Plant Pathology—PLP

402 Biology of Fungi
Fall. 3(2-3) Interdepartmental with Plant Biology. Administered by Department of Plant Biology. P: (BS 110 or BS 111 or PLB 105 or LBS 145 or LBS 148H or LBS 149H) SA: BOT 402
Major groups of fungi: characteristics, habitats, and diversity. Significance of fungi in nature and their economic importance.

405 Plant Pathology
Spring. 3(2-3) P: (BS 110 and BS 111) or (PLB 105 and PLB 106) or (LBS 144 and LBS 145) or (LBS 148H and LBS 149H) and completion of Tier I writing requirement. SA: BOT 405 Not open to students with credit in BOT 407.
Plant diseases and the organisms that cause them. Principles of disease management including application of chemicals, plant breeding, biological control, and genetic engineering.

407 Diseases and Insects of Forest and Shade Trees
Spring. 4(3-3) Interdepartmental with Entomology. Plant Biology. P: (PLB 105 or BS 110 or LBS 144 or LBS 148H and PLB 218 or FOR 204 or HRT 211) and completion of Tier I writing requirement. SA: BOT 407
Diseases, insects, and environmental problems affecting trees in forests, parks, suburbs, and nurseries. Methods of control.

490 Independent Study
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course.
Independent study of plant pathology on a laboratory, field or library research program of special interest to the student.

491 Selected Topics in Plant Pathology
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: (PLP 405 or PLP 407)
Selected topics in plant pathology of current interest and importance.

492 Seminar
Spring. 2(2-0) P: (PLP 498) and completion of Tier I writing requirement. RB: (PLP 405) Capstone course. Experience in scientific writing, oral presentations, professional preparation, and current developments in plant pathology.

493 Professional Internship in Plant Pathology
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to juniors or seniors in the Plant Pathology major. Approval of department, application required. A student may earn a maximum of 6 credits for any or all of these courses: ABM 493, AEE 493, ANR 493, ANS 493, CSS 493, EEP 493, FIM 493, FSC 493, FW 493, HRT 493, PKG 493, PLP 493, PRR 493, and RD 493.
Supervised professional experiences in agencies and businesses related to plant pathology.

498 Undergraduate Research
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 12 credits in all enrollments for this course. P: Completion of Tier I writing requirement. R: Approval of department.
Faculty supervised laboratory. Field research in plant pathology.

810 Current Concepts in Plant Pathology
Spring. 3(3-0) RB: (PLP 405 or PLB 414 or PLB 415) SA: BOT 810
Recent findings in mycology, plant virology, bacteriology, nematology, disease physiology and epidermology.

812 Epidemiology of Plant Diseases
Spring of odd years. 3(3-0) RB: (PLP 810) SA: BOT 812
Populations of plant pathogens within populations of plant hosts as affected by the environment and humans.

820 Plant Reproductive Biology and Polyploidy
Spring. 1 credit. Interdepartmental with Horticulture, Crop and Soil Sciences; Forestry; Plant Biology. Administered by Department of Horticulture. RB: Introductory Genetics and Plant Biology
Genetic processes underlying variations in plant reproductive biology and polyploidy and the utilization of these characteristics in plant breeding.

821 Crop Evolution
Spring of odd years. 1 credit. Interdepartmental with Horticulture; Crop and Soil Sciences; Forestry; Plant Biology. Administered by Department of Horticulture. RB: Introductory Genetics and Plant Biology Cultural and biological aspects of the evolution of domestic plants.

822 Historical Geography of Crop Plants
Spring of odd years. 1 credit. Interdepartmental with Plant Biology; RB: BOT 821 Development and spread of the major crop species.

847 Advanced Mycology
Spring of even years. 4(2-4) Interdepartmental with Plant Biology. RB: (BOT 402) Systematics, identification, physiology, genetics, and molecular biology of plant pathogenic fungi.

870 Nematode Management in Crop Systems
Summer of even years. 3(2-3) Interdepartmental with Entomology. Administered by Department of Entomology. RB: (PLP 405) SA: BOT 870
Biological, host parasite relationships and management by farming and cropping systems of selected nematode diseases of economic plants.

880 Plant Virology
Fall of odd years. 4(2-4) RB: (BMB 462 and BOT 810) SA: BOT 880
Biological and molecular aspects of viruses causing plant disease.

881 Molecular and Biochemical Plant Pathology
Spring of odd years. 3(2-2) RB: (BMB 462 and ZOL 341 and PLP 810) and (BOT 414 or BOT 415) SA: BOT 881
Biochemical and molecular bases of host-pathogen interactions. Mechanisms of pathogenicity and the nature of disease resistance.

884 Prokaryotic Diseases of Plants
Fall of even years. 4(2-4) RB: (BOT 810) SA: BOT 884
Prokaryotic genera associated with plant diseases. Identification, physiology, and genetics. Laboratory techniques.

885 Plant Diseases in the Field
Summer of odd years. 2(1-3) RB: (PLP 810) R: Open only to graduate students. SA: BOT 885 Diagnosis of plant diseases and disorders in a field setting. Field trips and independent study required.

890 Independent Study
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to graduate students.
Individual study in laboratory, field or library research in plant pathology.

893 Selected Topics
Fall, Spring, 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course.
Current topics in plant pathology.

894 Seminar in Plant Pathology
Fall, Spring. 1(1-0) A student may earn a maximum of 6 credits in all enrollments for this course.
Review, organization, analysis and oral presentation of research.

899 Master's Thesis Research
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 99 credits in all enrollments for this course.
Master's thesis research.

999 Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 99 credits in all enrollments for this course.
Doctoral dissertation research.

POLITICAL SCIENCE PL S

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.

140 Government and Politics of the World
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.

160 Introduction to International Relations
Fall, Spring, Summer. 3(3-0) 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.
392 Special Topics in Political Science
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. RB: Completion of Tier I writing requirement. R: Open only to juniors or seniors in the Department of Political Science or Interdisciplinary Studies in Social Science major or approval of department.

Issues and problems in contemporary political science.

420 American Politics and Public Administration (W)
Fall, Spring. 4(4-0) P: (PLS 301 or PLS 302 or PLS 305 or PLS 310 or PLS 313 or PLS 320) or (PLS 321 or PLS 322 or PLS 324 or PLS 325 or PLS 331 or PLS 333 or PLS 334) and completion of Tier I writing requirement. R: Open only to juniors or seniors in the Department of Political Science or Interdisciplinary Studies in Social Science major with political science as the disciplinary cognate or approval of department.

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.

421 Moot Court and Legal Research in Federal Law (W)
Spring. 4(4-0) P: (PLS 320) and (PLS 321 or MC 373) and completion of Tier I writing requirement. R: Open only to juniors or seniors in the Department of Political Science. Open to juniors or seniors in the Interdisciplinary Studies in Social Science major with political science as the disciplinary cognate or approval of department.

U.S. Supreme Court decisions in federal law. Legal research techniques, and participation in moot court exercises. Possible topics include civil rights and civil liberties.

440 Comparative Politics (W)
Spring. 4(4-0) P: (PLS 322 or PLS 342 or PLS 344 or PLS 351 or PLS 352 or PLS 353 or PLS 354 or PLS 356 or PLS 357 or PLS 358) and completion of Tier I writing requirement. R: Open only to juniors or seniors in the Department of Political Science or Interdisciplinary Studies in Social Science major with political science as the disciplinary cognate or approval of department.

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

460 International Relations (W)
Fall, Spring. 4(4-0) P: (PLS 361 or PLS 362 or PLS 363 or PLS 364) and completion of Tier I writing requirement. R: Open only to juniors or seniors in the Department of Political Science or Interdisciplinary Studies in Social Science major with political science as the disciplinary cognate or approval of department.

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

461 Refugees, Displaced Persons, Exiles (W)
Spring. 4(4-0) P: (PLS 322 or PLS 342 or PLS 344 or PLS 351 or PLS 352 or PLS 353 or PLS 354) or (PLS 356 or PLS 357 or PLS 358 or PLS 361 or PLS 362 or PLS 363 or PLS 364) and completion of Tier I writing requirement.

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.

470 Political Thought (W)
Fall of odd years. Spring of even years. 4(4-0) P: (PLS 371 or PLS 372 or PLS 377) and completion of Tier I writing requirement. R: Open only to juniors or seniors in the Department of Political Science or Interdisciplinary Studies in Social Science major with political science as the disciplinary cognate or approval of department.

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

481H Honors Seminar in Research Design
Fall, 4(4-0) R: Approval of department.

Research design seminar for honor's students in the political science program.

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.

491H Senior Honors Thesis
Fall, Spring. Summer. 3 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: (PLS481H) R: Approval of department.

Original research and writing under direction of a faculty member.

494 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.

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.

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.

801 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.

802 Quantitative Techniques in Public Policy and Political Science II
Spring. 3(3-0) R: (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 projects.

803 Political Thought
Fall. 3(3-0) RB: Admission to graduate program in political science.

Major political philosophers. Major themes of political philosophy. Consideration of the relationship between political philosophy and other fields of study in political science.

804 Analytical Tools for Public Policy
Fall, Spring, Summer. 3 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: (PLS481H)

Basic tools for public policy analysis. Fundamental concepts of microeconomic theory, such as utility maximization, supply and demand, marginal costs and revenues, and competitive and non-competitive markets. Interest rates and discounting time. Public goods and externalities. Equity and fairness concerns.

805 Environmental Politics and Policy
Fall of odd years. 3(3-0) RB: (PLS 811)

The impact of political institutions and processes on environmental policy. The relationship between state and federal policy, and the increasing role of the states. The politics of air and water pollution, toxic wastes, public lands, risk assessment, and environmental justice.

806 Health Politics and Policy
Spring of even years. 3(3-0) RB: (PLS 811)

Political institutions, processes, and policies shaping the health care system. The impact of Congress, the presidency, executive agencies, and interest groups on health care policymaking. State versus federal responsibilities. Policy analysis of health care issues.

807 Education Politics and Policy
Fall of even years. 3(3-0) RB: (PLS 811)


808 Issues in Urban Policy and Services
Spring of even years. 3(3-0) Interdepartmental with Social Work. RB: (PLS 811)

Issues in urban public policy. Major theoretical approaches. Urban regimes, local autonomy, public and private authority, economic constraints, social welfare, service delivery, neighborhood and community development, urban educational systems. Race, gender, and ethnicity.
809 Proseminar in Formal Theory
Spring. 3(3-0) R: Approval of department. SA: PLS 880
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.

810 Proseminar in Public Administration
Fall. 3(3-0) R: Open only to graduate students in the Department of Political Science or approval of department.
Expertise and bureaucratic power. Relations with political institutions. Role of public employees, the politics of administrative processes, and administrative ethics.

811 Proseminar in Policy Analysis
Spring. 3(3-0) P:M: (PLS 810) R: Open only to graduate students in the Department of Political Science or approval of department.
Economic and political techniques for analyzing public policies. Utility and limitations of these techniques and their use and abuse in public policy analysis.

812 Theories of Administrative Organization
Fall. 3(3-0)
Decisionmaking, hierarchy, control, participation, and the political context of public organization.

813 Politics of Public Finance and Budgeting
Fall. 3(3-0) P:M: (PLS 804) R: Open only to graduate students in Public Administration or Political Science, or approval of department. Not open to students with credit in EC 836.

817 Public Policy and the Nonprofit Sector
Spring. 3(3-0)
Political, economic, historical, and social perspectives on the nonprofit sector. Public policies promoting and regulating nonprofit organizations. The role of nonprofit organizations in implementing public programs. The public consequences of private actions in the nonprofit sector.

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 behavior.

821 State Government and Politics
Spring of odd years. 3(3-0)
Research literature on state government. Interstate differences. Parties, elections, governors, state legislatures, bureaucracy, interest groups, and policy outcomes.

822 Urban Government and Politics
Spring of even years. 3(3-0)
Research literature on urban government. Structure, process, and policy issues. Intergovernmental relations and fiscal interdependencies.

824 Congress
Spring of even years. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. RB: (PLS 801 and PLS 802 and PLS 820) or approval of department.
The legislative process in Congress, and the electoral connection to voters. Topics may include committees, parties and leadership, candidate recruitment and elections, and interactions between Congress and other national institutions.

826 International Development and Sustainability
Fall. 3(3-0) Interdepartmental with Resource Development; Anthropology; Forestry; Social Science. Administered by Department of Community Agriculture, Recreation and Resource Studies.
Environmental, economic, political, legal, management, and cultural components of sustainable development.

828 Public Opinion and Political Behavior
Fall of odd years. 3(3-0) RB: (PLS 801 and PLS 802) or approval of department.
The acquisition and change of political attitudes. The relationship between political attitudes and political behavior. Methods and problems of measuring political attitudes.

850 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.

852 Comparative Public Administration
Fall of odd years. 3(3-0)
Administrative systems in industrialized countries. Historical origins, personnel recruitment, bureaucratic-parliament interactions, planning and market regulation, public spending, and public outcomes.

853 Political Economy of Development Policy
Spring of odd years. 3(3-0)
Introduction to the political economy of Third World development. Decision making and economic policy.

854 Comparative Political Institutions
Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course.
Political institutions from a comparative perspective. Topics may include electoral systems, political parties, presidential vs. parliamentary systems, representation, federalism, and constitutional engineering.

857 Parties and Elections
Spring of even years. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course.
Origin, organization, and behavior of political parties in advanced industrial societies. Structure and transformation of party systems. Role of issues and elections in party systems. Parties in developing societies.

860 Proseminar in International Relations
Fall of even 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.

870 Proseminar in Political Thought
Spring of even years. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course.
Survey of major issues or themes in political philosophy.

871 Classical Political Philosophy
Fall. 3(3-0)
Study of one or more major figures or thinkers in ancient or medieval political philosophy.

884 Proseminar on Political Institutions and Public Choice
Fall. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course.
Theories of political institutions, with particular emphasis on the U.S. Possible topics include models of rational action in electoral, legislative, and bureaucratic institutions and problems of majority rule, collective action, and social welfare.

894 Field Experience Practicum
Fall, Spring. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course.
Fieldwork in government, private, and government-related 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 maximum of 9 credits in all enrollments for this course. RB: (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. RB: (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. RB: (PLS 811) R: Approval of department.
Field experience in public policy analysis. Work with faculty and public personnel to design 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. RB: (PLS 810 or PLS 811)
Specialized topics in public administration or public policy.
101 Elementary Portuguese I  
Spring, 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.

102 Elementary Portuguese II  
Spring, 4(4-1) P: (PRT 101) Further practice in using and understanding Portuguese to develop listening, speaking, reading, and writing skills. Pronunciation, grammar, vocabulary, and cultural topics.

201 Second-Year Portuguese I  
Fall, 4(4-0) P: (PRT 102) Intermediate level review and development of aural comprehension, speaking, reading, and writing skills. Topics in the cultures of the Portuguese-speaking world.

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.

290 Independent Study  
Fall, Spring, 1 to 4 credits. A student may earn a maximum of 4 credits in all enrollments for this course. R: Approval of department. Special projects arranged by an individual student and a faculty member in areas supplementing regular course offerings.

320 Advanced Portuguese  
Fall, 3(3-0) P: (PRT 202) Conversation, reading, and writing to develop proficiency.

340 Topics in Luso-Brazilian Language and Culture  
Spring, 3(3-0) P: (PRT 202) Cultural issues related to Portuguese-speaking countries.

901 Special Problems in Psychiatry  
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Approval of department. Special projects arranged by an individual student and a faculty member in areas supplementing regular course offerings.

1011 Introductory Psychology  
Fall, Spring, Summer. 4(4-0) P: PSY 101 Mind and behavior from biological, individual, and social perspectives. Scientific and professional aspects of psychology.

200 Cognitive Psychology  
Fall, Spring, Summer. 3(3-0) P: (PSY 101) Concepts, theories, methods, and research findings in human information processing. Attention, perception, memory, problem solving, decision making, and language comprehension and production.