### 841. Advanced Endocrine Physiology and Pharmacology

Fall. 4(4-0) Interdepartmental with Animal Science, Pharmacology and Toxicology, and

Psychology.
P: BCH 461, PSL 432. R: Open only to graduate students in the Colleges of Human Medicine, Osteoners, Natural Sci. pathic Medicine, Veterinary Medicine, Natural Science, and Agriculture and Natural Resources. Basic and advanced concepts of endocrine and reproductive physiology and pharmacology. QA: PSL 841

#### 890. Readings in Biophysics

Fall, Spring, Summer. 3 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Approval of department. Individual study of membrane phenomena or other topics in biophysics.

#### Master's Thesis Research 899.

Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 24 credits in all enrollments for this course.

QA: PSL 899

QA: PSL 890

# Cardiovascular System

Fall. 3(3-0) A student may earn a maxi-mum of 9 credits in all enrollments for this course. R: Approval of department.

Classical and current literature on the physiology of the heart, circulation or microcirculation. QA: PSL 919

950. Topics in Physiology

Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 9 credits in all enrollments for this course.

R: Approval of department.

Classical and modern concepts in selected areas of physiology. QA: PSL 950

980. Problems in Physiology
Fall, Spring, Summer. 1 to 4 credits. A
student may earn a maximum of 8 credits in all enrollments for this course. R: Approval of department. Individual research problems in physiology. QA: PSL 980

### 999. Doctoral Dissertation Research

Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 99 credits in all enrollments for this course.

QA: PSL 999

### POLITICAL SCIENCE PLS

# Department of Political Science College of Social Science

### 100. Introduction to American National Government

Fall, Spring, Summer. 3(3-0) The policymaking process in national government, with emphasis on political participation, the presidency, Congress, Supreme Court, bureaucracy, and civil rights and civil liberties. QA: PLS 100

# Introduction to Comparative Politics

Fall, Spring Summer. 3(3-0)
Comparative analysis of political systems in first, second, and third-world countries. Alternative methods for comparative cross-cultural analyses of political systems. QA: PLS 140

### 160. Introduction to International Re lations

Fall, Spring, Summer. 3(3-0) R: Not open to students with credit in MC 220 or MC 221.

Dynamics of conflict and cooperation. Processes of foreign policy decision making. Major international economic issues. Basic future trends. Primary analytical approaches for studying world politics. QA: PLS 160

### 170. Introduction to Political Philosophy

Fall, Spring, Summer. 3(3-0)
Basic questions of political philosophy as considered from ancient to modern times. Primary focus on the origins, defense, and radical critiques of modern liberal democracy. QA: PLS 170

# Introduction to Political Science

Fall, Spring, Summer. 4(4-0)
The science of politics. Theory construction, model building, empirical testing, and inductive inference. Examples from American, international and comparative politics. QP: PLS 290 QA: PLS 200

### 201. Introduction to Methods of Political Analysis Fall, Spring, Summer. 4(4-0)

P: PLS 200.

Philosophy of social science. Principles of research design, measurement, hypothesis testing, measures of association, cross tabulations, and regression analy-

QP: PLS 200 QA: PLS 290, PLS 291

### 301. American State Government

Spring. 3(3-0)

P. PLS loo.

Structure and processes of American state government. Interstate differences. Constitutions, elections, political parties, interest groups, and intergovernmental relations. Policy focus on education, welfare, and criminal justice. QP: PLS 100 QA: PLS 301

### 310. Public Bureaucracy in the Policy Process

Fall, Spring. 3(3-0)

P. PLS 100.

Role of public bureaucracy in the U.S. Theories of administrative behavior and the impact of hierarchy on policymaking. Relations with the president, Congress, interest groups, and the public. Administrative functions, responsiveness, and ethics. QP: PLS 100 QA: PLS 310

### 313. Public Policy Analysis

Fall, Spring, Summer. 3(3-0)
P: PLS 100, EC 201 or EC 202 or approval of department.

Political and economic concepts for evaluating the consequences of government decision making. Issues of problem identification, policy adoption, and implementation affecting program evaluation. QP: PLS 100 QA: PLS 313

### 320. The American Judicial Process

Fall, Spring. 3(3-0)
P: PLS 100. R: Not open to freshmen and sophomores.
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 the adjudication process. QP: PLS 100 QA: PLS 320

# American Constitutional Law

Fall, Spring. 3(3-0)
P: PLS 100. R: Not open to freshmen and sophomores. U.S. Supreme Court policy making and its effect on issues of current importance, including First Amendment freedoms, due process, race relations, sex discrimination, and privacy. QP: PLS 100 QA: PLS 321

# American Legislative Process Spring. 3(3-0)

P. PLS 100.

The design of Congress. Rules, structures, and procedures affecting policy making. Impact of regular elections on legislative behavior.

QP: PLS 100 QA: PLS 324

### 325. American Executive Process

Fall. 3(3-0)

P: PLS 100. Role of the president in the U.S. political system. Constitutional questions, presidential selection, presidential power, interbranch relations, and presidential

policy making. QP: PLS 100 QA: PLS 325

# Political Parties and Interest Groups Spring of odd-numbered years, 3(3-0)

P: PLS 100.

Origins, structure, and activities of political parties. Role of parties and interest groups in elections and in government. Internal politics of parties and of private associations.

QP: PLS 100 QA: PLS 331, PLS 332

# Political Socialization and Public Opinion

Fall, Spring. 3(3-0)

P: PLS 100.

Role of public opinion in political systems and its impact on the political process. Group differences, political socialization, development and change of political attitudes and behavior patterns. Methods of studying public opinion. QP: PLS 100 QA: PLS 333, PLS 339

### 334. Campaigns and Elections Fall, Spring. 3(3-0)

P: PLS 100.

The nominating process, Recruitment of candidates and the formation of electoral coalitions. Analysis of election results. Trends in electoral support for officeholders and parties. QP: PLS 100 QA: PLS 334

### 342. Comparative Political Economy

Spring. 3(3-0) P: PLS 140, EC 201 or EC 202.

Democratic politics and the linkages among political, social, and economic conceptions of equality in developed and developing countries. QP: PLS 140 QA: PLS 338

### 344. Politics in the Third World

Fall, Spring. 3(3-0)

P PLS 140.

Politics of modernization, democratic and authoritarian regimes, and class and ethnicity in developing countries

QP: PLS 140 QA: PLS 344

### African Politics 351.

Fall. 3(3-0)

P: PLS 140.

Political institutions and governmental processes in Sub-Saharan Africa. QP: PLS 140 QA: PLS 347

# Politics of Asia

Fall of even-numbered years, Spring of odd-numbered years, 3(3-0) P. PLS 140.

Political institutions, political actors, and policy-making processes in selected Asian countries. QP. PLS 140 QA: PLS 354

### West European Politics 356.

Fall, , Summer. 3(3-0) P. PLS 140.

Governmental institutions and processes, political socialization, and political culture in Western Europe, including Great Britain.

QP: PLS 140 QA: PLS 356

### Politics of English Speaking 357. Democracies

Summer. 3(3.0) Given only in London,

England. P. PLS 140 or approval of department. Political instituttions, political actors, and political culture in Britain, Australia, or Canada. QP: PLS 140 QA: PLS 349

# Politics of the U.S.S.R. and Its Successor States 358.

Spring. 3(3-0)

P: PLS 140.

Political history, communist ideology, state institu-tions and political processes in the Soviet Union and its successor states QP: PLS 140 QA: PLS 358

### 361. International Political Economy

Fall. 3(3-0)
P: PLS 160 or MC 220; EC 201 or EC 202. R: Not open to students with credit in MC 221. Introduction to the politics of international economics. Theories of international political economy. QP: PLS 160, EC 201, EC 202

362. Foreign Policy

Spring of even-numbered years. 3(3-0)
P: PLS 160 or MC 220 or MC 221.
Theories of foreign policy making. Factors shaping foreign policy in various countries. Current and recurrent problems in foreign policy making. QP: PLS 160 QA: PLS 362, PLS 367

# International Political Conflict

Fall of even-numbered years. 3(3-0) P: PLS 160. R: Not open to students with credit in MC 220.

Conflict, war, and conflict resolution in the international system. QP: PLS 160

### International Organization and 364. Cooperation

Spring. 3(3-0)
P: PLS 160 or MC 220 or MC 221. R: Not open to students with credit in MC 322.
History and evolution. League of Nations, United

Nations. Growth and role of regional, specialized, and non-governmental organizations. Impact of new states. Politics, functions, and problems. QP: PLS 160

# Classical Political Philosophy

Fall, Spring. 3(3-0)
P: PLS 170. R: Not open to students with credit in MC 270.

Examination of major themes in classical political philosophy as represented by such Greek and Roman philosophers as Plato, Aristotle, or Cicero. QP: PLS 170 QA: PLS 370, PLS 371

# Modern Political Philosophy

Fall, Spring. 3(3-0)

P: PLS 170. Major themes of modern political philosophy as represented by such thinkers as Machiavelli, Hobbes, Rousseau, Marx, and Nietzsche. QP: PLS 170 QA: PLS 372

# American Political Thought

Fall of even-numbered years. 3(3-0)
P: PLS 170. R: Not open to students with credit in MC 271.

Major themes of American political thought. Topics may include the founding of the U.S., naturalism, race relations, or progressivism. QP: PLS 170 QA: PLS 377, PLS 378

# Collective Decision Making in Politics Fall. 3(3-0)

P: PLS 200.

Formal models of collective decision making in polirish may include social choice theory, decision making under uncertainty, public choice theory and rent-seeking, spatial models, principal-agent models, or dynamic models. QP: PLS 200

### Game Theory and Politics 382.

Spring. 3(3-0) P: PLS 200.

Game theory models of politics. Topics may include non-cooperative two-person games, extensive form games, asymmetric information games, equilibrium refinements, and bargaining. Empirical and experimental tests of formal models. QP: PLS 200

### 420. American Politics and Public

Administration
Fall, Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this

course. P: PLS 301 or PLS 310 or PLS 313 or PLS 320 or PLS 321 or PLS 324 or PLS 325 or PLS 331 or PLS 333 or PLS 334. R: Not open to freshmen and sopho-

Capstone course in one subfield of either American politics or public administration. Potential topics include legislative behavior, policy analysis, bureaucratic politics, electoral politics, and the determinants of voting behavior.

440. Comparative Politics
Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course.
P: PLS 342 or PLS 344 or PLS 351 or PLS 354 or PLS 356 or PLS 357 or PLS 358. R. Not open to freshmen and sophomores.

Capstone course in one subfield of comparative politics. Potential topics include political development, urbanization, role of public opinion, human rights, and women in development. QA: PLS 454

### 460. International Relations

Fall, Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course.

P: PLS 361 or PLS 362 or PLS 363. R: Not open to freshmen and sophomores.

Capstone course in one subfield of international relations. Potential topics include international conflict, foreign policy, dispute resolutions, and international political economy. QA: PLS 469

461. Refugees, Displaced Persons, Exiles
Spring, 3(3-0)
P: PLS 342 or PLS 344 or PLS 351 or PLS 354 or
PLS 356 or PLS 358 or PLS 361 or PLS 362 or PLS
363 or PLS 364. R: Not open to freshmen and sopho-

Political refugees caused by nationalism, social change, persecution, war, and tyranny. Definition, analysis, history, causes, and consequences. Political, legal, sociological, psychological, economic, and historical problems. International aid. QA: SSC 447, SSC 448

### Political Thought

Fall of odd-numbered years, Spring of odd-numbered years, 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this

P: PLS 371 or PLS 372 or PLS 377. R: Not open to freshmen and sophomores.

Capstone course in one area of political thought. Potential topics include liberty, justice, equality, Aristotle, Plato, Locke, Hobbes, and Mill.

# Formal Theories of Politics

Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. P: PLS 381 or PLS 382, R: Not open to freshmen and sophomores.

Capstone course in one subfield of formal theory. Potential topics include game theory, decision theory, and dynamic modeling. Approaches may be either theoretical or applied. QP: PLS 200

### 490H. Honors Internship

Fall, Spring, Summer. 3 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Approval of department.

Supervised participation in research or teaching. QA: PLS 490H

### Senior Honors Thesis 491H.

Fall, Spring, Summer. 3 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course.

R: Open only to seniors in the Political Science Honors Program. Approval of department. Original research and writing under direction of a

faculty member. QA: PLS 491H

# Field Experience in Political Science

Fall, Spring, Summer. 3 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Approval of department.

Supervised field work in several areas of study. It may involve internships with non-profit organizations or public agencies, or participation in survey research, political campaigns, or petition drives. QA: PLS 494

### 495. Independent Study

Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Approval of department.

Individual research and reading supervised by a faculty member. QA: PLS 495

### 800. Proseminar: Political Theory and Research Methods

Fall. 3(3-0)

Issues in the accumulation of knowledge about political phenomena. Approaches to the verification of hypotheses. Alternative theoretical conceptions in study of politics.

## Quantitative Techniques in Public Policy and Political Science I Fall. 3(3-0)

R: Open only to graduate students in Political Science, Political Science-Urban Studies, or Public Administration or approval of department.

Foundations of research methodology. Applications of data in public policy and political science. Individual research projects.

# Quantitative Techniques in Public Policy and Political Science II 802.

Spring. 3(3-0)
P: PLS 801. R: Open only to graduate students in Political Science, Political Science-Urban Studies, or Public Administration or approval of department. Linear and nonlinear models applied to public policy and political science data. Individualized research

### 810. Proseminar in Public Administration

Fall. 3(3-0)

projects.

Expertise and bureaucratic power. Relations with political institutions. Role of public employees, the politics of administrative processes, and administra-QP: PLS 810A QA: PLS 810A

### 811. Proseminar in Policy Analysis Spring. 3(3-0)

P: PLS 810.

Economic and political techniques for analyzing public policies. Utility and limitations of these techniques and their use and abuse in public policy analysis. QP: PLS 810A QA: PLS 810B

### 812. Theories of Administrative Organization

Fall. 3(3-0)

Decisionmaking, hierarchy, control, participation, and the political context of public organization. QA: PLS 911

# Politics of Public Finance

Spring, 3(3-0)
P: PLS 811. R: Open only to graduate students in
Public Administration or Political Science, or approval of department.

Survey of the literature on the politics of public finance. Resource management in the public sector. Taxation and other revenue sources. Regulation, income redistribution, and fiscal federalism.

# Public Personnel Administration

Fall of odd-numbered years. 3(3-0) Historical development and current practices of personnel management in government. Employee recruitment and selection, affirmative action, labor relations, and employee development. QA: PLS 812

# Administrative Law

Fall of even-numbered years, 3(3-0) Administrative law in public agencies. Rulemaking and adjudication. The Administrative Procedures Act of 1946. Political control by the executive and legisla-tive branches. Judicial review of agency actions.

# Proseminar on the Non-Profit Sector

Spring. 3(3-0)

Political, economic, historical, and social perspectives. Establishment and operation of non-profit organizations.

### Politics of Public Budgeting 818.

Spring. 3(3-0) P: PLS 811. R: Open only to graduate students in Public Administration or Political Science or approval of department.

Public budgeting and public expenditure. Historical, institutional, and policy perspectives. Theory, practice, and empirical analysis.

QA: PLS 815

### 820. Proseminar in American Politics

Fall. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. The major subfields of American politics. Political behavior within institutions and mass political behav-

QA: PLS 840

#### 821. State Government and Politics

Spring of even-numbered years, 3(3-0) Research literature on state government. Interstate differences. Parties, elections, governors, state legislatures, bureaucracy, interest groups, and policy outcomes. QA: PLS 944

### 822. **Urban Government and Politics**

Spring of odd-numbered years. 3(3-0)
Research literature on urban government. Structure, process, and policy issues. Intergovernmental relations and fiscal interdependencies. QA: PLS 943

# Proseminar in Comparative Politics

Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. Research literature in a subfield of comparative politics. Methods, approaches, and purposes. QA: PLS 850

### 85 L Development Administration

Fall of even-numbered years. 3(3-0)
Design and organization of policies, programs, and projects for socioeconomic development in poor countries. Effects of politics and culture on organizational performance. Public management process from planning to evaluation. QA: PLS 916

# Comparative Public Administration Fall of odd-numbered years, 3(3-0) 852.

Administrative systems in industrialized countries. Historical origins, personnel recruitment, bureaucracy-parliament interactions, planning and market regulation, public spending, and public outcomes. QA: PLS 914

### 853. Political Economy of Development Policy

Spring of even-numbered years. 3(3-0)
Introduction to the political economy of Third World development. Decision making and economic policy.

### 855. Agrarian Politics in the Third World

Fall of even-numbered years. 3(3-0) Rural development in developing countries. The sociology and political economy of rural societies in the Third World. Policies for promoting agricultural development.

# Proseminar in International

Fall of even-numbered years. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course.

Theoretical perspectives and analytical approaches to a subfield of international relations. QA: PLS 860

### International Political Economy 861.

Fall of odd-numbered years. 3(3-0) P: EC 340 or approval of department. Politics of the international economy. Trade issues. International finance. North-South interactions.

# Proseminar in Political Thought

Fall of even-numbered years. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. Study of a major political thinker. QA: PLS 870

880. Proseminar in Formal Theory
Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. R: Approval of department.

R: Approval of department.

Formal models in understanding politics. Topics may include game theory, spatial modeling, social choice theory, public choice theory, and dynamic modeling. Theoretical issues and research applications. QA: PLS 880

### Decision Theory for Public Managers 881. Fall. 3(3-0)

R: Open only to graduate students in Public Administration or Political Science, or approval of department. Techniques for improving individual decision making in complex and uncertain public sector environments. Theoretical issues and practical applications.

## Programming for Public Policy Analysis

Spring. 3(3-0)

R: Open only to graduate students in Public Administration or Political Science, or approval of department. Management science techniques for solving complex public policy problems. Applications for public managers and public policy analysts.

# Field Experience Practicum Fall, Spring. 3(3-0)

R: Open only to graduate students in Public Administration or Political Science.

Internships in government, private, and governmentrelated agencies or other approved organizations.

# 895. Degree Project Seminar Spring. 3(3-0)

R: Open only to graduate students in Public Administration.

Research project integrating theory, field experiences, and independent research in public policy and public administration.

## 900 Research Seminar in Political Methodology Spring. 3(3-0) A student may earn a maxi-

mum of 9 credits in all enrollments for this course. P: PLS 802.

Advanced topics in political methodology. Individual research projects.

### 902. Research Seminar in Evaluation Research

Spring. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. P: PLS 802.

Methods and techniques for evaluating the policies and programs of public and non-profit organizations. Individual research projects.

### 903 Policy Analysis Practicum

Fall, Spring. 3 credits. A student may earn a maximum of 9 credits in all enrollments for this course.

P: PLS 811. R: Approval of department.

Field experience in public policy analysis. Work with faculty and public personnel to define and analyze a current public problem.

### 910. Research Seminar in Public Policy and Public Administration

Spring. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. P: PLS 810 or PLS 811.

Specialized topics in public administration or public policy.

## Research Seminar in American Politics

Spring. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. P: PLS 820.

Intensive study of one subfield of American politics. Critical evaluation of the literature.

## Research Seminar in Comparative Politics

Fall of odd-numbered years, 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. P: PLS 850.

Intensive study of one subfield of comparative politics. Critical evaluation of the literature.

## 960. Research Seminar in International

Politics
Spring. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course.
P: PLS 860.

Intensive study of one subfield of international politics. Critical evaluation of the literature.

### 970. Research Seminar in Political Thought

Spring of even-numbered years. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. P: PLS 870.

Intensive study of one subfield of political philosophy.

# Research Seminar in Formal Theory

Fall of odd-numbered years. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. P: PLS 880.

Intensive study of one formal modeling technique used in political science research.

993. Readings in Political Science Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course.

errouments for this course. R: Open only to graduate students in Political Science, Political Science-Urban Studies, or Public Administration or approval of department.

Supervised reading in a subfield of political science, public administration, or public policy.

# **Doctoral Dissertation Research**

Fall, Spring, Summer. 1 to 12 credits. A student may earn a maximum of 24 credits in all

enrollments for this course. R: Open only to doctoral students in Political Science or Political Science-Urban Studies. Approval of department.

# PORTUGUESE

PRT

# Department of Romance and Classical Languages College of Arts and Letters

### 101. Elementary Portuguese I

Fall. 4(4-1)

R: No previous experience in Portuguese or approval of department.

Practice in using and understanding Portuguese to develop listening, speaking, reading, and writing skills. Pronunciation, grammar, vocabulary, and cultural topics.

QA: PRT 101, PRT 102

### 102. Elementary Portuguese II

Spring. 4(4-1)
P: PRT 101 or approval of department.
Further practice in using and understanding Portuguese to develop listening, speaking, reading, and writing skills. Pronunciation, grammar, vocabulary, and cultural topics. QP: PRT 101 QA: PRT 102, PRT 103

201. Second-Year Portuguese I Fall, 4(4-0) P: PRT 102 or approval of department,

Intermediate level review and development of aural comprehension, speaking, reading, and writing skills. Topics in the cultures of the Portuguese-speaking

QP: PRT 103 QA: PRT 201, PRT 202

### 202. Second-Year Portuguese II Spring. 4(4-0)

P: PRT 201.

Further review and development of aural comprehension, speaking, reading, and writing skills. Topics in the cultures of the Portuguese-speaking world. QP: PRT 202 QA: PRT 202, PRT 203

### 290. Independent Study

Fall, Spring. 1 to 4 credits. A student may earn a maximum of 4 credits in all enrollments for

R: Approval of department.

Special projects arranged by an individual student and a faculty member in areas supplementing regular course offerings. OA: PRT 299