Grand Challenges Initiative
Courses of Interest – Spring 2009 Courses

AOS 537/GEO 537: Atmospheric Chemistry – Larry W. Horowitz
AOS 547: Atmospheric Thermodynamics and Convection – Leo Donner
AOS 572: Atmospheric and Oceanic Wave Dynamics – Sonya A. Legg, Isidoro Orlanski, Geoffrey K. Vallis
AOS 575: Numerical Prediction of the Atmosphere and Ocean – Robert W. Hallberg
ARC 304: The Historical Development of Urban Form (HA) – M. Christine Boyer
ARC 406/ENV 406: Energy and Form (STX) – Hillary A. Brown
ARC 515: The Environmental Engineering of Buildings, Part II – Mahadev Raman
ARC 586: Material Ecologies – Jane C. Harrison
AST 358: Seminar in Plasma Physics – Nathaniel J. Fisch, Allan H. Reiman
CEE 303/ENV 303/URB 303: Introduction to Environmental Engineering (STX) – Elle Bou-Zeid, Michael A. Celia
CEE 445: Air Quality and Aerosol Processes – Mark A. Zondlo
CHE 246: Thermodynamics (STX) – Athanassios Z. Panagiotopoulos
CHE 346: Chemical Engineering Laboratory – Jay B. Benziger, Shankaran Sundaresan, David W. Wood
CHM 306: Physical Chemistry: Chemical Thermodynamics and Kinetics – Michael T. Kelly
CHM 333/ENV 333: Oil to Ozone: Chemistry of the Environment (STX) – Francois Morel
CHM 525/ENV 525: Production of Renewable Fuels and Energy – Gerard C. Dismukes
EGR 194/MAT 194/PHY 194: An Introduction to Engineering, Mathematics & Physics (ST) – Michael G. Littman, Jennifer L. Rexford
ELE 555: Selected Topics in Optics and Optical Electronics – Gerard Wysocki
ELE 577: Low Powre IC and System Design – Niraj K. Jha
ENV 305: Topics in Environmental Studies: Environmental Science Writing – Anne M. Matthews
ENV 306: Topics in Environmental Studies: American Environmental History (HA) – Frank J. Popper
ENV 320: Feeding the World While Saving the Planet – Timothy D. Searchinger
ENV 340: Environmental Challenges and Sustainable Solutions (ST) – Eileen Zerba
ENV 352/CHV 352: Environmental, Ecological, and Climate Justice (EM) – David Schlosberg
FRS 120: Life on Mars -- Or Maybe Not (SA) – Michael D. Lemonick, Edwin Lewis Turner
FRS 122: The Everglades Today and Tomorrow: Global Change and the Impact of Human Activities on the Biosphere (ST) – Anne Morel-Kraepiel
FRS 136: Living in a Polluted Greenhouse (SA) – Denise Mauzerall
FRS 140: Life in a Nuclear-Armed World (SA) – Zia Mian
FRS 170: Economics of Environmental Protection (SA) – Smita Brunnermeier
FRS 184: Materials and Technology for a Sustainable Energy Future (ST) – Craig B. Arnold
GEO 399/ENV 399: Environmental Decision Making – Gregory E. van der Vink
GEO 450/CEE 450/ENV 450: Earth Surface Processes – Adam C. Maloof
GEO 499/ENV 499: Environmental Change, Poverty and Conflict – Gregory E. van der Vink
GEO 523/CEE 572: Geomicrobiology – Tullis C. Onstott
JRN 449: International News – Thanassis Cambanis
MAE 426: Rocket and Air-Breathing Propulsion Technology – Yiguang Ju
MAE 427: Energy Conversion & the Environment: Transportation Applications – Frederick L. Dryer
MAE 522/AST 564: Applications of Quantum Mechanics to Spectroscopy and Lasers – Szymon Suckewer
MAE 532: Combustion Theory – Chung K. Law
MAE 598: Graduate Seminar in Mechanical & Aerospace Engineering – Edgar Y. Choueiri
NES 266/ENV 266: Oil, Energy and the Middle East (SA) – Bernard A. Haykel
NES 283: Social History of the Modern Middle East (HA) – Cyrus Schayegh
PHY 115A/115B: Future Physics (QR/ST) – Paul J. Steinhardt
WWS 334/ENV 334: Global Environmental Issues (SA) – Denise L. Mauzerall
WWS 582E: Topics in Applied Economics: Energy Economics – Amy B. Craft
Siebel Energy Grand Challenge

WWS 586D: Topics in Science, Technology and Environmental Policy – Global Environmental Governance – Michael Oppenheimer

For more information on Siebel Energy Grand Challenge, please contact Princeton Environmental Institute, Pascale Maloof Poussart, Assistant Director – Energy Initiatives, 144 Guyot Hall, (609) 258-7050, poussart@princeton.edu.

Development Grand Challenge

AFS 374: African Development and Globalization – Mahamadou L. Sagna
CEE 307/EEB 305: Field Ecohydrology (Kenya) – Kelly K. Caylor
EEB 380: Ecology and Conservation on African Landscapes (Kenya) – Corinna Riginos, Philip Muruthi
EEB 404: Natural History of Mammals (Kenya) – Daniel Rubenstein
ENV 340: Environmental Challenges and Sustainable Development – Eileen Zerba
MAE 436: Global Technology (Kenya) – Winston Soboyejo

For more information on Development Grand Challenge, please contact Ecology & Evolutionary Biology, Lolly O’Brien, Undergraduate/Graduate Program Administrator, 102 Guyot Hall, (609) 258-3977, lolly@princeton.edu.
Health Grand Challenge

AAS 403/ANT 403: Race and Medicine – Carolyn Rouse
ANT 431: Biomedical Anthropology – Alan Mann
EEB 328: Ecology and Epidemiology of Parasites and Infectious Diseases – Andrew Dobson
GHP 351: Critical Perspectives on Global Health and Health Policy – Burton Singer, Christina Paxson, Evan Lieberman
HIS 293: Science in a Global Context: 15th to 20th Century – D. Graham Burnett
MAE 344: Introduction to Bioengineering and Medical Devices – Winston Soboyejo
MOL 205: Genes, Health, and Society – Leon E. Rosenberg
MOL 328/WWS 399: U.S. Medical Research and Researchers: Preeminence, Problems, Policies – Leon E. Rosenberg
MOL 425/WWS 474: Infection: Biology, Burden, Policy – Adem Mahmoud, Thomas Shenk, Burton Singer
PSY 320: Theories of Psychotherapy – Ronald Comer
SPA 108: Advanced Spanish (“Medical” section) – Maria Jose Souto-Portas
SPA 207: Advanced Spanish (“Medical” section) – Alberto Bruzos Moro
STC 349: Science Journalism – Michael Lemonick
WWS 315: Bioethics and Public Policy – Harold Shapiro
WWS 320/MOL 320: Human Genetics, Reproduction, and Public Policy – Lee Silver

For more information on Health Grand Challenge, please contact Center for Health and Well-Being, Woodrow Wilson School, Kristina M. Graff, 347 Wallace Hall, (609) 258-8271, kgraff@princeton.edu.