System  
Fall. 4(3-2) 502.  
Outstanding literature on physiology of heart, blood vessels and lymphatics, hemodynamics, cardiac output and circulation in special regions. Appropriate methodology discussed. Laboratory work illustrates principles of special procedures.

550. Topics in Physiology  
Fall, Winter, Spring, Summer. 1 to 3 credits. May re-enroll for a maximum of 9 credits. Approval of department.  
Classical and modern concepts in selected areas of physiology.

980. Problems  
Fall, Winter, Spring, Summer. 1 to 3 credits. May re-enroll for a maximum of 9 credits. Approval of department.  
Limited amounts of individual work on selected research problems.

999. Research  
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

POLITICAL SCIENCE

College of Social Science

100. American National Government  
(300.) Fall, Winter, Spring, Summer. 4(3-0)  
Not open to majors.  
Major aspects of national government with emphasis on the policy-making process.

140. Comparative Politics  
Fall, Winter, Spring. 4(3-0)  
Comparison of political systems in western and non-western nations.

160. International Relations  
(200.) Fall, Winter, Spring, Summer. 4(3-0)  
Contemporary world affairs surveyed. The struggle for power, the nation-state system; factors creating harmony and hostility among nations. War and peace in our time.

170. The Iams  
Fall, Winter, Spring, Summer. 4(3-0)  
Introduction to basic contemporary political ideologies; theoretical foundations of democracy, socialism, communism, political liberalism, and nationalism. Special attention to ideology underlying contemporary political problems.

200. Introduction to Political Science  
Fall, Winter, Spring, Summer. 4(3-0)  
Acquaints the student with the theories, methods and concepts of political science. Emphasis is on ideology and interests in the political process.

290. Methods of Political Research  
Fall, Winter. 4(3-0) 200.  
Design and execution of research in political behavior and institutions. Major emphasis on logic underlying various types of political research, on identification of appropriate data sources and field methods.
321. Methods of Political Research
Winter, Spring. 4(3-0)
Analysis of political data, with major emphasis on quantitative techniques.

301. American State Government
Fall, Winter, Spring, Summer. 4(3-0)
Major aspects of policy-making process at the state government level. Comparison of state political systems.

302. American Urban Government
Fall, Winter, Spring, Summer. 4(3-0)
Urban political process in America. Policies of policy-making for urban functions; politics of intergovernmental relations.

303. Michigan Government
(401.) Spring. 4(3-0)
How Michigan government is organized and conducted and how policies are made; sources of executive- legislative conflict; politics of taxation; role of the state in local affairs; balance of political forces in the state.

310. Public Bureaucracy in the Policy Process
Fall, Spring. 4(3-0)
Introduces student to following major areas of public administration: development of administration in the U.S.; theories of administrative organization; principles and methods of administrative management; executive leadership; interpersonal and intergroup relationships; levels of decision making, ethics and responsibility.

313. Public Policy Analysis
Winter. 4(3-0)
Problems and methods in perception of public problems, determination of goals, generation and evaluation of alternatives, policy choice. Planning and program budgeting, political and analytical methods of policy making compared.

320. The American Judicial Process
Fall, Winter, Spring, Summer. 4(3-0)
Analysis of the structure and functions of judicial systems. Organization, administration, and politics of judicial bureaucracies. Roles of judges, juries, counsel, litigants, and interest groups in adjudication processes.

321. Judicial Policy Making
Fall, Spring. 4(3-0)
Consideration of political behavior of judges (especially Justices of Supreme Court) and their policy making. Focus on policy questions currently important, including civil liberties, national economic policy and interrelationships among governmental units.

324. The American Legislative Process
(424.) Winter. 4(3-0)
Nature of legislative process in the United States; organization and procedure of legislative bodies; direct legislation; relationship of legislative branch to other branches of government.

325. The American Executive Process
(425.) Spring. 4(3-0)
Role of the president, state governors, and municipal executives in the American system of government. Analysis and discussion of constitutional status and powers, selection, administrative responsibilities, legislative and political leadership, accountability, and responsibility of chief executives.

331. American Political Parties and Elections
Fall. 4(3-0)

332. Interest Groups and Political Movements
Winter. 4(3-0)
Group theory and politics. Growth of organizations and associations to represent the interests of business, labor, agricultural, professional, veterans, and interest groups. Internal politics of private associations and their impact on public policy.

333. Political Opinion and Voting Behavior
Fall, Winter, Spring. 4(3-0)
Development of political attitudes, ideology, and partisanship and their relation to voting behavior; political participation; comparisons of mass and elite attitudes and behavior; representation of public opinion in the political system.

335. Comparative Parties and Pressure Groups
Spring. 4(3-0)
Comparative analysis of organization, ideologies, membership, leadership, tactics, power and influence of parties.

336. Black Political Movements
Fall. 4(3-0)
Examines attempts of blacks to gain political access and identity in America from post civil war through black nationalism. Treated as a case study of the politics of social movements.

337. Ethnicity, Race and Politics
Winter. 4(3-0)
Ethnicity and race as factors in the political process and as issues of public policy.

340. Theories of Comparative Politics
Fall, Winter, Spring. 4(3-0)
Synt n. 4(3-0)
Alternative methods for comparative cross-cultural analyses of political systems. Political structures, functions, cultures, stability and change. The problem of equivalence.

344. The Politics of Developing Areas
Spring. 4(3-0)
Process of political growth in emergent societies of the world; stresses of change and flux resulting from economic development in relation to the structure and dynamism of government.

345. Political Institutions and Behavior in South Asia
Winter of odd-numbered years. 4(3-0)
Political ideas and institutions in India, Pakistan, and related territories; analysis of constitutional development, political parties, legislatures, administration, planning, foreign policy and their interaction with the social system.

346. Governments of the Middle East
Spring of odd-numbered years. 4(3-0)
Policies and cultures of Turkey, Iran, Saudi Arabia, Yemen, Israel, Jordan, Lebanon, Syria, Iraq, and Egypt.

347. African Politics
Winter of even-numbered years. 4(3-0)
Political practices and perspectives in Africa. Special attention to emerging independent nations of Sub-Saharan Africa. Discussions of socio-political change, nationalism, cultural duality, nation-building, pan-Africanism.

348. Major African Political Systems
Spring of even-numbered years. 4(3-0)
Systematic analysis of three or four specific African political systems, with countries chosen on the basis of their contemporary importance and their representatives of the general political problems of the area.

349. Politics of English Speaking Democracies
Spring. 4(3-0)
Political institutions and development of the English speaking nations. Special attention to Great Britain, Canada and the U.S. parliaments, systems, parties, pressure groups, and problems of these societies.

350. The Governments and Politics of Latin America
Winter of odd-numbered years. 4(3-0)
Survey of politics in the area; competing ideologies, types of revolutions, sources of instability, party and interest group developments, relationships between political, social, and economic structures, and relationships between the United States and Latin America.

351. Major Latin American Political Systems
Spring of odd-numbered years. 4(3-0)
Systematic analysis of three or four specific Latin American political systems, with countries chosen on the basis of their contemporary importance and representativeness of the general political problems of the area.

352. Political Institutions and Behavior in East Asia
Winter of even-numbered years. 4(3-0)
China, Japan, and Korea. Political ideas, institutions and practices in societies of East Asia. Dynamics of political organization; role of competing ideologies and systems of behavior; interaction of domestic and foreign policies.

353. Political Institutions and Behavior in Southeast Asia
Spring of odd-numbered years. 4(3-0)
Philippines, Indonesia, Malaysia, Thailand, Viet Nam, Cambodia, Laos, Burma.

356. Western European Political Institutions and Behavior
Fall. 4(3-0)
Analysis of parliamentary systems of Britain and selected European countries. Basic institutions, socioeconomic conditions, recruitment of leadership, pressure groups, and party organization and tactics, voting behavior. Policy making, roles of executive, legislature and bureaucracy.

357. European Political Institutions and Behavior
Winter. 4(3-0)
Continuation of 356. Attention to European countries not previously treated. Emphasis on dynamics of political organization and behavior in these societies.

358. Soviet Political Institutions and Behavior
Fall of even-numbered years. 4(3-0)
Study of Soviet society as a political system; its origins, development, institutions, functioning, and trends. Comparisons will be made with other political systems.

359. Eastern European Governments
Winter of even-numbered years. 4(3-0)
Comparative analysis of East-European socialist countries, their political cultures, institutions, problems, policies, and trends of development.
362. **Theory and Practice of Foreign Policy**  
Fall, Spring. 4(3-0)  
Systematic analysis of the dynamics of contemporary world politics. Major theories and concepts of foreign policy-making and international relations. Comparative study of factors shaping foreign policy in various states. Examination of current and recurrent problems.

363. **International Law**  
(463.) Fall, Spring. 4(3-0)  
Origins and development of international law. Legal interstate relationships in terms of peace and war. Recognition of states and governments, diplomatic practice, treaties, war, neutrality.

364. **International Organization**  
(464.) Winter. 4(3-0)  

365. **The United States in World Affairs**  
Winter, Spring. 4(3-0)  
Resources, policies, and role of the United States as a great power. Contemporary United States foreign policy in the key and critical areas of the world. Major factors affecting future course of American foreign policy.

367. **Foreign Policies of Major Powers**  
Winter. 4(3-0)  
Examination of the foreign policies and decision-making processes of major powers, such as the Soviet Union, China, Great Britain, France, Japan, and India. Analysis of their foreign policy goals, the role of ideology, national interest, and institutions.

370. **Classics of Political Thought**  
(470.) Fall. 4(3-0)  
Political ideas of Plato, Aristotle, Cicero, Augustine, Aquinas, and other leading political philosophers of classical Greece, Rome, and Christendom through the medieval period.

371. **Classics of Political Thought**  
(471.) Winter. 4(3-0)  
Political ideas of Machiavelli, Hobbes, Locke, Montesquieu, Rousseau, and other leading political philosophers whose works are fundamental in understanding such modern concepts as sovereignty, the state, freedom, and power.

372. **Classics of Political Thought**  
(472.) Spring. 4(3-0)  
Political ideas of Burke, Bentham, Hegel, Mill, Marx, and other leading political and social philosophers whose works underlie such modern political ideologies as liberalism, socialism, and conservatism.

375. **Theory and Practice of International Communism**  
Winter, Summer. 4(3-0)  
Development of Marxism revolutionary doctrine from Marx to the present day. Critical analysis of the principal ideas and their interrelationship. Conflicts between different schools or factions within the Marxist movement.

376. **Theory and Practice of International Communism**  
Spring. 4(3-0)  
History, organization, and policies of the Communist International, its auxiliary organizations, and the parties composing it. Relationship of the aims and policies of various communist parties to the national interest and foreign policy of the U.S.S.R.

377. **American Political Thought**  
Fall. 4(3-0)  
Colonial times to the Civil War. Roger Williams, Thomas Jefferson, John Adams, and John C. Calhoun will be discussed in the context of major political issues.

378. **American Political Thought**  
Winter, Summer. 4(3-0)  
Civil War to present. Henry George, Edward Bellamy, Thorstein Veblen, and John Dewey will be discussed in the context of major political issues.

380. **Foundations of Modern Political Theory**  
(210.) Winter, Spring. 4(3-0)  
Major ideas in the social sciences which have been or may be utilized in development of systematic theories of political institutions and behavior.

381. **Foundations of Modern Political Theory**  
(211.) Fall, Spring. 4(3-0)  
Continuation of 380.

389. **Survey of Sub-Saharan Africa**  
For course description, see Interdisciplinary Courses.

390. **Survey of Sub-Saharan Africa**  
For course description, see Interdisciplinary Courses.

404. **Selected Aspects of State and Local Government**  
Fall, Winter, Spring, Summer. 5(3-0)  
May re-enroll for a maximum of 15 credits. Political science seniors or approval of department. Covers different subjects at different times such as community decision making, metropolitan problems, and intergovernmental relations.

415. **Advanced Seminar in Policy and Bureaucracy**  
Fall, Spring. 5(3-0)  
Political science seniors or approval. Special aspects of public administrative processes and organization, with special reference to particular policy areas and the policy process.

420. **Judicial Policy Making and Behavior**  
Fall, Winter, Spring, Summer. 5(3-0)  
Political science seniors or approval of department. Analysis of policy making by judicial systems. Research theory and methods in judicial behavior. Socialization of judges, and the relationship between judicial attributes, and judicial ideologies and attitudes and values.

430. **Seminar in Political Organization and Behavior**  
Fall, Winter, Spring, Summer. 5(3-0)  
May re-enroll for a maximum of 15 credits. Political science seniors or approval of department. Covers different subjects at different times such as legislative behavior, electoral behavior, and public opinion.

454. **Special Topics in Comparative Politics**  
Fall. 5(3-0)  
May re-enroll for a maximum of 15 credits. Political science seniors or approval of department. Comparative analysis of various topics, such as political recruitment, elites, urbanization, and totalitarian systems.
837. Psychological Aspects of Politics
Winter, Spring. 4(3-0) Interdepartmental with the Psychology Department. Relevance of psychological concepts, theories and methods for the study of political institutions, organizations and behavior.

838. Interdisciplinary Seminar on Africa
For course description, see Interdisciplinary Courses.

840. Proseminar in American Politics
Winter. 4(3-0) Basic literature and concepts in American politics and critical examination of approaches and methods.

850. Proseminar in Comparative Politics
Winter. 4(3-0) May re-enroll for a maximum of 12 credits. Developments in comparative politics and critical examination of its methods, approaches, and purposes.

860. Proseminar in International Relations
Fall, Spring. 4(3-0) International relations as a field of graduate study. Special attention to methods, major substantive problems, and principal bibliography.

860s. Proseminar in Political Thought
Fall. 4(3-0) Selected classic of political thought and some of the significant ways of approaching the literature. Major political concepts in the ancient and modern literature, and contemporary bibliography in political thought.

894. Field Experience Practicum
Fall, Winter, Spring, Summer. 4 to 12 credits. May re-enroll for a maximum of 12 credits. Graduate students; approval of Program Guidance Committee. Participatory observation of the administration of public policy in governmental organizations. Faculty supervision is provided to ensure both the practical and scholarly experience. Agency subject to guidance committee approval.

999. Research
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

901. Problems in the Scientific Study of Politics
Fall of even-numbered years. 4(3-0) Humanistic and scientific approaches to the study of political science and their effects on the discipline today. Emphasis on the relations between normative and empirical problems and on the methods of inquiry most appropriate to political science.

903. Research Methods in Political Science
Winter. 4(3-0) Introductory statistics or approval of department. Study of the design and execution of research in politics, including the use of existing data and gathering of data in the field. Special attention given to the problems of cross-cultural research.

911. Theories of Administrative Organization
Fall of odd-numbered years. 4(3-0) Analysis of some recent contributions by the behavioral sciences to formal organizational theory.

914. Comparative Public Administration
Winter of odd-numbered years. 4(3-0) Comparative study of the administrative systems of major nations. Analysis of the manner in which these patterns have been transplanted into dependent and developing countries and of the subsequent modifications of these patterns. Social and cultural setting of administration.

921. Judicial Systems
Winter of even-numbered years. 4(3-0) Structure and functions of judicial systems, including both American state and federal courts and those of other states. Interrelationships between courts, administration of judicial bureaucracies (supporting administrative personnel as well as judges) and analysis of judicial decision-making processes.

922. Judicial Behavior
Fall of even-numbered years. 4(3-0) Design in which these patterns have been transplanted into dependent and developing countries and of the subsequent modifications of these patterns. Social and cultural setting of administration.

923. Judicial Decision Making
Spring of even-numbered years. 4(3-0) Comparative survey of substantive findings of the empirical studies in judicial attitudes, ideologies, values and decision-making behavior. Contributions of other social sciences to the description of decision-making processes, and to the construction of systematic theories and models.

931. Political Behavior
Fall of even-numbered years. 4(3-0) Role of the judiciary as policy maker in legislative reapportionment, racial integration, socialism in public education or other issues. Interrelationships among judges and chief executives, legislatures, administrators, political parties and interest group leaders. Connections between legal concepts of judicial review and of judicial activism and restraint are examined as they relate to theories of representation.

932. Legislative Process
Spring of even-numbered years. 4(3-0) Operation of interest groups, sociopolitical movements, cliques, and juntas. Interests and ideologies underlying these groups and channeling of their demands into the political system. Basis, growth, and internal politics of political groups and movements and their relation to formation of public policy and governmental institutions.

933. Political Parties
Fall of odd-numbered years. 4(3-0) Operation of political parties in the political system. Relationship between party organization, electoral system, and the recruitment and advancement of political leaders. Interaction between parties and other political groups.

934. Voting Behavior, Political Attitudes and Public Opinion
Spring of odd-numbered years. 4(3-0) Study of the voting behavior of electorates and decision-making processes of the political attitudes, popular voting, and public policies.

941. Metropolitan Area Government and Politics
Fall of odd-numbered years. 4(3-0) Core city and suburbia, issues and policies resulting from rapid urbanization, causes and effects of suburban-urban conflicts, the search for decision-making machinery in metropolitan areas.

942. Federalism and Intergovernmental Relations
Winter of odd-numbered years. 4(3-0) How federal systems originate and are maintained; patterns in allocations of power between national and state levels; the political processes involved in intergovernmental relations, cooperative federalism; trends in American federalism.

943. Community Decision Making
Winter of even-numbered years. 4(3-0) Discussion and critique of the power structure literature; emphasis on methods of studying community elites.

951. Comparative Political Systems
Winter of odd-numbered years. 4(3-0) May re-enroll for a maximum of 12 credits. Comparative analysis of those characteristics of human societies which affect political institutions and activity. Useful analytical methods, the identification of significant variables, the analysis of interaction systems and the explanation of differences and similarities between political systems.

952. Political Change
Winter of even-numbered years. 4(3-0) Comparative analysis of revolutionary and evolutionary changes of political systems, both modern and developing. Methods of analysis, causes and consequences of change, and typical developmental sequences.

953. The Politics of International Relations
Winter of odd-numbered years. 4(3-0) May re-enroll for a maximum of 12 credits. Approval of department. Analysis in depth, using comparative theory and method, of political systems and changes in selected administrative or cultural areas.

954. Comparative Analysis of Institutions and Processes
Fall of odd-numbered years. 4(3-0) May re-enroll for a maximum of 12 credits. Approval of department. Comparative analysis of specific institutions, or processes in different cultures, e.g., comparison of legislatures, political recruitment, types of totalitarian systems, political impact of urbanization in a number of different areas or countries.

961. History and Contemporary Theory of General International Relations
Winter of even-numbered years. 4(3-0) Examination of substantive problems of politics and public order in the world as a whole.

982. Contemporary International Organizations
Spring of odd-numbered years. 4(3-0) Examination of the functions of international law and organizations in international politics.

983. Foreign Policies of the Major Nations and Decision Making Processes
Spring of odd-numbered years. 4(3-0) Examination of foreign policies and decision making processes of selected nations—the role of ideology, national interest, and institutions.
964. Selected Topics in International Relations
Winter. 4(3-0) May re-enroll for a maximum of 12 credits. Approval of department.
Intensive analysis of special problems and issues such as international political and economic development, international and intercultural communications, international violence, etc.

971. Classical and Medieval Political Thought
Spring of odd-numbered years. 4(3-0) Systematic analysis of selected works of such classical political philosophers as Plato, Aristotle and others whose work provides both an understanding of the premodern political perspective of the Western World and the philosophical underpinnings of modern political thought.

972. Modern Political Thought
Spring of even-numbered years. 4(3-0) Systematic analysis of selected works of such writers as Machiavelli, Hobbes, Locke, Montesquieu, Hume, Rousseau, Burke, Mill, Marx or other political philosophers. Special attention is given to those writers or works relevant to understanding the philosophical foundations of contemporary social science and ideology.

973. American Political Thought
Fall of odd-numbered years. 4(3-0) Study of the thinkers and social forces which have shaped American political ideology.

974. Contemporary Political Ideas in Selected Areas
Fall of even-numbered years. 4(3-0) May re-enroll for a maximum of 12 credits. Approval of department. Extensive analysis of selected aspects of current political thought in selected areas, including the developing nations.

990. Seminar
Fall, Winter, Spring. 5 to 15 credits. May re-enroll for a maximum of 45 credits. Intensive training in individual or group research. Sections of the seminar may involve one or more doctoral fields and the credit earned will vary accordingly.

993. Readings in Political Science
Fall, Winter, Spring, Summer. Variable credit. May re-enroll for a maximum of 10 credits.

999. Research
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

PORTUGUESE
See Romance Languages

POULTRY SCIENCE

College of Agriculture and Natural Resources

224. Poultry Science and Practice
Winter, Spring. 4(3-2)
Poultry in the agricultural economy; fundamental principles of anatomy, physiology and body systems; diseases, their prevention and control; management practices and procedures in producing poultry meat and eggs.

301. Special Problems
Fall, Winter, Spring, Summer. Variable credit. May re-enroll for a maximum of 6 credits. Approval of department.

411. Poultry Seminar
Fall. 1(2-0) May re-enroll for a maximum of 3 credits. Special articles and reports.

413. Avian Nutrition

424. Poultry Breeding and Incubation
Winter of even-numbered years. 4(3-2) ANS 461. Genetic and biological factors affecting economic characteristics including egg production, egg size, hatchability, growth and viability and factors involved in the hatching of eggs.

435. Poultry Industry-Management and Marketing
Spring of even-numbered years. 5(4-2) 224 or approval of department. Practical application of economic and management principles to commercial poultry enterprises.

440. Avian Physiology
Spring of odd-numbered years. 4(3-2) Approval of department. Interdepartmental and interdisciplinary course with the Physiology Department. A survey of the systemic physiology of birds emphasizing digestion, metabolism, the endocrine, and reproductive systems.

454. Avian Disease Prevention and Treatment
Winter of even-numbered years. 4(3-2) MPH 200 or B S 212 or approval of department. Microbiological concepts. Causes, preventive and therapeutic methods for poultry diseases, laboratory diagnosis and experiments.

Winter. 3(4-0) For course description, see Interdisciplinary Courses.

500. Advanced Poultry—Special Problems
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

501. Advanced Poultry Seminar
Fall, Winter, Spring. 2 credits. May re-enroll for a maximum of 6 credits. Approval of department.

599. Research
Fall, Winter, Spring, Summer. Variable credit. Approval of department.

PSYCHIATRY

College of Human Medicine
College of Osteopathic Medicine

501. Introduction to Clinical Psychiatry
Fall. 1 credit.
Basic background concerning psychiatric syndromes. Designed to follow psychiatric input into human development sequences, doctor-patient interviewing and focal problems. Provides preparation for elective (psychiatry) courses and psychiatric clerkship.

596. Special Problems in Psychiatry
Fall, Winter, Spring, Summer. 1 to 6 credits. May re-enroll for a maximum of 12 credits. Human Medicine students; graduate students with approval of department.
Each student will work under direction of a staff member on an experimental, theoretical or applied problem.

501. Medical Psychopathology (508)
Fall, Winter, Spring. 1 to 3 credits. H M 501; nonmedical students: approval of instructor. Psychiatric nosology, diagnosis and medical psychopathology. Interview techniques, diagnosis of common psychiatric disorders, psychopathology and its behavior disorders encountered in the practice of medicine.

508. Psychiatry Clerkship
Fall, Winter, Spring. 1 to 17 credits. May re-enroll for a maximum of 45 credits. H M 501, primary clerkship. Approval of department.
A program designed to permit the student to become familiar with and participate in the contemporary practice of psychiatry utilizing supervised in-patient, out-patient, emergency and community mental health services.

PSYCHOLOGY

College of Human Medicine
College of Osteopathic Medicine
College of Social Science

107. Motivation and University Life
Fall, Winter, Spring. 2(3-0) For Freshmen and Sophomores with a 2.5 grade point average or lower; approval of department, referred by Counseling Center and approval of department.
Seminars on topics of current interest relating psychological principles to problems of university life. Topics include behavior motivation, attitudes and values, perception of self and others, and learning processes.

160. Introductory Psychology: Social-Personality
Fall, Winter, Spring, Summer. 3(3-0)
The complex functioning of the individual in his social environment will be considered. Topics include: socialization, interpersonal perception, group processes, motives, emotions, attitudes, and values. Students may participate in psychological experiments outside of class.

167. Topics in Introductory Psychology: Social-Personality
Fall, Winter, Spring. 2(2-0)
160 must be elected concurrently.
A small-enrollment discussion class for students enrolled in 160 who are interested in discussing a particular psychological topic in depth.