Climate Change Science and Policy PhD Course Requirement Checklist

Student's Name_____Advisor__ _____

Semester/Grade Earned	ESGP Required Courses (23 credit hours)	
_____/_____	ESGP 7899	ESGP Seminar (1 crhr)
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_____/_____	Special Topic	Climate Change special topic or an independent s study with a climate change affiliated supervisor (2crhrs)
	Biological Sciences Approved Course (*See Appendix) (6 crhrs)	
_____/_____	_____	
_____/_____	_____	
	Physical Sciences Approved Course (*See Appendix) (6 crhrs)	
_____/_____	_____	
_____/_____	_____	
	Social Sciences Policy Approved Course (*See Appendix) (6 crhrs)	
_____/_____	_____	
_____/_____	_____	

Semester/Grade Earned	**Electives (3 credit hours)** With advisor's guidance and approval, select from the following list of ESGP courses	
_____/_____	AEDECON 4320/ INTSTDS 4320	Energy, Environment, and the Economy (3 crhrs)
_____/_____	ATMOSSC 5901	Climate System Modeling: Basics and Applications (3 crhrs)
_____/_____	ATMOSSC 5950	Atmospheric Thermodynamics (3 crhrs)
_____/_____	EARTHSC 5663	Global Biogeochemical Cycles (3 crhrs)
_____/_____	EARTHSC 5650	Paleoclimatology (4 crhrs)
_____/_____	EARTHSC 5663/ PUBHLTH 5203	Geo-environment and Human Health (3 crhrs)
_____/_____	EARTHSC 5663	Global Change and Sustainability in the Earth System (4 crhrs)
_____/_____	EARTHSC 5650	Glaciology (4 crhrs)
_____/_____	EEOB 5470	Community and Ecosystem Ecology (3 crhrs)
_____/_____	ENR 5600	Sustainable Agriculture and Food Systems (3 crhrs)
_____/_____	GEOG 8902	Applied Climatology (3 crhrs)
_____/_____	GEOG 5802	Globalization and Environment (3 crhrs)
_____/_____	PUBAFRS 7500	Energy Policy and the Environment (3 crhrs)
_____/_____	PUBAFRS 7504	Science and Technology Policy (3 crhrs)
_____/_____	PUBHEHS 5320	Climate Change and Human Health (3 crhrs)

Semester/Grade Earned **Research Credits (53 credit hours minimum)**

Research Hours in Advisor's home department

In addition to the general Graduate School requirements of a cumulative grade point average of 3.0 or higher, students must meet specific college policies regarding grades in courses.

I certify that the above named student has meet the requirements for completion of the MS

_____

Signature *Date*

***Appendix**

Core and Elective Courses in Biological Sciences

The objective of this core course area is to ensure that students are familiar with the diversity and functioning of organisms and the interactions among species and between organisms and the environment. Because the environmental sciences focus on the relationships between living organisms and their environment, the basic principles of ecology and a solid understanding of ecosystems structure and function is the focus of the ESGP core. This understanding can be gained through coursework that focuses on a particular taxon or a particular kind of ecosystem, but must be broadly applicable to any environment.

Agricultural Systems Management

ASM 5786	Environmental Issues in East Asia	3 credits	SP

Environment and Natural Resources

ENR 5225	Ecosystems Modeling	3 credits	
ENR 5250.01 and 5250.02	Wetland Ecology Restoration and Wetland Field Laboratory	4 credits	AU
ENR 5263	Biology of Soil Ecosystems	3 credits	SP
ENR 5270	Soil Fertility	3 credits	AU
ENR 5560	Rehabilitation/Restoration of Ecosystems	2 credits	AU
ENR 6610	Soil and Environmental Biochemistry	2 credits	SP
ENR 7333	Successional Dynamics of Forests	3 credits	SP

Entomology

ENTMLGY 6410	Insect Ecology and Evolutionary Processes	3 credits	AU
ENTMLGY 6701	Biodiversity Analysis for Ecosystem Sustainability and Resilience	2 credits	AU
ENTMLGY 6704	System Analysis, from Molecules to Ecosystems	2 credits	

Environmental Engineering

ENVENG 7217	Applied Mathematical Ecology	4 credits	

Evolution, Ecology and Organismal Biology

EEOB 4410	Conservation Biology	3 credits	SP
EEOB 5420	Aquatic Ecosystems – Ecology of Inland Waters	4 credits	
EEOB 5470	Community and Ecosystem Ecology	3 credits	SP
EEOB 6210	Ecotoxicology	3 credits	

Horticulture and Crop

HCS 5602	The Ecology of Agriculture	3 credits	AU

Science Microbiology

MICRO 5150	Microbial Ecology	3 credits	AU
MICRO 5155	Environmental Microbiology	3 credits	

Public Health

PUBHEHS 6320	Global Health and Environmental Microbiology	3 credits	AU
PUBHEHS 7360	Water Contamination: Sources and Health Impact	3 credits	

Core and Elective Courses in Physical Sciences

The objective of this core area is to provide an understanding of physical structure and processes in which ecosystems must function. Physical structure includes soil, water, air, geological media, climate, nutrients, and contaminants. Physical science processes include movement of "abiotic" matter and energy through ecosystems. Core courses must (1) study fundamental physical, hydrological, chemical, or biogeochemical processes and (2) study and emphasize the effects of physical structure and processes on ecosystem biotic components and function and the interactions between the biotic and abiotic components of the ecosystem.

Environment and Natural Resources

ENR 8710*	Soils and Climate Change	2 credits	SP

Chemistry

CHEM 6550	Atmospheric Chemistry	3 credits	

Geography

GEOG 5900	Climatology	3 credits	SP

*As this class is only 2 credit hours, include a petition to count one credit from the climate change elective for your Physical Science core

Core and Elective Courses in Social Sciences and Policy

The objective of the social science core is to provide an understanding of concepts related to the study of human society and/or individuals and their relationships to the structure and function of the ecosystem(s) of which they are a part. Methodology includes a range of approaches, both qualitative and quantitative. Core social science courses must engage social science in a combined theoretical and/or applied study of a physical, cultural, regulatory, or economic relationship between humans and the natural and physical environment.

Environment and Natural Resources

ENR 7380	Climate and Society	3 credits	AU
ENR 7400*	Communicating Environmental Risk	2 credits	SP

Agricultural, Environmental and Developmental Economics

AED 5330	Benefit-Cost Analysis	3 credits	AU

Law

Law 8311	Climate Change Law	3 credits	AU

*As this class is only 2 credit hours, include a petition to count one credit from the climate change elective for your Social Science core