812. Advanced Comparative Physiology
Fall, 4(3-4) B S 212 or approval of department.
A study of organ function in a wide range of groups of animals with emphasis on evolutionary relationships and physiological basis of ecology.

815. Sensory Physiology
Winter of even-numbered years, 3(2-2) Not open to students with credit in 332. Approval of department. Physiology of sense organs for students in physiology, psychology and others.

819. 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.

835. Neurophysiology
Winter of odd-numbered years. 3(1-4) Approval of department. Functions and properties of the peripheral and central nervous systems.

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

837. Radiobiology
(430.) Fall, 3(3-0) Approval of department. Application of radioactive tracer techniques to study of biological function. Determination of turnover rates and tissue constituents by isotope dilution. Control of radiation hazards.

859. Analysis of Hormone Action
Spring, 4(4-0) ZOL 317, or approval of department. Interdisciplinary with end 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.

870. 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.

890. 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
Winter, 4(3-2) 502, approval of department. Development of ideas leading to our present state of knowledge in respiration.

919. Cardiovascular System
Fall, Winter, Spring, Summer. 4(3-0) 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.

950. 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

PLS

College of Social Science

100. American National Government
(200.) 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) Not open to majors.
Comparison of political systems in western and non-western nations.

160. International Relations
(260.) 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 Isms
Fall, Winter, Spring, Summer. 4(3-0) Introduction to basic contemporary political ideologies; theoretical foundations of democracy, socialism, communism, political elitism, 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) 260.
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.

291. Methods of Political Research
Winter, Spring, 4(3-0) 260.
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. Politics 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 and 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. Constitutional Politics
Winter, Spring, 4(3-0) The political behavior of Supreme Court justices and their policy making. Focus on Court's role in formulating national policy, selection, and jurisdictional interactions among the national, state, and local governments.

322. Constitutional Politics
Spring, Summer, 4(3-0) Continuation of 321, with focus on public policy pertaining to civil rights and liberties, political freedom and social equality.

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)
Origins, structure, and functions of political
332. Interest Groups and Political Movements

Winter. 4(3-0)


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, comparison of mass and elite attitudes and behavior; representation of public opinion in the political system.

335. Comparative Parties and Pressure Groups

451. Spring. 4(3-0)

Dynamics of political party and pressure group behavior in selected political systems. Comparative analysis of organization, ideologies, membership, leadership, tactics, power and influence of parties.

336. Black Political Movements

Fall. 4(3-0)

Examination of attempts by 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. Contemporary Race and Politics in America

Winter. 4(3-0) seniors.

Focuses on race, black protest and politics in contemporary America. Examination of recent attempts by black Americans to influence public policy on race-related questions at both national and local levels of government.

340. Theories of Comparative Politics

Fall, Winter, Spring. 4(3-0)

Alternative methods for comparative cross-cultural analysis of political systems. Political structures, functions, cultures, stability and change. The problem of equivalence.

341. The Politics of Developing Areas

452. 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 dynamics 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)

Peoples 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. Analyses of sociopolitical 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. The 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. parliamentary 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 revolution, sources of instability, party and interest group development, 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 even-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 societies. Basic institutions, socioeconomic conditions, recruitment of leadership, party and 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 politics. 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 time of peace and war; neutrality.

364. International Organization

484. Winter. 4(3-0)

Introduction to international organizations. Early proposals, records of past experiments. League of Nations; its significance, reasons for its decline. The United Nations, its organization, functions, and problems.

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 and social philosophers of classical Greece, Rome, and Christianity 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 communism.

375. Theory and Practice of International Communism

Winter, Summer. 4(3-0)

Development of Marxist revolutionary doctrine from Marx to the present day. Critical analysis of the principal ideas and their inter-relationships. Conflicts between different schools or factions within the Marxist movement.
911. Theories of Administrative Organization
Fall of odd-numbered years. 4(3-0)
Analysis of some recent contributions by the behavioral sciences to formal organization 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 developed 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 countries. 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 and execution of research in judicial decision making. Projects include both individual and group work, and field as well as library research. Critical evaluation of reports of other research investigations with which seminar projects articulate.

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.

924. Judicial Policy Making
Fall of odd-numbered years. 4(3-0)
Role of the judiciary as policy maker in legislative arrogations, social integration, secularism in public education or other issues. Interrelationships among judges and chief executives, legislators, administrators, political party 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.

931. Political Groups and Movements
Fall of even-numbered years. 4(3-0)
Operation of interest groups, sociopolitical movements, cliques, and fusions. Intentions 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.

932. Legislative Process
Spring of even-numbered years. 4(3-0)
Behavior of legislative bodies in the context of the political system, including other governmental institutions and the legislative roles of legislators and legislative decision making.

933. Political Parties
Fall of odd-numbered years. 4(3-0)
Operation of political parties in the political system. Relationship between parties and the electorate, constitutional and government functions, 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 bodies; of political attitudes and opinions; and of the relationships among 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 politics resulting from rapid urbanization, causes and effects of suburbanization, city-fringe friction, 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)
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 patterns 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 Selected Areas
Winter of even-numbered years. 4(3-0)
May re-enroll for a maximum of 12 credits. Analysis in depth, using comparative theory and method, of political systems and changes in selected administrative or cultural areas.

954. Comparative Selected Analysis of Institutions and Processes
Fall of odd-numbered years. 4(3-0)
May re-enroll for a maximum of 12 credits. 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 and of World Order
Winter of even-numbered years. 4(3-0)
Examination of substantive problems of politics and public order in the world as a whole.

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

963. Foreign Policies of the Major Nations and Decision Making Processes
Spring of even-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.

965. Systematic analysis of selected works of such classical political philosophers as Plato, Aristotle and others whose work provides both an understanding of the pre-modern political perspective of the Western World and the philosophical underpinnings of modern political thought.

971. Classical and Medieval Political Thought
Spring of even-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 pre-modern 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.

990. Seminar
Fall, Winter, Spring. 3 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.

PORTUGUÊS
See Romance Languages