

CENTERS, LABORATORIES, AND INSTITUTES

Independent research laboratories, centers, and institutes perform multidisciplinary research that extends beyond the scope of any one of the University's organized schools. The listings are not all-inclusive. A comprehensive list of Stanford offices is available on the University's A to Z Index page (<http://www.stanford.edu/atoz>).

The following tabs contain information on programs for undergraduates:

- Arts Institute (<http://exploreddegrees.stanford.edu/schoolofhumanitiesandsciences/artsinstitute>)
 - Interdisciplinary Honors in the Arts Program
 - Arts Immersion
 - Creative Cities
- Center for Spatial and Textual Analysis (CESTA) (<https://cesta.stanford.edu>)
 - Graduate Certificate of Digital Humanities
- Center for the Study of Poverty and Inequality (CPI (p. 2))
 - Certificate Program on Poverty and Inequality
- Freeman Spogli Institute for International Studies (FSI) (p. 4)
 - Interschool Honors Program in Democracy, Development, and the Rule of Law
 - Interschool Honors Program in International Security Studies

Office of Vice Provost and Dean of Research

Vice Provost and Dean of Research: Ann M. Arvin

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 Mail Code: 94305-2064
 Phone: 650-723-8789 / Fax 650-723-0662
 Web Site: <http://stanford.edu/dept/DoR>
 Office Fax: 650-723-0662

The following independent Laboratories, Centers, and Institutes report to the Vice Provost and Dean of Research:

Biological and Life Sciences

- Bio-X, the interdisciplinary program related to bioengineering, biomedicine, and biosciences, <http://biox.stanford.edu>
- Spectrum (formerly the Stanford Center for Clinical and Translational Education and Research), <http://spectrum.stanford.edu>

Environmental Sciences

- Precourt Institute for Energy, <http://pie.stanford.edu/>
 - Precourt Energy Efficiency Center, <http://peec.stanford.edu>
 - Global Climate and Energy Project (G-CEP), <http://gcep.stanford.edu>
- Woods Institute for the Environment, <http://woods.stanford.edu>

Humanities and Social Sciences

- Center for Advanced Study in the Behavioral Sciences (CASBS), <http://www.casbs.org>
- Center for the Study of Language And Information (CSLI), <http://www.csli.stanford.edu>
- Freeman Spogli Institute for International Studies (FSI), <http://fsi.stanford.edu>
 - Center on Democracy, Development, and the Rule of Law (CDDRL), <http://cddrl.stanford.edu>

- Stanford Health Policy (Center for Health Policy/Center for Primary Care and Outcomes Research), <http://healthpolicy.stanford.edu>
- Center for International Security and Cooperation (CISAC) <http://cisac.stanford.edu>
- Walter H. Shorenstein Asia-Pacific Research Center (Shorenstein APARC), <http://aparc.stanford.edu>
- The Europe Center, <http://tec.stanford.edu>
- Program on Food Security and the Environment, <http://fse.stanford.edu>
- Inter-University Center for Japanese Language Studies (IUC), <http://www.stanford.edu/dept/IUC>
- Program on Energy and Sustainable Development (PESD), <http://pesd.stanford.edu>
- Stanford Program on International and Cross-Cultural Education (SPICE), <http://spice.stanford.edu>
- Human-Sciences and Technologies Advance Research Institute (H-STAR), <http://hstar.stanford.edu>
 - Media-X, <http://mediax.stanford.edu>
 - Stanford Center for Innovations in Learning (SCIL), <http://scil.stanford.edu>
- Stanford Center on Longevity (SCL), <http://longevity.stanford.edu>
- Stanford Humanities Center, <http://shc.stanford.edu>
- Stanford Institute for Economic Policy Research (SIEPR), <http://siepr.stanford.edu>

Physical Sciences

- Edward L. Ginzton Laboratory, <http://stanford.edu/group/ginzton>
- Geballe Laboratory for Advanced Materials (GLAM), <http://stanford.edu/group/glam>
- Kavli Institute for Particle Astrophysics and Cosmology (KIPAC), <http://www-group.slac.stanford.edu/kipac>, operated jointly with SLAC National Accelerator Laboratory
- Photon Ultrafast Laser Science and Engineering (PULSE), <http://pulse.slac.stanford.edu>, operated jointly with SLAC National Accelerator Laboratory
- Stanford Institute for Materials and Energy Sciences (SIMES), <http://simes.slac.stanford.edu>, operated jointly with SLAC National Accelerator Laboratory
- W. W. Hansen Experimental Physics Laboratory (HEPL), <http://hepl.stanford.edu>

Centers Reporting to the Dean of Humanities and Sciences

- Center for Space Science and Astrophysics (<http://www.stanford.edu/group/CSSA>)
- Center for Spatial and Textual Analysis (CESTA) (<https://cesta.stanford.edu>)
 - CESTA offers a graduate Certificate of Digital Humanities program
- Institute for Research in the Social Sciences (<http://iriss.stanford.edu>) (IRiSS)
 - Stanford Center for Population Research (<http://iriss.stanford.edu/scpr>) (SCPR)
 - Stanford Center for the Study of Poverty and Inequality (<http://iriss.stanford.edu/CPI>) (CPI)
 - Stanford Center for American Democracy (<https://iriss.stanford.edu/ANES>) (SCAD)
 - Stanford Center on Philanthropy and Civil Society (<http://pacscenter.stanford.edu>) (PACS)

- Center for Computational Social Science (<https://css-center.stanford.edu>)
- Immigration and Integration Policy Lab (<http://immigrationlab.stanford.edu>)
- Center for the Advancement of Research through Online Learning (CAROL)
- Michelle R. Clayman Institute for Gender Research (<http://gender.stanford.edu>)
- Morrison Institute for Population and Resource Studies (<http://www.stanford.edu/group/morrinst>)
- Stanford Arts Institute (<http://arts.stanford.edu/arts-institute>)

Arts Institute information can now be found under the School of Humanities and Sciences (<http://exploreddegrees.stanford.edu/schoolofhumanitiesandsciences/artsinstitute>) in the menu on the left.

Stanford Center on Poverty and Inequality Certificate Program on Poverty and Inequality

The Stanford Center on Poverty and Inequality (CPI) monitors and publicizes trends in poverty and inequality, publishes the country's leading magazine on poverty and inequality (*Pathways Magazine*), supports research on the causes of poverty and inequality, and examines the effects of public policy on poverty and inequality. The center carries out these activities with ten research groups addressing the following topics:

- poverty measurement and trends
- educational access and achievement
- income inequality
- social mobility
- safety net use
- recession and recovery effects
- spatial segregation
- racial and ethnic inequality
- discrimination, poverty, and the labor market
- Hispanic poverty, inequality, and mobility.

The Certificate in Poverty and Inequality recognizes undergraduates who have developed expertise in one or more of these research areas. The certificate is conferred as soon as the coursework and research requirements listed below are completed. Although the certificate does not appear on an official University transcript, it provides formal recognition of a rigorous program of study in the field of poverty and inequality.

Admission

Applications to the CPI certificate program are available on the CPI web site (<http://www.stanford.edu/group/scspi>) and may be filed at any time. Admitted students are assigned an adviser who assists in planning coursework and providing research opportunities within CPI. Contact CPI (inequality@stanford.edu) with any questions.

Requirements

The student's course and research plan, which is submitted with the application, should meet the four requirements listed below.

1. **Core Foundation Course:** (SOC 140 Introduction to Social Stratification. This required introductory course examines the causes and consequences of poverty, inequality, and mobility. It is available as both a regular and online course.
2. **Elective Foundation Course:** The second foundation course is selected from among the normative, empirical, and policy courses listed below. These courses examine the principles by which certain types of living conditions may be deemed unjust or impoverished

(i.e., normative analysis), the social processes and forces by which poverty and inequality are generated and maintained (i.e., empirical analysis), and the types of policies and interventions that might reduce or increase poverty and inequality (i.e., policy analysis).

Units

Elective Foundation Courses

Normative Foundation

ETHICSOC 136R	Introduction to Global Justice	4
ETHICSOC 171	Justice	4-5
INTNLREL 136R	Introduction to Global Justice	4
PHIL 76	Introduction to Global Justice	4
PHIL 171	Justice	4-5
POLISCI 136R	Introduction to Global Justice	4
PUBLPOL 103C	Justice	4-5

Empirical Foundation

SOC 141	Controversies about Inequality	5
SOC 144	Inequality and the Workplace	5

Policy Foundation

ECON 11N	Understanding the Welfare System	3
SOC 135	Poverty, Inequality, and Social Policy in the United States	4

3. **Research Project:** Students must complete a research paper on poverty or inequality. Students are invited to join one of the ten CPI research groups and become involved in an ongoing CPI research project that might become the basis for their research paper. Alternatively, students write an independent research paper rather than joining a CPI Research Group. The research paper may either take the form of a research proposal or an empirical research project based on quantitative or qualitative methods. This paper should be completed while the student is enrolled in Independent Study with a CPI faculty affiliate (<http://www.stanford.edu/group/scspi>).
4. **Additional Elective:** Students must take an elective course with a poverty or inequality focus. This requirement may be satisfied by taking an additional foundation course from the list provided above or by taking any of the preapproved elective courses listed below. Additionally, other unlisted courses addressing issues of poverty and inequality may also satisfy this requirement, although such courses require CPI approval (which is requested by submitting the Course Approval Form (<http://www.stanford.edu/group/scspi>)). It is recommended that approval be secured in advance of taking an unlisted course. If a new applicant to the certificate program wishes to count a completed course toward the requirements, that should be indicated on the application form and, if necessary, the Course Approval Form (<http://www.stanford.edu/group/scspi>) should be filled out).

Units

Preapproved Elective Courses

Poverty

EARTHSYS 106	World Food Economy	5
ECON 11N	Understanding the Welfare System	3
ECON 106	World Food Economy	5
SOC 135	Poverty, Inequality, and Social Policy in the United States	4

Educational Access and Achievement

ECON 146	Economics of Education	5
EDUC 102	Examining Social Structures, Power, and Educational Access	3
EDUC 173	Gender and Higher Education: National and International Perspectives	4
EDUC 181	Multicultural Issues in Higher Education	4
EDUC 221A	Policy Analysis in Education	4-5

EDUC 232	Culture, Learning, and Poverty	2-3
FEMST 173		
SOC 132	Sociology of Education: The Social Organization of Schools	4
SOC 134	Education, Gender, and Development	4
SOC 173	Gender and Higher Education: National and International Perspectives	4
Income Inequality		
AMSTUD 50N	The Literature of Inequality: Have and Have-Nots from the Gilded Age to the Occupy Era	3
POLISCI 127P	Economic Inequality and Political Dysfunction	5
SOC 14N	Inequality in American Society	4
SOC 117D	Recognizing Inequality	3
SOC 141	Controversies about Inequality	5
Social Mobility		
EDUC 102	Examining Social Structures, Power, and Educational Access	3
SOC 144	Inequality and the Workplace	5
Safety Net		
ECON 11N	Understanding the Welfare System	3
PUBLPOL 101	Politics and Public Policy	4-5
Recession and Recovery		
ECON 110	History of Financial Crises	5
SOC 114D	Sociology of the Great Recession	5
Spatial Segregation		
SOC 149	The Urban Underclass	4
Racial and Ethnic Income Inequalities		
CSRE 45Q	Understanding Race and Ethnicity in American Society	4
CSRE 145	Race and Ethnic Relations in the USA	4
NATIVEAM 139	American Indians in Contemporary Society	4
SOC 45Q	Understanding Race and Ethnicity in American Society	4
SOC 46N	Race, Ethnic, and National Identities: Imagined Communities	3
SOC 139	American Indians in Contemporary Society	4
SOC 145	Race and Ethnic Relations in the USA	4
SOC 148	Comparative Ethnic Conflict	4
Discrimination and the Labor Market		
ECON 11N	Understanding the Welfare System	3
ECON 118	Development Economics	5
ECON 145	Labor Economics	5
SOC 142	Sociology of Gender	3
SOC 144	Inequality and the Workplace	5
Poverty, Inequality, and Mobility among Hispanics		
CHILATST 125S	Chicano/Latino Politics	5
POLISCI 125S	Chicano/Latino Politics	5
SOC 165	Seminar on the Everyday Lives of Immigrants	5
SOC 166	Mexicans, Mexican Americans, and Chicanos in American Society	5

technical and conceptual skills as well as to strengthen their position in the competitive job market within and beyond the academy. The certificate program has been established as a pilot program from 2014-17.

Completion of the program results in a Certificate, signed by the CESTA director and the chair of the doctoral student's home department.

The Graduate Certificate in Digital Humanities is issued by the Center for Spatial and Textual Analysis (CESTA) and will not appear on any University record, including the student's transcript.

Contact

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 Mail Code: 94305-2084
 Phone: (650) 721-1385. Fax: (650) 725-5916
 Email: mattbryant.stanford@gmail.com
 Web Site: <http://cesta.stanford.edu>

Staff

Core Faculty: Mark Algee-Hewitt, Franco Moretti, Richard White, Dan Edelstein, Paula Findlen, Giovanna Ceserani, Walter Scheidel, Elaine Treharne, Amir Eschel, Zephyr Frank

Affiliated CESTA Faculty: Allyson Hobbs, Edith Scheffer, Caroline Winterer, Mark McGurl, Ana Minian, Mikael Wolfe.

CESTA Staff, Affiliates, and others: Celena Allen (GIS), Erik Steiner (visualization design and cartography), Ryan Heuser (programming), Nicole Coleman (information design and visualization), Jason Heppler (digital history), Elijah Meeks (information design), Karl Grossner (information design and cartography).

Admission

Admission to the program is on a rolling basis, and students may apply at any time. Submit a letter of interest and any supporting information to CESTA Lab Manager Matt Bryant (mattbryant.stanford@gmail.com) at mattbryant.stanford@gmail.com. For more information about the new GDCH program or CESTA in general, see the program's web site (<http://cesta.stanford.edu/gcdh>) or contact Matt Bryant (mattbryant.stanford@gmail.com) at mattbryant.stanford@gmail.com.

Course work

Students wishing to take part in the first cohort starting in 2014-15 and thereafter are expected to complete one GCDH-approved graduate core course for a letter grade, and one additional approved elective course. The approved core courses for the first year of the program are:

- HISTORY 401A
- ENGLISH 303C
- DLCL 396 Humanities+Design: Visualizing the Grand Tour (same as CLASSICS 396, HISTORY 336E)

Students who have completed any of the core courses, or equivalent courses taught by members of the program, in past years are eligible to move to the next step in the GCDH program.

Following or concurrent with the completion of the required core course, students must complete the following two certificate components:

1. Additional course work (1 or more classes, may be taken credit/no credit, and must be approved in advance by the committee in charge) in computer science, information design, statistics, network analysis, linguistics, or other fields approved by the student's supervisor and the CESTA committee in charge. A list of course recommendations is forthcoming.
2. One of the following:

Graduate Certificate in Digital Humanities

Overview

The Center for Spatial and Textual Analysis (CESTA) offers a Graduate Certificate in Digital Humanities (GCDH) to meet a growing need among the humanities for training in digital methods by leveraging existing resources at Stanford University. The Graduate Certificate in Digital Humanities allows graduate students to acquire and deepen their

- Independent research project and portfolio including a finished project which is evaluated and approved by an Academic Council supervisor and accepted as an affiliated project in one of CESTA's labs. The duration of such projects must be a minimum of one academic quarter. Students may take up to 5 units of credit of directed reading for the purpose of completing the independent research project. Final projects are included in the student's ePortfolio and published on the CESTA web site.
- Supervised collaborative research in a CESTA lab with the expectation that the student's participation culminates in a digital humanities product substantially of the authorship of the student; this must be a minimum of two quarters in duration. The student's portion of the research is included in the ePortfolio and published on the CESTA web site.

Freeman Spogli Institute for International Studies (FSI)

Contacts

Office: Encina Hall Center, First Floor, 616 Serra Street
 Mail Code: 94305-6055
 Phone: 650-723-4581 / Fax 650-725-2592
 Web Site: <http://fsi.stanford.edu/>

The Freeman Spogli Institute for International Studies (FSI) provides opportunities for undergraduate research through the CDDRL Undergraduate Honors Program and the CISAC Interschool Honors Program in International Security Studies.

Interschool Honors Program in Democracy, Development, and the Rule of Law

Director: Stephen J. Stedman

The Center on Democracy, Development, and the Rule of Law (CDDRL) Undergraduate Senior Honors Program provides students majoring in any Stanford academic department the opportunity to conduct an independent honors thesis focused on the fields of democracy, development, and the rule of law. Students are required to complete a three quarter long honors research seminar that begins Spring Quarter of the junior year. They will spend the last quarter of the senior year working independently with their faculty adviser to complete and submit their honors thesis ahead of their formal defense in mid-May. Upon fulfilling individual department course requirements and completing the honors program, students graduate with a certificate in Honors in Democracy, Development, and the Rule of Law.

Students interested in the program consult with their prospective honors advisers in their junior year to determine the tentative thesis topic, which should have some degree of policy relevance. Prerequisites for the program include; a 3.5 grade-point average at the time they apply; a strong overall academic record; sufficient depth and breadth in the fields of democracy, economic and social development, rule of law, and human rights course work; and demonstrated skills in writing and conducting independent research.

Students are required to attend honors college in Washington, D.C. in September before Autumn Quarter classes begin. Applicants are discouraged from studying abroad during the duration of the CDDRL Undergraduate Honors program.

Required Course Work

Two courses that explore the areas of democracy, development, and the rule of law to be approved by the faculty director. CDDRL's flagship undergraduate lecture course taught during Autumn Quarter, which

ideally should be completed before the student enters the honors program. DDRL Honors Research Methods Seminars meet on a weekly basis to present their project theses and receive feedback.

Typical Schedule for CDDRL Honors Program

Junior	Units		
	Autumn	Winter	Spring
Select one of the following:		5	
Democracy, Development, and the Rule of Law (INTNLREL 114D)			
Democracy, Development, and the Rule of Law (POLISCI 114D)			
DDRL 189 Honors Research Methods			3
Year Total:		5	3

Senior	Units		
	Autumn	Winter	Spring
DDRL 190 Honors Research Workshop		3	
DDRL 190 Honors Research Workshop			3
DDRL 191 Independent Study (Optional) ¹			
Year Total:		3	3

Total Units in Sequence:			14
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¹ Optional any quarter during senior year for 1-5 units, repeatable once for credit.

Admitted students must be able to fulfill all course requirements in their individual majors by the time they graduate, in addition to the units required for the honors program. For more information, contact Alice Kada, CDDRL Administrative Manager at akada@stanford.edu or go to <http://cddrl.stanford.edu/>.

Interschool Honors Program in International Security Studies

Co-Directors: Coit D. Blacker, Amy Zegart

The Center for International Security and Cooperation (CISAC) coordinates a University-wide Interschool Honors Program in International Security Studies. Students chosen for the honors program intern with a security-related organization, attend the program's honors college in Washington, D.C., in September, participate in a year-long core seminar, and under the direction of a faculty advisor produce an honors thesis relevant to international security policy. Upon fulfilling individual department course requirements and completing the honors program, students graduate in their major with the award of Honors in International Security Studies. To be considered for the program, students must demonstrate sufficient depth and breadth of international security course work.

			Units
Successful applicants to the program are expected to have taken:			
MS&E 193	Technology and National Security		3
POLISCI 114S	International Security in a Changing World		5
and at least one related course such as			4-5
ECON 106	World Food Economy		5
HISTORY 103F	The Changing Face of War: Introduction to Military History		5
HISTORY 204E			4-5
HUMBIO 129S	Global Public Health		4
INTNLREL 114D	Democracy, Development, and the Rule of Law		5
INTNLREL 140A	International Law and International Relations		5
LAW 5013	International Law (formerly LAW 479)		4
MS&E 93Q	Nuclear Weapons, Energy, Proliferation, and Terrorism		3

MS&E 190	Methods and Models for Policy and Strategy Analysis	3
MS&E 295	Energy Policy Analysis	3
POLISCI 42Q	The Rwandan Genocide	5
POLISCI 110D	War and Peace in American Foreign Policy	5
POLISCI 116	The International History of Nuclear Weapons	5
PUBLPOL 101/ POLISCI 102	Politics and Public Policy	4-5
PUBLPOL 102	Organizations and Public Policy	4-5
SOC 160	Formal Organizations	4

Students in the program enroll in IIS 199 Interschool Honors Program in International Security Studies, in Autumn, Winter, and Spring quarters for 3-5 credits for quarter (9-12 total credits). Information about and applications to this program may be obtained from the Center for International Security and Cooperation, C206-10, Encina Hall Central, telephone (650) 725-5365 or http://cisac.stanford.edu/docs/undergraduate_honors_program.

Center for Space Science and Astrophysics

Emeriti: (Professors) Robert Cannon, (Professors, Research) Donald L. Carpenter, Aldo V. daRosa, Daniel B. DeBra, W.Gary Ernst, Von R. Eshleman, Antony Fraser-Smith, Robert A. Helliwell, Bruce B. Lusignan, Ronald J. P. Lyon, Laurence A. Manning, Bradford W. Parkinson, J. David Powell, Peter A. Sturrock, G. Leonard Tyler, Robert V. Wagoner

Director: Roger W. Romani

Associate Directors: Umran S. Inan, Philip H. Scherrer

Professors: Roger Blandford (Physics, SLAC), Elliot Bloom (SLAC), Lambertus Hesselink (Electrical Engineering), Umran S. Inan (Electrical Engineering), Steven Kahn (Physics, SLAC), Tune Kame (SLAC), Peter F. Michelson (Physics), Vahé Petrosian (Physics), Roger W. Romani (Physics), Norman H. Sleep (Geophysics), Guenther Walther (Statistics), Howard Zebker (Electrical Engineering, Geophysics)

Associate Professors: Tom Abel (Physics, SLAC), Steve Allen (Physics, SLAC), Sarah Church (Physics),

Assistant Professors: Stefan Funk (Physics, SLAC), Chao-Lin Kuo (Physics, SLAC), Risa Wechsler (Physics, SLAC)

Professors (Research): C-W. Francis Everitt (HEPL), Philip H. Scherrer (Physics)

SLAC Staff Physicist: Grzegorz Madejski

Center Offices: Varian, Room 340

Mail Code: 94305-4060

Phone: (650) 723-1439

Email: danav@stanford.edu

Web Site: <http://www.stanford.edu/dept/astro>

The Center for Space Science and Astrophysics is an interdepartmental organization coordinating research in space science and astrophysics. Its members are drawn from the Department of Geological and Environmental Sciences in the School of Earth Sciences; the departments of Aeronautics and Astronautics, Electrical Engineering, and Mechanical Engineering in the School of Engineering; the departments of Applied Physics, Physics, and Statistics in the School of Humanities and Sciences; the W. W. Hansen Experimental Physics Laboratory; and the SLAC National Accelerator Laboratory. Its membership also

includes all faculty and appropriate staff at the Kavli Institute for Particle Astrophysics and Cosmology, located at SLAC and the Physics department.

The facilities of the center are available to any interested and qualified student, who must be admitted by and registered in a department. The departments of Aeronautics and Astronautics, Applied Physics, Electrical Engineering, Mechanical Engineering, and Physics offer opportunities leading to an M.S. or Ph.D. degree for work in space science or astrophysics. The center also offers opportunities to undergraduates who may, for instance, participate in research projects in their junior or senior years, on a part-time basis during the school year or on a full-time basis during the summer. The Astronomy Course Program operates a small student observatory where students may gain practical experience in astronomical observing.

Other Academic Programs and Centers, and Independent Research Laboratories, Centers, and Institutes

- Hoover Institution on War, Revolution and Peace, <http://www.hoover.org>
- SLAC National Accelerator Laboratory (SLAC), <http://www.slac.stanford.edu>
- Stanford Synchrotron Radiation Laboratory (SSRL), <http://ssrl.slac.stanford.edu>