



SUSTAINABILITY COURSE INVENTORY 2018

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INTRODUCTION

Through its research, teaching, and operational practices, Penn is dedicated to promoting a sustainable culture and implementing environmentally conscious policies. Five years after releasing its original *Climate Action Plan*, the University of Pennsylvania announced the launch of *Climate Action Plan 2.0* in October 2014. *Climate Action Plan 2.0* is a roadmap for environmental improvement and campus sustainability.

Some of the most significant achievements of the *Climate Action Plan* have come inside the classroom. Penn now offers more than 300 courses related to sustainability. The Integrating Sustainability Across the Curriculum program has incorporated sustainability into 41 courses through the collaboration of 48 faculty and 24 students over the past three years. Other programs and degree offerings, including a Sustainability & Environmental Management minor, a Master in Environmental Building Design, and the Vagelos Integrated Program in Energy Research, have furthered Penn's goal of integrating sustainability into coursework.

This inventory highlights and advances this goal of expanding the awareness and availability of information about sustainability courses at Penn. The guide is organized alphabetically by School and then by Department with cross-listed courses in grey italics. Please consult the course catalog for full descriptions of the courses and Penn InTouch's course registration site to confirm that the course is currently being offered.

This is not an exhaustive list of all the sustainability related courses at Penn, but covers the majority across a range of Departments and Schools. Please advise Penn Sustainability about any missing courses, updates, or revisions (sustainability@upenn.edu).

The inventory was first compiled in 2012. It was updated in August 2015 by searching “sustain”, “green”, “preservation”, “conservation”, “urban”, “energy”, “transportation” and “waste” in the PennInTouch Course Search, and finding relevant classes.

NB. Classes listed as 500 or higher are graduate level classes, and if they are open to undergraduate students may require special permission from the instructor.

The Sustainability Course Inventory was prepared by the Penn Sustainability Office. Please direct any comments, updates, revisions, or suggestions to sustainability@upenn.edu with “Penn Sustainability Course Inventory” in the subject line.

Please consider the environment before choosing to print this document.

Last update: February 2018

COURSE ABBREVIATIONS

AAMW	Art & Archaeology of the Mediterranean World	DEMG	Demography
ACCT	Accounting	DTCH	Dutch
AFST	African Studies Program	DYNM	Organizational Dynamics
AFRC	Africana Studies	EESC	Earth and Environmental Science
AMCS	Applied Math & Computational Science	EALC	East Asia Languages & Civilizations
ANAT	Anatomy	ECON	Economics
ANCH	Ancient History	EDUC	Education
ANEL	Ancient Near East Languages	ESE	Electrical & Systems Engineering
ANTH	Anthropology	EAS	Engineering and Applied Science
ARAB	Arabic	ENGL	English
ARCH	Architecture	ENM	Engineering Mathematics
ARTH	Art History	ENVS	Environmental Studies
ASAM	Asian American Studies	EPID	Epidemiology
ALAN	Asian Languages	FNCE	Finance
ASTR	Astronomy & Astrophysics	FNAR	Fine Arts
BCHE	Biochemistry (Undergraduate)	FOLK	Folklore
BMB	Biochemistry and Molecular Biophysics (Graduate)	FREN	French
BE	Bioengineering	GAS	Graduate Arts & Sciences
BIOE	Bioethics (Medical Ethics)	GSWS	Gender, Sexuality & Women's Studies
BIOM	Biomedical Graduate Studies	GCB	Genomics and Computational Biology
BIBB	Biological Basis of Behavior	GRMN	Germanic Languages
BIOL	Biology	GAFL	Government Administration
BIOT	Biotechnology	GEOL	Geology
BSTA	Biostatistics	GREK	Greek
BPUB	Business & Public Policy	HEBR	Hebrew
CAMB	Cell and Molecular Biology	HSOC	Health and Societies
CBE	Chemical & Biomolecular Engineering	HCMG	Health Care Management
CHEM	Chemistry	HIST	History
CHIN	Chinese	HPR	Health Policy Research
CINE	Cinema Studies	HSPV	Historic Preservation
CPLN	City & Regional Planning	HSSC	History and Sociology of Science
CLST	Classical Studies	IMUN	Immunology
COGS	Cognitive Science	INSR	Insurance & Risk Management
COLL	College	IPD	Integrated Product Design
COMM	Communications	INTR	International Relations
COML	Comparative Literature & Literary Theory	ITAL	Italian
CIS	Computer & Information Science	JPAN	Japanese
CIT	Computer & Information Technology	JWST	Jewish Studies
CRIM	Criminology	KORN	Korean
		LARP	Landscape Architecture and Regional Planning
		LATN	Latin

COURSE ABBREVIATIONS

LALS	Latin American and Latino Studies	SOCI	Sociology
LAW	Law	SAST	South Asia Studies
LGST	Legal Studies & Business Ethics	SPAN	Spanish
LING	Linguistics	STAT	Statistics
LGIC	Logic, Information and Computation	TCOM	Telecommunications
MGMT	Management	THAR	Theater Arts
MKTG	Marketing	TURK	Turkish
MKSE	Market and Social Systems	URBS	Urban Studies
MSSP	Master in Social Policy	VLST	Visual Studies
MSE	Materials Science and Engineering	YDSH	Yiddish
MATH	Mathematics		
MEAM	Mechanical Engineering and Applied Mechanics		
MSCI	Military Science		
MUSA	Urban Spatial Analytics		
MUSC	Music		
NANO	Nanotechnology		
NELC	Near Eastern Languages & Civilizations		
NGG	Institute of Neurological Science		
NPLD	Nonprofit/NGO Leadership		
NSCI	Naval Science		
NURS	Nursing		
OPIM	Operations & Information Management		
PERS	Persian		
PHRM	Pharmacology		
PHIL	Philosophy		
PPE	Philosophy, Politics, and Economics		
PHYS	Physics		
PRTG	Portuguese		
PSCI	Political Science		
PSYC	Psychology		
PUBH	Public Health Studies		
REAL	Real Estate		
RELS	Religious Studies		
ROML	Romance Languages		
RUSS	Russian		
SCND	Scandinavian Languages		
STSC	Science Technology & Society		
SLAV	Slavic Languages including other Eastern European Languages		
SWRK	Social Policy and Practice		

INTEGRATING SUSTAINABILITY ACROSS THE CURRICULUM

Integrating Sustainability Across the Curriculum (ISAC) Program was established in 2012 to help Penn faculty introduce environmental sustainability into existing and new courses. Faculty participants explore sustainability concepts at a one-day workshop in the late spring, and then are partnered with an undergraduate student research assistant to work over the summer integrating sustainability into the course syllabi, lectures, assignments, reading material, and tests. More information about ISAC can be found here: <http://www.upenn.edu/sustainability/get-involved/integrating-sustainability-across-curriculum>

Below are the courses that have participated in ISAC:

Course Number	Course Title	Professor/Instructor
ANTH 415	Archeology of Animals	Moore
ANTH 440	Plans and Society	White
ARCH 111	Architecture in the Anthropocene	Barber
ARCH 431 / 531	Construction Technology I	Trubiano
BIOL 376 / 576	Microbial Diversity and Pathogenesis Lab	Hogan
CHEM 012	Environmental Chemistry	Lester
CHEM 101	Introduction to Chemistry	Dmochowski
CHEM 251	Principles of Biochemistry	Saven
COMM 123	Critical Approaches to Popular Culture	Paxton
DYNM 555	Leadership and Sustainability: How to Engage in Collaborative Innovation	Garofalo / Nuessle
DYNM 615	Global Pennovation	Finn
EAS 301 / 505	Climate Policy and Technology	Huemmler
EAS 503-401	Energy Systems and Policy	Huemmler
ECON 001	Introduction to Microeconomics	Stein
EDUC	Educating for Sustainability	MacKenzie
EESC 327	Principles of Sustainability	Plante
ENVS 100	Introduction to Environmental Science	Plante

INTEGRATING SUSTAINABILITY ACROSS THE CURRICULUM

Course Number	Course Title	Professor/Instructor
ENVS 325	Sustainable Goods	Hagan
ENVS 400	Landscape Sustainability	Jerolmack
GRMN	Utopian Visions	Wiggin
HSPV 572	Preservation Through Public Policy	Hollenberg
LALS 233 / HIST 233	From Coca to Cocaine	Farnsworth
LGST 215/815	Environmental Management, Law and	Light
LGST 612	Policy Responsibility in Professional	Light / Orts
STSC 272	Services Energy in American History	Greene
URBS 225 / ARCH 255 / ENVS 255	Sustainability in Action	Hughes / Billhymer
URBS 290	Metropolitan Nature: Urban Sustainability	Nairn
URBS 417	Cities and Sustainability	Ben-Amos

SCHOOL OF ARTS AND SCIENCES

Course Number	Course Title	Professor/Instructor
AFST 620 ENVS 620	Topics on African Environmental Issues	Staff
ANTH 121 NELC 103 URBS 121	Origin and Culture of Cities	Zettler
ANTH 127 ARTH 127 CLST 127 HIST 127 NELC 187	The Material Past in a Digital World	Cobb
ANTH 133 LALS 133	Native Peoples and the Environment	Erickson
ANTH 294 URBS 293	Global Cities: Urbanization in Most of the World	Anand
ANTH 386	Culture, Consumption, and Production in the Global Marketplace	Digg-Thompson
ANTH 415	Archeology of Animals	Moore
ANTH 440	Plants and Society	White
ANTH 581	How Digital Humanities Can Help Save the Planet	Powell
ANTH 593	National & Cultural Heritage: A Global Perspective	Daniels
ARTH 127 ANTH 127 CLST 127 HIST 127 NELC 187	The Material Past in a Digital World	Cobb
BDS 516	Quantitative Modeling in the Decision and Social Sciences	Berger
BIOL 017	The Biology of Food	Poethig
BIOL 019	Biology and Public Policy	Hewitt
BIOL 138	Energy Transformation and Living Off-the-Grid	Rome
BIOL 140 BIOL 440	Humans and the Environment	Janzen
BIOL 240	Ecology: Individuals to Ecosystems	Helliker / Akcay
BIOL 325	Marine Biology	Petratis
BIOL 376 BIOL 576	Microbial Diversity and Pathogenesis Lab	Hogan
BIOL 400	Field Botany	Rhoads / Block
BIOL 411	Evolutionary Ecology	Linksvayer
BIOL 414	Advanced Ecology	Petratis / Casper
BIOL 415 ENVS 416 ENVS 640	Freshwater Ecology	Arscott

SCHOOL OF ARTS AND SCIENCES

Course Number	Course Title	Professor/Instructor
CHEM 012	Environmental Chemistry	Lester
CHEM 101	Introduction to Chemistry	Dmochowski
CHEM 251	Principles of Biochemistry	Saven
CLST 127 <i>ANTH 127</i> <i>ARTH 127</i> <i>HIST 127</i> <i>NECL 187</i>	The Material Past in a Digital World	Cobb
COML 209-401 <i>GRMN 239-401</i> <i>ENVS 239-401</i> <i>ENGL 275-401</i>	Sustainability and Utopia	Wiggin
COML 776 <i>LARP 770</i> <i>ITAL 371</i> <i>LARP 370</i>	Topics in Landscape Architecture History and Theory	Hunt / Giannetto
COMM 123 COMM 243 COMM 385	Critical Approaches to Popular Culture Ethnography and Media for Social Justice Media, Activism, and Social Change	Paxton Lingel Garry
DYNAM 555	Leadership and Sustainability: How to Engage in Collaborative Innovation	Nuessle / Garofalo
DYNAM 615	Global PENNOvation: Water Security in a Changing World	Finn
DYNAM 662-001	Entrepreneurship and Leadership: Creating Winners	Keech
DYNAM 663	Green Skepticism: Communicating and Implementing Sustainable Business	Heller
DYNAM 667 DYNAM 758-900, 901, 902	Building a Business Case for Sustainability Sweden: Strategies for the 21st Century	Barstow Barstow
DYNAM 759 DYNAM 781	Sweden: Sustainable Development & the Natural Step Dynamic Hub of the Americas: Entrepreneurship and Sustainable Development in Panama	Barstow Staff
EESC 095 EESC 237	Risk Communication and the Environment Principles of Sustainability	Osterhoudt Plante

SCHOOL OF ARTS AND SCIENCES

Course Number	Course Title	Professor/Instructor
ECON 001 ECON 237	Introduction to Microeconomics Urban Fiscal Policy	Stein Sieg
ENGL 206-302 ENGL 275-401 <i>ENVS 239-401</i> <i>COML 209-401</i> <i>GRMN 239-401</i>	Poetry and the Environment Sustainability and Utopia	Slater Wiggin
ENGL 282 <i>ENVS 246</i> <i>RELS 246</i>	Spirituality in the Age of Global Warming	Powell
ENGL 584 <i>FOLK 575</i> <i>HSSC 575</i>	Environmental Imaginaries	Hufford
ENVS 098	The Next Millennium: Would Technology Help Us Resolve the Environmental Dilemma	Bokreta / Santiago-Alives
ENVS 150 <i>HIST 320</i> <i>HSOC 170</i> <i>STSC 179</i>	Water Worlds	Richter
ENVS 179 <i>HIST 320</i> <i>HOSC 179</i> <i>STSC 179</i>	Environmental History	Greene
ENVS 181-950 <i>GRMN 181-950</i>	Comparative Cultures of Sustainability	Richter
ENVS 200 ENVS 204 ENVS 239-401 <i>COML 209-401</i> <i>GRMN 239-401</i> <i>ENGL 275-401</i>	Introduction to Environmental Earth Science Global Climate Change Sustainability and Utopia	Plante Horton / Marinov Wiggin
ENVS 246 <i>HSSC 272</i> <i>STSC 272</i>	Spirituality in the Age of Global Warming	Powell
ENVS 272 ENVS 301 ENVS 305 ENVS 312	Energy in American History Environmental Case Studies Bioremediation Ocean-Atmosphere Dynamics and Implications for Future Climate Change	Greene Dmchowski Vann Marinov
ENVS 325 ENVS 325 ENVS 327 ENVS 400	Sustainable Goods GIS Mapping Place and Analyzing Space Principle Sustainability Environmental Studies Seminar: Landscape Sustainability	Hagan Heinlen Plante Jerolmack

SCHOOL OF ARTS AND SCIENCES

Course Number	Course Title	Professor/Instructor
ENVS 400	Environmental Studies Seminar: Estuary Sustainability	Pepino
ENVS 400-305	Environmental Policy	Kulik
<i>HSOC 404</i>		
ENVS 404	Urban Environments: Speaking About Lead in West Philadelphia	Klinger / Kutcher / Pepino
<i>HSOC 408</i>		
ENVS 408	Urban Environments: The Urban Asthma Epidemic	Pepino
ENVS 410	Clean Water – Green Cities	Neurkrug
ENVS 411	Air Pollution: Sources and Effects in Urban Environments	Howarth / Andrews
<i>BIOL 415</i>		
<i>ENVS 640</i>		
ENVS 413	Corporate Sustainability Management & Communications	Hagan / English
<i>ENVS 676-600</i>		
ENVS 416	Freshwater Ecology	Arcscott
<i>BIOL 415</i>		
<i>ENVS 640</i>		
ENVS 494	Toward Environmental Sustainability on Penn's Campus	Garofalo
ENVS 507	Wetlands	Willig
ENVS 541	Modeling Geographic Objects	Tomlin
ENVS 543	Environmental Humanities	Wigggin Bordeaux
ENVS 601	Proseminar: Contemporary Issues in Environmental Studies	Harper
ENVS 604	Conservation and Land Management	Willig
ENVS 607	Puerto Rico's Ecology	Kizuik
ENVS 609-660	Creating Gateways to the Land with Smarter Conservation	Keene
ENVS 611	Environmental Law	Kizuik
ENVS 612	Economics and the Environment	Heller/ Laskowski
ENVS 613	Business and the Natural Environment	
ENVS615	Professional Case Studies in Environmental Analysis and Management	Chu Kulik
ENVS 616	Managing Environmental Risks in an Uncertain World	Staff
ENVS 620	Developing Environmental Policy	
ENVS 620	How to Quantify Sustainable Practices in Business and Manufacturing	Staff
ENVS 620	Topics on African Environmental Issues	Lisa Feldman
<i>AFST 620</i>		
ENVS 622	Environmental Enforcement	
ENVS 623	Crossing Borders: Policy, Regulatory, and Management Issues in Transboundary Environmental Protection	Forren Harris / Thompson
ENVS 624-600	US Environmental Policy – An Analysis of NEPA	
ENVS 625	Overview of Environmental Justice: Issues, Actions, and Visions for the Future	Collier
ENVS 627	The Delaware River: An Environmental Case Study	Neukrug
ENVS 629	The US Water Industry in the 21 st Century	Laskowski

SCHOOL OF ARTS AND SCIENCES

Course Number	Course Title	Professor/Instructor
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ENVS 631	Current EPA Regulatory Practices and Future Directions	Laskowski
ENVS 634	Closing the Loop on Climate Change	Chu
ENVS 635	Major Global Environmental Problems of Today and How We Must Deal with Them Tomorrow	Laskowski
ENVS 637	Global Water Issues	Laskowski
ENVS 658	Global Water Policy and Governance	Laskowski
ENVS 639	Policy to Practical in Environmental Management: Water Issues	Laskowski
ENVS 640	Ocean-Atmosphere Dynamics and Implications for Future Climate Change	Marinov
ENVS 644	Energy, Waste, and Environment	Giere/ Bathala/ Mikulska
ENVS 645	Energy Geopolitics of Eurasia	Kulik
ENVS 647	Urban Ecology	Blaine
ENVS 648-660	Issues in Food and Agriculture Policy	Kulik
ENVS 652	God, Gold, & Green: Themes and Classics in American Environmental Thought	Laskowski
ENVS 656	Environmental Futures	Berman
ENVS 657	Hazardous Waste and Health Effects	Berman
ENVS 662	Green Design and the City	Hagan
ENVS 664	Sustainable Design	Hagan
ENVS 667-401	Sustainable Goods	Survis
ENVS 667-660	Introduction to Sustainability	Keene
ENVS 669	Corporate Sustainability	Freedman
ENVS 671	Sustainable Development Strategies	Keene
ENVS 673	The Future of Water	McCann
ENVS 674	Assessment and Remediation of the Environment Using Biological Organisms	Vann
ENVS 684	Ecology, Management, and Advocacy of Urban Forests	Willig

FOLK 575 ENGL 584 HSSC 575	Environmental Imaginaries	Hufford
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GSWS 007	Population and Society	Staff
GSWS 122-401	Sociology of Gender	Leidner

SCHOOL OF ARTS AND SCIENCES

Course Number	Course Title	Professor/Instructor
GEOL 096	Field Approaches to Understanding Earth and Environmental Science	Staff
GEOL 100	Introduction to Geology	Omar
GEOL 103	Natural Disturbances and Disasters	Phipps
GEOL 109	Introduction to Geotechnical Science	Omar
GEOL 130	Oceanography	Bordeaux
GEOL 201	Mineralogy	Omar
GEOL 201	Global Climate Change	Marinov
GEOL 205	Paleontology	Sallan
GEOL 206	Stratigraphy	Jerolmack
GEOL 305	Earth Surface Processes	Jerolmack
GEOL 318	Glaciers, Ice, and Climate	Goldsby
GEOL 405	Advanced Paleontology	Sallan
GEOL 409	Introduction to Remote Sensing	Dmchowski
GEOL 418	Geochemistry	Omar
GEOL 419	Coasts	Horton
GEOL 421	Biogeochemistry	Plante
GEOL 478	Evolution of the Dinosaurs	Dodson
GEOL 500	Advanced Earth Systems	Phipps
GEOL 503	Earth Systems and Earth Hazards	Phipps
GEOL 508	Advanced Stratigraphy	Jerolmack
GEOL 509	Introduction to Remote Sensing	Dmochowski
GEOL 519	Evolution/Revolution of Land Ecosystems	Mimichele / Wing
GEOL 531	Advanced Mineralogy	Omar
GEOL 541	Advanced Biogeochemistry	Plante
GEOL 542	Data Analysis in Earth Science	Jerolmack
GEOL 545	Earth Surface Processes	Jerolmack
GEOL 618	Fundamentals of Air Pollution	Andrews
GEOL 631	Reconstructing Former Seal Levels	Horton
GEOL 636	Quantitative Paleoclimatology	Staff
GEOL 637	Recent Climate Change	Staff
GEOL 640	Environmental Investigations and Reporting	Saunder / Mastrapaolo
GEOL 650	Environmental Due Diligence	Cron
GEOL 651	Geocomputations	Mastrapaolo
GEOL 652	Physical Geology for Environmental Professionals	Doheny
GEOL 653	Introduction to Hydrology	Sauder
GEOL 654	Geomechanics: Solids	Duda
GEOL 655	Engineering Geology	Calabria
GEOL 656	Fate and Transport Pollutants	Mastrapaolo
GEOL 667	Landfill Design	Calabria
GEOL 670	Engineering Geology: Rock Mechanics	Freed
GEOL 696	Advanced Geologic Field Methods	Cron
GEOL 760	Topics in Earth Science	Goldsby

SCHOOL OF ARTS AND SCIENCES

Course Number	Course Title	Professor/Instructor
GRMN 181-950 <i>COML 209-401</i> <i>ENGL 275-401</i> <i>ENVS 329-401</i>	Comparative Cultures of Sustainability	Richter
GRMN 239-401 GRMN	Sustainability and Utopia Utopian Visions	Wiggin Wiggin
HSSC 271 <i>ENVS 272</i> <i>STSC 272</i>	Law, Environment, and Technology	Staff
HSSC 272 <i>ENGL 584</i> <i>FOLK 575</i>	Energy in American History	Staff
HSSC 575	Environmental Imaginaries	Hufford
HSOC 003 HSOC 131-910 <i>PSCI 135</i>	Technology and Society Sustainability and Public Health	Cowan / Ensmenger Mackenzie
HSOC 135 <i>ENVS 129</i> <i>HIST 320</i> <i>STSC 179</i>	The Politics of Food	Summers
HSOC 179 <i>SCST 312</i>	Environmental History	Greene
HSOC 312 <i>ENVS 404</i>	Weapons of Mass Destruction	Lindee
HSOC 404 <i>ENVS 408</i>	Urban Environments: Speaking About Lead in West Philadelphia	Pepino
HSOC 408	Urban Environments: The Urban Asthma Epidemic	Pepino
HIST 037 HIST 107 <i>ANTH 127</i> <i>ARTH 127</i> <i>CLST 127</i> <i>NELC 187</i>	Europeans & Environment Comparative Capitalist Systems	Pritchard Drew
HIST 127 <i>URBS 178</i>	The Material Past in a Digital World	Cobb
HIST 173 <i>URBS 103</i>	Urban University Relations: Faculty-Student Collaborative Action in Urban University Relations	Harkavy
HIST 209 <i>LALS 233</i>	Industrial Metropolis	Vitiello
HIST 233 <i>ENVS 179</i> <i>HSOC 179</i>	From Coca to Cocaine	Farnsworth

SCHOOL OF ARTS AND SCIENCES

Course Number	Course Title	Professor/Instructor
<i>STSC 179</i> HIST 320	Environmental History	Greene
<i>SOCI 420</i> <i>URBS 420</i> HIST 440	Perspectives on Urban Poverty	Fairbanks
<i>ANTH 121</i> <i>URBS 121</i>		
ITAL 371 <i>COML 776</i> <i>LARP 370</i> <i>LARP 770</i>	Topics in Landscape Architecture History and Theory	Hunt / Gianetto
LALS 133 <i>ANTH 133</i>	Native Peoples and the Environment	Erickson
LALS 233 <i>HIST 233</i>	From Coca to Cocaine	Fansworth
NELC 103 NECL 187 <i>ANTH 127</i> <i>ARTH 127</i> <i>CLST 127</i> <i>HIST 127</i>	Origin and Culture of Cities The Material Past in a Digital World	Zettler Cobb
PHIL 079	Environmental Ethics	Staff
PHYS 016	Energy, Oil, and Global Warming	Sweeney
PSCI 135 PSCI 136 PSCI 154 PSCI 398-302 PSCI 398-303 <i>GSWS 007</i> <i>URBS 265</i>	The Politics of Food Urban Politics in the US Politics of Global Environment PIW: The US Presidency: Limits on the Give Executive Power PIW: Today's Diplomacy: How Does it Really Work?	Summers Reed Staff Rodriguez Denburg
RELS 246 <i>ENG 282</i> <i>ENVS 246</i>	Spirituality in the Age of Global Warming	Powell
SOCI 007 <i>URBS 010</i>	Population and Society	Staff
SOCI 041 <i>HIST 440</i> <i>URBS 420</i>	Homelessness and Urban Inequality	Culhane
SOCI 420 <i>URBS 457</i>	Perspectives on Urban Poverty	Fairbanks

SCHOOL OF ARTS AND SCIENCES

Course Number	Course Title	Professor/Instructor
SOCI 435 <i>URBS 453</i>	Globalization and the City	Deuskar
SOCI 453	Metropolitan Growth and Policy	Madden
STSC 168 STSC 179 <i>ENVS 179</i> <i>HIST 320</i> <i>HSOC 179</i>	Environment and Society Environmental History	Crnic Greene
STSC 272 <i>ENVS 272</i> <i>HSSC 272</i>	Energy in American History	Staff
STSC 312 <i>HSOC 312</i>	Weapons of Mass Destruction	Lindee
URBS 010 URBS 103 <i>HIST 209</i>	Homelessness and Urban Inequality Industrial Metropolis	Culhane Vitiello
URBS 121 <i>ANTH 121</i> <i>NECL 103</i>	Origin and Culture of Cities	Zettler
URBS 178 <i>HIST 173</i>	Urban University-Community Relations: Faculty-Student Collaborative Action in the Urban University Community Relations	Harkavy
URBS 225 <i>ARCH 225</i> <i>ENVS 225</i>	Sustainability in Action	Hughes / Billhymer
URBS 265 <i>GSWS 007</i> <i>SOCI 007</i>	Population and Society	Staff
URBS 270 <i>CPLN 676</i>	The Immigrant City	Vitiello
URBS 290 URBS 294 <i>ANTH 294</i>	Metropolitan Nature: Urban Sustainability Global Cities Urbanization in Most of the World	Narin Anand
URBS 390 URBS 417	Urban Agriculture Cities and Sustainability: Policies and Projects for Making Cities Greener	Narin Ben-Amos
URBS 419 URBS 420 <i>HIST 440</i> <i>SOCI 420</i>	Transportation in American Society Perspectives on Urban Poverty	Ben-Amos Fairbanks
URBS 440 <i>CPLN 500</i>	Introduction to City and Regional Planning: Past and Present	Vitiello

SCHOOL OF ARTS AND SCIENCES

Course Number	Course Title	Professor/Instructor
URBS 450	Urban Redevelopment	Rachlin
URBS 451	The Politics of Housing and Urban Development	Kromer
<i>CPLN 625</i>		
URBS 452	Community and Economic Development	Lamas
URBS 453	Metropolitan Growth and Poverty	Madden
<i>SOCI 453</i>		
URBS 457	Globalization and the City	Deuksar
<i>SOCI 435</i>		
URBS 463	Brownfield Remediation: The Historical, Scientific, and Policy Dimensions of Brownfields in Old Industrial Cities	Keene
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VIPR 120	Vagelos Integrated Program in Energy Research (VIPER) Seminar, Part I	Vohs/ Rappe/ Hughes
VIPR 121	Vagelos Integrated Program in Energy Research (VIPER) Seminar, Part II	Vohs/ Rappe/ Hughes
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WRIT 076	Urban Planning Utopias / Green Cities	Staff

SCHOOL OF DESIGN

Course Number	Course Title	Professor/Instructor
ARCH 111	Architecture in the Anthropocene	Barber
ARCH 225	Sustainability in Action	Hughes / Billhymer
<i>ENVS 225</i>		
<i>URBS 225</i>		
ARCH 411	Topics in Theory and Design - Designing with Risk	Staff
<i>ARCH 711</i>		
<i>LARP 780</i>		
<i>CPLN 673</i>		
ARCH 431	Construction 1	Trubiano
<i>ARCH 531</i>		
ARCH 433-401	Environmental Systems 1	Mostapha / Sadghipour / Roudsari
ARCH 534	Environmental Systems 2	Braham
ARCH 671-001	Professional Practice 1	Ryan
ARCH 708	Environmental Design Laboratory	Staff
ARCH 732-001	Technology Designated Elective: Daylighting	Zofchak
ARCH 732-002	Technology Designated Elective: Material and Structural Intelligence	Nicol
ARCH 734	Dimensions of Sustainability	Martin
ARCH 751	Ecology, Technology and Design	Braham
ARCH 752	Integrated Building Design	Staff
ARCH 753	Building Performance Simulation	Staff
ARCH 754	Performance Design Workshop	Yi
ARCH 756	Sustainable Urban Forms	Staff
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CPLN 500	Introduction to City and Regional Planning: Past and Present	Vitiello
<i>URBS 440</i>		
CPLN 504	Site Planning	Staff
CPLN 505	Planning by Numbers	Ryerson
CPLN 508	Urban Research Methods	Rodriguez / Landis
CPLN 510	Urban Planning and Theory	Lanids
CPLN 520	Introduction to Community and Economic Development	Servon
CPLN 530	Introduction to Land Use Planning	Daniels
CPLN 531	Introduction to Environmental Planning and Policy	Daniels
CPLN 540	Introduction to Property Development	Landis
CPLN 550	Introduction to Transportation Planning	Guerra
CPLN 571	Sensing the City	Lassiter
CPLN 590	Spatial Analysis for Urban and Environmental Planning	Steif
<i>MUSA 507</i>		
CPLN 620	Techniques for Urban Economic Development Metropolitan	Staff
CPLN 621	Food Systems	Vitiello
CPLN 622	Community Development and Public Health	Hillier
CPLN 624	Race, Poverty, and Place	Rodriguez
CPLN 625	The Politics of Housing and Urban Development	Kromer
<i>URBS 451</i>		

SCHOOL OF DESIGN

Course Number	Course Title	Professor/Instructor
CPLN 631	Planning for Land Conservation	Daniels
CPLN 655	Ecological Principles for Planners	Hewitt
CPLN 635	Water Policy	Staff
CPLN 641	Progressive Development	Landis
CPLN 650 <i>ESE 548</i>	Transportation Planning Methods	Ryerson
CPLN 651	Public Infrastructure and Finance	Angelides
CPLN 652	National Infrastructure Investment	Yaro
CPLN 654	Urban Transit Systems and Technology	Guerra
CPLN 660 <i>LARP 660</i>	Fundamentals of Urban Design	Staff
CPLN 673 <i>LARP 781</i>	Contemporary Urbanism	Gouveneur
CPLN 675	Land Use and Environmental Modeling	Landis
CPLN 676	The Immigrant city	Vitiello
CPLN 677	Land Conservation Finance	Staff
CPLN 678 <i>URBS 478</i>	Elements of Sustainable Development Policy	Keene
CPLN 685 <i>LARP 780</i>	Environmental Readings	Steiner
CPLN 730	Urban Sustainability Planning	Staff
CPLN 730	Sustainable Cities	Hughes
CPLN 750	Advanced Transportation Seminar: Air Transportation Planning	Ryerson
CPLN 760	Public Realm Studio	Staff
ENGM 502	Introduction to Energy Policy	Mikulska / Henderman
ENGM 507	Ideas in Energy Policy	Hughes
FNAR 313 <i>FNAR 613</i>	The Chinese Body and Spatial Consumption in Chinatown	Lum
HSPV 538	Cultural Landscapes and Landscape Preservation	Mason
HSPB 540	American Building Technology I: Building Anatomy	Matero
HSPV 572	Preservation through Public Policy	Staff
HSPV 621	Conservation Seminar	Hawkes
HSPV 640	Contemporary Design in Historic Settings	Mason
HSPV 660	Theories in Historic Preservation I	Mason
HSPV 701	Historic Preservation Studio	Heighan / Myers
HSPV 740	Conservation: Finishes/Metals	Matero
HSPV 741	Special Topics in Historic Preservation	Matero

SCHOOL OF DESIGN

Course Number	Course Title	Professor/Instructor
HSPV 747	Conservation of Archeological Sites and Landscapes	Fearon / Ingraffia
HSPV 793	Conservation: Masonry/Wood	Staff
LARP 511	Workshop	Staff
LARP 535	Theory I: Case Studies in Landscape Architecture	Gianetto
LARP 540	Theory II: Topics in Contemporary Landscape Architecture	Gianetto
LARP 660-401	Fundamentals of Urban Design	Staff
<i>CPLN 660-401</i>		
LARP 750	Topics in Construction, Horticulture, and Planning Design	Staff
LARP 755	Issues in Arboretum Management I	Skema
LARP 760	Topics in Ecological Design	Staff
LARP 761	Urban Ecology	Carlisle / Pevzner
LARP 770	Topics in Landscape Architecture History and Theory	Hunt / Gianetto
<i>COML 776</i>		
<i>ITAL 371</i>		
<i>LARP 370</i>		
LARP 780-001	Topics in Theory and Design: The Craft and Criticism of Landscaping	Staff
LARP 780-002	Topics in Theory and Design: Design in the Terrain of Water	Staff
LARP 780-002	Topics in Theory and Design: Design with Risk	Staff
LARP 780-004	Topics in Theory in Design: China in Africa Seminar	Staff
LARP 780-401	Environmental Readings	Steiner
LARP 780-401	Topics in Theory and Design: The Culture of Nature	Weller
MUSA 507	Spatial Analysis for Urban and Environmental Planning	Steif
<i>CPLN 590</i>		

SCHOOL OF ENGINEERING AND APPLIED SCIENCES

Course Number	Course Title	Professor/Instructor
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CBE 230	Material and Energy Balances	Shieh
CBE 350	Fluid Mechanics	Hollaran
CBE 375	Engineering and the Environment	Sheih
<i>ESE 360</i>		
CBE 430	Polymers and Biomaterials	Yang
<i>CBE 510</i>		
<i>MSE 430</i>		
<i>MSE 580</i>		
CBE 543	Sustainable Development / Water Resource Systems	Saunders
<i>ESE 560</i>		
CBE 545	Electrical Energy Conservation and Storage	Vohs
CBD 546	Fundamentals of Industrial Catalytic Processes	Gorte

ESE 360	Engineering and the Environment	Staff
<i>CBE 375</i>		
ESE 418	Electrical Energy Storage Systems	Santiago
ESE 521	The Physics of Solid State Energy Devices	Kagan
ESE 548	Transportation Planning Methods	Ryerson
ESE 560	Sustainable Development / Water Resource Systems	Saunders
<i>CBE 543</i>		
ESE 567	Risk Analysis and Environmental Management	Kunreuther
<i>BEPP 761</i>		
<i>BPUB 261</i>		
<i>BPUB 761</i>		
<i>BPUB 061</i>		
<i>OPIM 261</i>		
<i>OPIM 761</i>		

ENGR 250	Energy Systems, Research, and Technology	Jackson
<i>MEAN 250</i>		
ENGR 503	Engineering in Oil, Gas, and Coal, from Production to End Use	Staff

EAS 250	Energy Systems, Resources, and Technology	Jackson
EAS 301	Climate Policy and Technology	Huemmler
<i>EAS 505</i>		
EAS 306	Electricity and Systems Markets	Staff
<i>EAS 506</i>		
EAS 401	Energy and Its Impacts: Technology, Ecology, Economics, Sustainability	Loir
<i>EAS 501</i>		
EAS 402	Renewable Energy and its Impacts	Loir
<i>EAS 502</i>		
EAS 403	Energy Systems and Policy	Huemmler
<i>EAS 503</i>		

SCHOOL OF ENGINEERING AND APPLIED SCIENCES

Course Number	Course Title	Professor/Instructor
MSE 430 <i>CBE 430</i> <i>MSE 580</i>	Polymers and Biomaterials	Yang
MSE 545	Energy Storage and Technology	Murray
MEAM 250 <i>ENGR 250</i>	Energy Systems, Research, and Technology	Jackson
MEAN 502	Energy Engineering	Lukes
MEAN 503	Direct Energy Conversion: From Macro to Nano	Bargatin
MEAM 504	Enhancing Sustainability Through Tribology	Jackson
MEAM 570	Transport Processes	Ayyaswamy
MEAN 572	Micro/Nanoscale Energy Transport	Lukes

SCHOOL OF EDUCATION

Course Number	Course Title	Professor/Instructor
EDUC 503	Global Citizenship	Hall
EDUC 570	Education and the American Metropolis	Puckett
EDUC 605	Sustainability in Schools	Ball
EDUC 646	Participatory Educational Research in the Global Perspective: Theory and Practice	Ravitch
EDUC	Educating for Sustainability	Staff

LAW SCHOOL

Course Number	Course Title	Professor/Instructor
LAW 634	Environmental Law	Orts
LAW 695	Land Use Law	Witt
LAW 777	Environmental Lawyering	Fox
LAW 790	International Environmental Law	Chang
LAW 871	Externship: Delaware RiverKeeper	Staff
LAW 919	Energy Law and Climate Change	Kulak
LAW 974	Defining and Achieving Regulatory Excellence	Coglianesse

PERLMAN SCHOOL OF MEDICINE

Course Number	Course Title	Professor/Instructor
PHRM 657-401	Introduction to Superfund Sites and Health Effects of Hazardous Waste	Willenbring / Pepino / Penning
PUBH 500 NURS 570	Introduction to Public Health	Buttenheim / Nguyen
PUBH 503	Environmental & Occupational Health	Emmett
PUBH 517	Epidemiologic Study of Geography and Health	Branas / Wiebe
PUBH 530 NURS 667	Environmental Toxicology: Risk Assessment and Health Effects	Staff

SCHOOL OF NURSING

Course Number	Course Title	Professor/Instructor
NURS 570 <i>PUBH 500</i>	Introduction to Public Health	Buttenheim /Nguyen
NURS 575 <i>PUBH 530</i>	Health, Sustainability, and Built Environment	Staff
NURS 667 <i>PUBH 530</i>	Environmental Toxicology: Risk Assessment and Health Effects	Staff
NURS 698-900	Practicum: Quality Improvement in Healthcare	Lisa Fidyk

SCHOOL OF SOCIAL POLICY AND PRACTICE

Course Number	Course Title	Professor/Instructor
NPLD 787	Leadership for the New Economy	Staff
NPLD 791	Leadership: Designing the Future	Smith
SWRK 736	Building Community Capacity	Neff
SWRK 755-001	International Social Work: Practicing in the Global South	Shown

SCHOOL OF VETERINARY MEDICINE

Course Title

The Penn School of Veterinary Medicine offers classes related to sustainability, including animal health economics, epidemiology, public health and food production systems. These classes are only open to students currently enrolled at Penn as candidates for the Doctor of Veterinary Medicine (VMD) degree.

- Animal Production Systems
- Catastrophic Epidemic Infectious Diseases in Animals
- Exotoxicology for Veterinarians
- Emerging and Exotic Diseases
- Introduction to Poultry, Swine, and Dairy Medicine
- Veterinary Medicine Global Health and Food Security

WHARTON SCHOOL OF BUSINESS

Course Number	Course Title	Professor/Instructor
BEPP 262	Environmental & Energy Economics and Policy Risk Analysis and Environmental Management	Van Benthem Kunreuther
BEPP 761		
<i>BPUB 261</i>		
<i>BPUB 761</i>		
<i>BPUB 961</i>		
<i>ESE 567</i>		
<i>OPIM 261</i>		
BEPP 763	Energy Markets & Policy	Van Benthem
BPUB 206	Urban Public Policy and Private Economic Development	Pack
<i>BPUB 706</i>		
<i>REAL 206</i>		
<i>REAL 772</i>		
<i>REAL 972</i>	Risk Analysis and Environmental Management	Kunreuther
BPUB 261		
<i>BEPP 761</i>		
<i>BPUB 761</i>		
<i>BPUB 961</i>		
<i>ESE 567</i>		
<i>OPIM 261</i>		
<i>OPIM 761</i>		
FNCE 230	Urban Fiscal Policy	Inman
<i>BEPP 230</i>	Finance Energy ASP - Energy Finance	Gilje Staff
<i>REAL 230</i>		
FNCE 256		
FNCE 882		
LGST 215	Environmental Management: Law and Policy	Light
<i>LGST 815</i>	International Business Ethics	Hsieh / Radin
<i>MGMT 213</i>		
<i>MGMT 713</i>		
LGST 220	Responsibility in Professional Services	Light / Orts
<i>LGST 820</i>		
LGST 612		
MGMT 213	Environmental Management: Law and Policy	Orts / Light
<i>MGMT 713</i>	Group Dynamics	Friedman
<i>LGST 215</i>		
<i>LGST 815</i>		
MGMT 240-001 002		
MGMT 715	Political and Social Environmental of the Multinational Firm	Gatignon
MGMT 720	Corporate Diplomacy	Henisz
MGMT 740-001	Leading Effective Teams	Friedman

WHARTON SCHOOL OF BUSINESS

Course Number	Course Title	Professor/Instructor
MKTG 233 <i>MKTG 733</i>	The Social Impact of Marketing	Hutchinson
OIDD 615-003, 004, 008 OIDD 673	Operations Strategy Global Supply Chain Management	Cachon / Veeraraghavan / Song Fisher
OPIM 261 <i>OPIM 761</i> <i>ESE 567</i> <i>BEPP 761</i> <i>BPUB 261</i> <i>BPUB 761</i> <i>BPUB 961</i>	Risk Analysis and Environmental Management	Kunreuther
OPIM 615-001 003 OPIM 673-001 002 OPIM 762 OPIM 763	Operations Strategy Global Supply Chain Management Environmental Sustainability and Value Creation Energy Markets and Policy	Cachon Fisher Staff Van Benthem
REAL 206 <i>REAL 772</i> <i>REAL 972</i> <i>BPUB 206</i> <i>BPUB 706</i>	Urban Public Policy and Private Economic Development	Pack
REAL 240 <i>BEPP 230</i> <i>FNCE 230</i>	Urban Fiscal Policy Advanced Topics in Urban Economics and Real Estate	Inman Duranton
WH 219	Sustainable Growth	Asean