

PHYSICS MAJOR

The physics major offers a challenging program emphasizing a low student-teacher ratio and the opportunity to engage in independent research projects. There are two introductory course sequences, College Physics and General Physics; the General Physics sequence incorporates calculus and is required for the Bachelor of Science major.

BACHELOR OF ARTS MAJOR

PHYS 153, 154; 163, 164, 223, 499A, 499B.

Plus: Eight additional, upper-division semester hours in physics.

Required supporting courses: MATH 151, 152, 253.

BACHELOR OF SCIENCE MAJOR

PHYS 153, 154, 163, 164, 223, 331, 332, 333, 336, 354, 356, 499A, 499B.

Strongly recommended: PHYS 401 and 406

Chemistry 341 or PHYS 321 may be substituted for PHYS 333

Required supporting courses:

CHEM 115; MATH 151, 152, 253

A typical B.S. physics major program is as follows:

First Year	PHYS 153, 163; MATH 151, 152
Sophomore Year	PHYS 154, 164, 223, 354; MATH 253
Junior Year	PHYS 331, 332, 336, 356; CHEM 115
Senior Year	PHYS 333, 401 or 406, 499A, 499B

MINOR

PHYS 153; 154; 163; 164; 223.

Plus eight additional semester hours in physics (excluding PHYS 110), of which at least four must be upper division.

BACHELOR OF SCIENCE MAJOR IN APPLIED PHYSICS

Also available is a major in Applied Physics, which includes a substantial selection of courses from engineering to provide a challenging and highly versatile degree. Applied Physics can lead to research or advanced study in such areas as robotics—with application in space exploration or joint and limb prosthetics; growth of single-crystal metals, which would be thousands of times stronger than the best steels now available; mechanics of material failure, such as metal fatigue and fracture; turbulence in fluid flow; photovoltaic cell research for solar energy development; or applications of fluid flow and thermodynamics to the study of planetary atmospheres and ocean currents.

While many Applied Physics graduates pursue professional careers in industry immediately after graduation from PLU, the program also provides excellent preparation for graduate study in nearly all fields of engineering.

PHYS 153, 154, 163, 164, 223, 331, 334, 354, 356, 499A, 499B
CSCE 131

Plus: Four courses, one of which must be upper division, selected from:

CSCE 245, 345, 346

PHYS 210, 240, 333;

PHYS 336 may be substituted for PHYS 240

CHEM 341

or PHYS 321 may be substituted for PHYS 333

Required supporting courses:

CHEM 115 CSCE 144 MATH 151, 152, 253

A typical applied physics program is as follows:

First Year	PHYS 153, 163; CSCE 131; MATH 151, 152
Sophomore	PHYS 154, 164, 240, 354; MATH 253
Junior	PHYS 223, 333, 356; CHEM 115; CSCE 144
Senior	PHYS 331, 333A, 499A, 499B; CSCE 245

To view Physics (PHYS) courses, go to the PLU Directory of Approved Courses on page 205.

Political Science

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The student of politics seeks to understand how governments are organized and structured, how political processes are employed, and the relationship of structures and processes to societal purposes. Political activity embodies and reflects the full range of human values. The study of politics includes real world events while at the same time asking how well political systems work, what purposes they ought to serve, and what effects result from political activity. Political science encourages a critical understanding of government and politics in the belief that a knowledgeable, interested, and aware citizenry remains vital to a democratic society.

Faculty: Grosvenor, *Chair*; Chavez, Dwyer-Shick, Kelleher, Olufs.

Courses in political science explore various topics in American government and politics, international relations and foreign policy, comparative government and area studies, political philosophy and theory, and public policy and law. The department provides pre-professional training leading to careers in teaching, law, government, and related fields.

Students of political science are strongly encouraged to combine the academic study of government and politics with practical experience by participating in one of the internship programs sponsored by the department.

The department sponsors or otherwise encourages active student participation in political life through class activities and through such campus organizations as the Young Democrats and the Young Republicans.

There are no prerequisites for political science courses, except as noted. Prior consultation with the instructor of any advanced course is invited. Students wishing to pursue a major or minor

in political science are requested to declare the major or minor with the department chair as soon as possible.

BACHELOR OF ARTS MAJOR

36 semester hours

- **Required courses**
12 semester hours
POLS 151, 325, 499
- **Distributional requirement:**
Eight semester hours
 - One course from each of Group A and Group B
 - Group A: American Government and Public Policy**
POLS 338, 345, 346, 353, 354, 361, 363, 364, 368, 371, 372, 373
 - Group B: International Relations and Comparative Government**
POLS 331, 332, 347, 380, 381, 383, 384, 385, 386
- **Research and Writing Requirement:**
One 300-level course designated as an “intensive writing course” indicating that it has a substantial research/writing component. Courses that qualify in Group A are: POLS 345, 353, 354, 361, 372 and 373. Courses in Group B are: POLS 331, 332, 380, 384 and 385.
- **Electives:**
Minimum of 16 semester hours selected from the Political Science curriculum

Majors should plan their course of study in consultation with their departmental advisor. An internship (POLS 450, 458, 464 or 471) may be substituted for POLS 499 when its graded requirements include research and writing a substantive capstone report/project. Students must pre-plan this option with the appropriate faculty intern supervisor in consultation with the department chair.

MINOR

Minimum of 20 semester hours including POLS 151. Minor programs should be planned in consultation with the departmental chair or a designated adviser.

Concurrent Attainment

No more than eight semester hours taken to satisfy other major or minor requirements may also be applied to the political science major. No more than four such semester hours may also be applied to the political science minor.

Residency

A minimum of 12 semester hours for the major and eight semester hours for the minor must be taken in residence at PLU.

MINOR IN PUBLIC AFFAIRS

24 semester hours, including POLS 345 (required) and 20 hours from economics, political science, sociology, or statistics.

This minor offers an interdisciplinary study designed to support many major programs whose content has implications

for public affairs and is particularly useful to students contemplating careers in public service or graduate study in public administration, public affairs, and related programs.

The Public Affairs minor

Includes the following requirements:

- POLS 345: Government and Public Policy
- At least five additional courses from three of the following groups (courses which are taken as part of a major program may not also count toward the Public Affairs minor):
 - **Political Science**
Minimum of eight semester hours if this minor is selected
 - POLS 151: American Government
 - POLS 354: State and Local Government
 - POLS 363: Politics and the Media
 - POLS 364: The Legislative Process
 - **Economics**
Minimum of eight semester hours if this minor is selected
 - ECON 101, 102: Principles of Macroeconomics and Microeconomics (or ECON 111: Principles of Microeconomics: Global and Environmental)
 - ECON 321: Labor Economics
 - ECON 327: Public Finance
 - ECON 325: Industrial Organization and Public Policy
 - **Sociology**
Minimum of four semester hours if this minor is selected
 - SOCI 240: Social Problems
 - SOCI 413: Crime and Society
 - **Statistics**
Minimum of four semester hours if this minor is selected
 - STAT 231: Introductory Statistics

On approval by the Public Affairs advisor, up to eight semester hours may be earned through participation in an internship program as a substitute for courses listed above (except POLS 345). Internship opportunities are offered through several departments, and through the Cooperative Education Program, and provide students with actual work experience in diverse public and private agencies. Students interested in internships are urged to consult with their academic advisors and with intern faculty advisors at an early date.

Students interested in the Public Affairs minor should declare the minor in the Department of Political Science and consult with the department’s Public Affairs advisor.

MINOR IN CONFLICT RESOLUTION

Requires 20 semester hours as follows:

- **Four Required Courses:**
 - POLS 331: International Relations (4)
 - POLS 332: International Conflict Resolution (4)
 - COMA 340: Conflict and Communication (4)
 - COMA 441: Conflict Management (4)
- **One Elective**
Chosen from the following, or another course selected in consultation with the minor’s faculty coordinator:
 - POLS 210: Global Perspectives: The World in Change (4)
 - COMA 304: Intercultural Communication (4)

MINOR IN LEGAL STUDIES

20 semester hours

For additional information, see Legal Studies, page 76.

PRE-LAWFor information, see *Pre-professional Programs* on page 96.**BACHELOR OF ARTS IN EDUCATION**For information, see *Department of Instructional Development and Leadership* on page 65.To view *Political Science (POLS)* courses, go to the *PLU Directory of Approved Courses* on page 207.**Pre-Professional Studies**

The following pre-professional studies do not constitute academic majors, but are programs of study designed to facilitate further graduate or professional work after completion of a disciplinary major at PLU.

HEALTH SCIENCESwww.nsci.plu.edu/hsc

The Division of Natural Sciences health sciences committee advises students aspiring to careers in the health sciences. Students having such interests are encouraged to obtain a health sciences advisor early in their program. Summarized below are pre-professional requirements for many health science areas; additional information is available through the health science committee.

Dentistry, Medicine, and Veterinary Medicine

The overwhelming majority of students entering the professional schools for these careers have earned baccalaureate degrees, securing a broad educational background in the process. This background includes a thorough preparation in the sciences as well as study in the social sciences and the humanities. There are no pre-professional majors for medicine, dentistry or veterinary medicine at PLU; rather students should select the major which best matches their interests and which best prepares them for alternative careers. In addition to the general university requirements and the courses needed to complete the student's major, the following are generally required for admission to the professional program:

BIOL 125, 136, 332
 CHEM 115, 116, 331, and 332 (all with laboratories)
 MATH 140
 PHYS 125 and 126
 or PHYS 153 and 154 (with appropriate laboratories)
 Check with a health science advisor for exceptions or for additions suggested by specific professional schools.

Medical Technology

The university no longer offers a medical technology degree, but continues to provide academic preparation suitable for admission to medical technology, hematology, and clinical chemistry programs. Minimal requirements include:

BIOL 125, 126, 332, 328, 407, 448
 CHEM 115, 116, 331 (with 333 lab), 332 (with 334 lab)
 MATH 140
 Recommended courses include: BIOL 348, 441; CHEM 403; PHYS 125, 126, 135, 136.

Optometry

Although two years of pre-optometry study is the minimum required, most students accepted by a school of optometry have completed at least three years of undergraduate work. A large percentage of students accepted by schools of optometry have earned a baccalaureate degree. For those students who have not completed a baccalaureate degree, completion of such a degree must be done in conjunction with optometry professional studies. The requirements for admission to the schools of optometry vary. However, the basic science and mathematics requirements are generally uniform and include:

BIOL 125, 126, 332
 CHEM 115, 116, 331 (with 333 lab), 332 (with 334 lab)
 One year of college mathematics, including calculus (at least through MATH 151)
 PHYS 125 and 126
 or PHYS 153 and 154 (with appropriate laboratories)

In addition, each school of optometry has its own specific requirements. Check with a health science advisor.

Pharmacy

Although the pre-pharmacy requirements for individual schools vary (check with a health science advisor), the following courses are usually required: one year of general chemistry with laboratory; one year of organic chemistry, with laboratory; college-level mathematics (often including calculus); one year of English composition. Other courses often required include microbiology, analytical chemistry, statistics and introductory courses in communication, economics, and political science. For example, the University of Washington School of Pharmacy has approved the following courses as being equivalent to the first two years of its program leading to the Doctor of Pharmacy degree:

BIOL 125, 126, 201 or 328
 CHEM 115, 116, 331 (with 333 lab), 332 (with 334 or 336 lab)
 MATH 128 or 151; STAT 231
 WRIT 101
 A second course in writing; electives from humanities and social sciences.
 Total credits should not be fewer than 60 semester hours.

Physical Therapy

Acceptance to schools of physical therapy has become increasingly competitive in recent years, and students interested in physical therapy are strongly encouraged to meet with a health science advisor as early as possible to determine prerequisites for specific schools. All physical therapy programs are doctoral programs. Therefore, potential applicants should plan on completing a baccalaureate degree in conjunction with satisfying admission requirements. The School of Physical Education offers a Bachelor of Science degree in Physical Education with a pre-physical therapy track.

Political Science (POLS)

POLS 101: Introduction to Politics – SI, SO

A general introduction to political issues, ideals and processes using case studies. (4)

POLS 151: American Government – SI, SO

A survey of the constitutional foundations of the American political system and of institutions, processes, and practices relating to participation, decision-making, and public policy in American national government. (4)

POLS 170: Introduction to Legal Studies – SI, SO

An examination of the nature of law, judicial process, and participant roles in the legal system. (4)

POLS 210: Global Perspectives: The World in Change – C, SI, SO

A survey of global issues: modernization and development; economic change and international trade; diminishing resources; war and resolution; peace and justice; and cultural diversity. (Although this course is cross-listed with ANTH 210 and HIST 210, students receive political science credit only when this course has a faculty member from political science.) (4)

POLS 231: Current International Issues – SI, SO

A survey course in international relations with emphasis on current events. (4)

POLS 322: Scandinavia and World Issues - SI, SO

This course explores globalization, de-centering of power, the declining sovereignty of nation-states, and the interaction of economic, political, and cultural factors in the global production of social life. Key topics include migration, sustainability, and international conflict as they related to Scandinavian societies, institutions, and states. Cross-listed with SCAN 322. (4)

POLS 325: Political Thought – SI, SO

A survey of the origin and evolution of major political concepts in ancient, medieval, and early modern times. Can count for a Philosophy major or minor. (4)

POLS 326: Recent Political Thought – SI, SO

A critical examination of the major ideologies of the modern world. (4)

POLS 331: International Relations – SI, SO

A systematic analysis of the international system highlighting patterns in state interaction. Intensive writing course. (4)

POLS 332: International Conflict Resolution - SI, SO

This course will study several examples of peace processes and compare them with conflict reduction/resolution models. At any given time in recent years, over thirty violent conflicts, most of them internal but some also external, tear apart societies, produce extensive suffering, and threaten regional stability. Several strategies have been tried, some relatively successfully,

to end such violence and begin the long, difficult process of achieving peace. Intensive writing course. **Prerequisite:** Any political science course but particularly recommended are POLS 101, 210, and 331. (4)

POLS 338: American Foreign Policy – SI, SO

The role of the United States in international affairs. An analysis of the major factors in the formulation and execution of the United States foreign policy and its impact on other powers. (4)

POLS 345: Government and Public Policy – SI, SO

An integrated approach to the nature of public policy, with emphasis on substantive problems, the development of policy responses by political institutions, and the impacts of policies. Intensive writing course. (4)

POLS 346: Environmental Politics and Policy – SI, SO

An examination of environmental problems from political perspectives, including international and domestic political contexts and methods of evaluating policies. (4)

POLS 347 Political Economy – SI, SO

An examination of the ways that politics and economics coincide. Topics include the development of capitalism, socialist approaches, international issues, regional examples, and methods of study. **Prerequisite:** POLS 101 and ECON 101 or 102 or 111. (4)

POLS 353: United States Citizenship and Ethnic Relations – A, SI, SO

This course will focus on the political incorporation in the United States polity of a variety of ethnic communities by studying the evolution of United States citizenship policy. Intensive writing course. (4)

POLS 354: State and Local Government – SI, SO

Governmental structures, processes, and policy at state, local, and regional levels of the American system. Intensive writing course. (4)

POLS 356: Creating Community: Public Administration - SI, SO

This course examines public service and civic engagement. It is designed to teach students about public administration by exploring methods of building community through public service. Major issues in public administration will be covered as well as its central importance in the implementation of public policies and in sustaining a democratic polity. (4)

POLS 361: Political Parties and Elections – SI, SO

Study of party and electoral systems with particular emphasis on American parties and elections. Examination of party roles in elections and government; party financing; interest groups and political action committees; and voting behavior. Intensive writing course. (4)

POLS 363: Politics and the Media – SI, SO

The role of mass media in American government, politics, and policy. Attention to political culture, public opinion, polls and surveys, press freedom and responsibility, and governmental regulation, secrecy, and manipulation. (4)

POLS 364: The Legislative Process – SI, SO

A study of theory, organization, and procedure of the Congress and other legislative bodies in the United States. (4)

POLS 368: The American Presidency – SI, SO

Study of the nation's highest political office in terms of the roles and expectations of the office, styles of leadership, presidential decision-making, powers and limitations, and the interaction of personality and institution. (4)

POLS 371: Judicial Process – SI, SO

An examination of legal processes in various adjudicatory settings. Primary attention given to judicial processes focusing on American civil and criminal law. (4)

POLS 372: Constitutional Law – SI, SO

The constitutional basis of governmental powers in the United States with special emphasis given to judicial review, separation of powers, federalism, interstate commerce, and political and constitutional restrictions on governmental power. Intensive writing course. (4)

POLS 373: Civil Rights and Civil Liberties – SI, SO

The constitutional basis of rights and liberties in the United States with special emphasis given to freedom of expression and association, religious freedom, rights in criminal proceedings, due process, and equal protection. Intensive writing course. (4)

POLS 374: Legal Studies Research – SI, SO

Introduction to various methods of legal analysis, research, and writing. (4)

POLS 380: Politics of Global Development - SI, SO

Designed to provide information, concepts, and alternative perspectives needed to study development as a global issue within the international political context. Examples of how general world trends manifest themselves in specific countries will be covered as well as case studies of successful development projects. Intensive writing course. **Prerequisite:** Any political science course, but particularly recommended are POLS 101, 210, and 331. (4)

POLS 381: Comparative Legal Systems – C, SI

Study of legal systems around the world as they actually work within their respective political, economic, social, and cultural contexts. Intensive writing course. (4)

POLS 383: Modern European Politics – SI, SO

A study of the origins and development of the European Union and an examination of the governmental systems and political cultures of key European states, including France, Germany, Italy, and the United Kingdom. (4)

POLS 384: Scandinavian Government and Politics – SI, SO

This course examines the governmental structures and political processes of the Scandinavian countries. It does so in the context of the region's historical development, its political cultures and ideologies, the distinctive Scandinavian model of political economy and welfare, and the place of Scandinavia in the international system. (4)

POLS 385: Canadian Government and Politics – SI, SO

The governmental system and political life of Canada, with special attention to the constitution, political parties, nationalism and separatism in Quebec, self-government of native peoples, and comparative study of Canadian and U.S. political cultures. Intensive writing course. (4)

POLS 386: The Middle East – C, SI, SO

Contrasts the history and aspirations of the Arab Nations with the reality of European dominance and its legacy, the formation of the present Arab states and Israel. Intensive writing course. (4)

POLS 401: Workshops and Special Topics – SI, SO (1-4)

POLS 431: Advanced International Relations – SI, SO

Examines various theories of international conflict management, including in-depth analysis of historical examples. The development of international law and international governmental organizations are also considered. **Prerequisite:** POLS 331. (4)

POLS 450: Internship in Politics - SI

Internship in the political dimensions of non-governmental organizations. By departmental consent only. (1-8)

POLS 455: Internship in International and Comparative Politics

Internship overseas or with a US agency or organization that engages in international issues and activities. By departmental consent only. (1-8)

POLS 458: Internship in Public Administration – SI

An internship with a government department or agency. By departmental consent only. (1-8)

POLS 464: Internship in the Legislative Process – SI

An opportunity to study the process from the inside by working directly with legislative participants at the national, state or local level. By department consent only. (Internships with the Washington State Legislature are open only to juniors and seniors with at least one year at PLU.) (1-12)

POLS 471: Internship in Legal Studies – SI

An internship with a private or public sector agency or office engaged in legal research, litigation, or law enforcement. By departmental consent only. (4)

POLS 499: Capstone: Senior Seminar – SR

Intensive study into topics, concepts, issues, and methods of inquiry in political science. Emphasis on student research, writing, and presentation. By departmental consent only. (4)

