Certificate in Renewable Energy and the Environment

AT A GLANCE: Course Clusters

Cluster #1: Social Sciences, Humanities, and Business

American Culture Studies
L98 AMCS 332B 3.00 Environmental and Energy Issues
L98 AMCS 3612 3.00 Culture and Environment
L98 AMCS 442 3.00 Oil Wars: America and the Cultural Politics of Global Energy
L98 AMCS 343 3.00 Two Cultures: Literature and Science
L98 AMCS 454 3.00 Environmental Policy

Anthropology
L48 Anthro 111 3.00 In the Amazon: Peoples and the Politics of Nature
L48 Anthro 167 3.00 Global Population Issues
L48 Anthro 3182 3.00 Ancient Africa: Social Mosaics and Environmental Challenges
L48 Anthro 3472 3.00 Global Energy and the American Dream
L48 Anthro 361 3.00 Culture and Environment
L48 Anthro 3616 3.00 From Deep Ecology to Indigenous Ecological Identity: Environmental Social Movements and Anthropology
L48 Anthro 372 3.00 Geoarchaeology
L48 Anthro 379 3.00 The Meltdown: The Archaeology of Climate Change
L48 Anthro 3793 4.00 Mississippi River Basin: Past, Present and Future
L48 Anthro 4282 3.00 Political Ecology
L48 Anthro 479 3.00 Climate, Culture and Human History
Archaeology
L52 ARC 372 3.00 Geoarchaeology
L52 ARC 3793 4.00 Mississippi River Basin: Past, Present and Future
L52 ARC 479 3.00 Climate, Culture and Human History

Business
B54 MEC 494 3.00 Business and the Environment

Economics
L11 Econ 309W 3.00 Microeconomics of Public Policy
L11 Econ 451 3.00 Environmental Policy

Education
L12 Educ 4413 3.00 Project Design for Math and Science Education
L12 Educ 4521 3.00 Teaching Adults in Community Settings

Environmental Studies
L82 EnSt 109A 3.00 Quantitative Reasoning in Environmental Science
L82 EnSt 201 4.00 Earth and the Environment
L82 EnSt 221A 3.00 Human Use of the Earth
L82 EnSt 222 3.00 Topics in Japanese Literature and Culture: Environmental Consciousness in Modern Japanese Literature
L82 EnSt 272A 3.00 Physics and Society
L82 EnSt 299 3.00 Directed Internship
L82 EnSt 323 3.00 Biogeochemistry
L82 EnSt 332 3.00 Environmental and Energy Issues
L82 EnSt 335F 3.00 Introduction to Environmental Ethics
L82 EnSt 361 3.00 Culture and Environment
L82 EnSt 379 3.00 Feast or Famine: Archaeology and Climate Change
L82 EnSt 3793 4.00 Mississippi River Basin: Past, Present and Future
L82 EnSt 393 2.00 Practical Skills in Environmental Biology
L82 EnSt 444 3.00 Environmental Geochemistry
L82 EnSt 451 3.00 Environmental Policy
L82 EnSt 479 3.00 Climate, Culture and Human History

History
L22 History 3032 3.00 Problems in U.S. Environmental History
L22 History 49BV 3.00 Climate Change: An Environmental History

Legal Studies
L84 Lw St 332B  3.00  Environmental and Energy Issues

Philosophy
L30 Phil 235F 3.00 Introduction to Environmental Ethics
L30 Phil 239 3.00 Topics in Philosophy and Environment

Physics
L31 Physics 344 3.00 Energy and Environmental Physics
L31 Physics 444 3.00 Energy and Environmental Physics

Political Economy
L50 Pol Econ 451  3.00  Environmental Policy

Political Science
L32 Pol Sci 2010 3.00 Introduction to Environmental Policy
L32 Pol Sci 227 1.00 Just Do It! Skills That Turn Passion Into Policy
L32 Pol Sci 332B  3.00  Environmental and Energy Issues

Psychology
L33 Psych 347  3.00  Environmental Psychology
Social Work

S60 Social Work 5040 3.00 Environment, Climate, and Community

University College*

U44 Bus 367 3.00 Corporate Social Responsibility & Sustainability
U44 Bus 375 3.00 Contemporary Organization Development: Creativity, Innovation, Sustainability
U07 Econ 362 3.00 Environmental Economics
U85 IA 5421 3.00 International Environmental Issues
U43 IS 364 3.00 Global Sustainability
U22 Phil 2352 3.00 Introduction to Environmental Ethics
U25 PolSci 3322 3.00 Sustainability Policy
U19 Sust 107 3.00 Environmental Geology and Energy
U19 Sust 209 3.00 Introduction to Environmental Studies
U19 Sust 2352 3.00 Environmental Ethics
U19 Sust 313 3.00 Nature and the American Literary Imagination
U19 Sust 319 3.00 Planning Sustainable Communities
U19 Sust 328 3.00 Environmental Law: Applications Toward Sustainability
U19 Sust 3322 3.00 Sustainability Policy
U19 Sust 343 3.00 Managing LEED Certification
U19 344 3.00 International Development and Sustainability
U19 Sust 355 3.00 Environmental Economics
U19 Sust 362 3.00 Practical Applications of Sustainable Design I
U19 Sust 363 3.00 Practical Applications of Sustainable Design II
U19 Sust 364 3.00 Global Sustainability
U19 Sust 375 3.00 Contemporary Organization Development: Creativity, Innovation, Sustainability
Cluster #2: Architecture

Architecture

A46 ARCH 336A 3.00 Sustainability FL2010
A46 ARCH 336B 3.00 Designing Sustainable Environments
A46 ARCH 336C 3.00 Biomimicry: Towards a Sustainable Design
A46 ARCH 336D 3.00 Biomimicry: A Biokinetic Approach to Sustain(Able) Design
A46 ARCH 350 3.00 Service Learning Course: Environmental Issues
A46 ARCH 403 Sustainable Design
A46 ARCH 434R 3.00 Decoding Sustainability
A46 ARCH 462H 3.00 Information Modeling for Sustainable Design
A46 ARCH 462K 3.00 Productive Systems: Ecological Articulations in Architecture
A46 ARCH 472 3.00 Sustainable Development
A46 ARCH 490 Architecture Service Learning Practicum

Cluster #3: Natural Sciences & Engineering

Biology

L41 Biol 2950 3.00 Introduction to Environmental Biology
L41 Biol 2951 1.00 Environmental Debates
L41 Biol 393 2.00 Practical Skills in Environmental Biology Research
L41 Biol 4830 2.00 Bioenergy
L41 Biol 4831 01 4.00 Green Machines: Plant Physiology, Growth & Bioenergy

Chemistry
L07 Chem 475  3.00  Chemical Biology
L07 Chem 481  3.00  General Biochemistry I
L07 Chem 482  3.00  General Biochemistry II

**Earth & Planetary Sciences**
L19 EPSc 109A 3.00 Quantitative Reasoning in Environmental Science
L19 EPSc 111 3.00 Introduction To Global Climate Change In the 21st Century
L19 EPSc 112 3.00 Freshman Seminar: Engineering the Climate
L19 EPSc 116A 3.00 Resources of the Earth
L19 EPSc 201 4.00 Earth and the Environment
L19 EPSc 219 3.00 Energy and the Environment
L19 EPSc 221A 3.00 Human Use of the Earth
L19 EPSc 323 3.00 Biogeochemistry
L19 EPSc 408 3.00 Earth’s Atmosphere and Global Climate
L19 EPSc 429 3.00 Environmental Hydrogeology
L19 EPSc 444  3.00  Environmental Geochemistry

**Electrical and Systems Engineering**
E35 ESE 437 3.00 Sustainable Energy Systems

**Energy, Environmental & Chemical Engineering**
E33 EECE 380A 3.00 Sustainable Technologies for the Global Community
E33 EECE 401 3.00 International Experience in Energy, Environmental and Chemical Engineering
E33 EECE 439 3.00 Advanced Energy Lab
E33 EECE 448 3.00 Environmental Organic Chemistry
E33 EECE 495 3.00 Special Topics: Energy and Buildings
E33 EECE 534 3.00 Environmental Nanochemistry
E33 EECE 547 3.00 Atmospheric Science and Climate
E33 EECE 548 3.00 Environmental Organic Chemistry
E33 EECE 588 3.00 Physical and Chemical Processes for Water Treatment
E33 EECE 590 3.00 Special Topics: Energy and Environmental Economics and Risk Management Decision-Making
E33 EECE 594 3.00 Special Topics: Advanced Renewable Energy
E33 EECE 595 3.00 Special Topics: Energy and Buildings
E63 ChE 262 3.00 Intro to Environmental Engineering
E63 ChE 344 3.00 Air Pollution
E63 ChE 345 3.00 Pollution Abatement and Waste Minimization
E63 ChE 408A 3.00 Environmental Engineering Lab
E63 ChE 438 3.00 Environmental Risk Assessment and Toxicology
E63 ChE 443 3.00 Environmental Chemistry
E63 ChE 449 3.00 Sustainable Air Quality
E63 ChE 4830 2.00 Bioenergy
E63 ChE 510A Dynamics of Air Pollution
E63 ChE 523 3.00 Biological Treatment Processes
E63 ChE 542 6.00 Interdisciplinary Environmental Clinic
E63 ChE 549 3.00 Sustainable Air Quality

Environmental Studies
L82 EnSt 201 4.00 Earth and the Environment

Mechanical Engineering & Materials Science
E37 MEMS 5422 3.00 Solar Energy Thermal Processes
E37 MEMS 5423 3.00 Sustainable Environmental Building Systems
E37 MEMS 5424 3.00 Thermo-Fluid Modeling of Renewable Energy Systems
E37 MEMS 5705 3.00 Wind Energy Systems

Pathfinder: Program in Environmental Sustainability

Please contact us regarding L54 EPSC XXX courses that you would like to apply to the certificate. See http://wufs.wustl.edu/pathfinder/ for information about Pathfinder.

University College*

U29 Bio 209 3.00 Introduction to Environmental Studies
U29 Bio 364 3.00 Introduction to Global Sustainability
U29 Bio 406 3.00 Introduction to Biochemistry
U29 Bio 413 3.00 Environmental Science: Regional & Global Perspectives
U13 EPSc 107 3.00 Environmental Geology and Energy
U13 EPSc 111 0.00 Introduction to Global Climate Change
U13 EPSc 2011 3.00 Earth and the Environment

* Note regarding University College courses: Full-time Washington University undergraduates may only take a total of eight (8) University College courses, or one course per semester over four years. Please contact your advisor or University College (http://ucollege.wustl.edu/) with any questions.