

# MS Environmental Sciences Checklist

## Thesis Track | 36 Minimum Credit Hours

Student Name \_\_\_\_\_ Student ID \_\_\_\_\_

Faculty Advisor \_\_\_\_\_ Specialization \_\_\_\_\_

<b>Physical, Ecological, Chemical Science Core:</b> <b>One course from each of the four spheres (*two must be field/lab-based).</b>				
<b>Atmosphere</b>				
	ENVS 5720	Climate Change: Causes, Impacts and Solutions	3	
	*ENVS 5730	Air Quality Modeling and Analysis	3	
<b>Hydrosphere</b>				
	*ENVS 5280	Environmental Hydrology	4	
	*GEOG 5251	Fluvial Geomorphology	3	
	*ENVS 5410	Aquatic Chemistry	3	
<b>Lithosphere/Cryosphere</b>				
	GEOG 5240	Applied Geomorphology	3	
	GEOG 5270	Glacial Geomorphology	3	
	*?ENVS 5740	Geography of Soils	3	
<b>Biosphere</b>				
	*ENVS 5010	Landscape Biogeochemistry	3	
	*ENVS 5731	Mountain Biogeography	4	
	*ENVS 5500	Beeography	4	
<p><i>Note: Only one course per sphere is required. If in designing your academic program, you end up taking two courses from the same sphere, the 2<sup>nd</sup> course can be counted as an elective.</i></p>				

<b>Research Core (take all):</b>				
ENVS 6002	Research Topics in Environmental Science	3		
GEOG 6750	Research Design	3		
GEOG 6950	Master's Thesis Preparation and Writing	3		
<b>Environmental Social Sciences (choose one):</b>				
GEOG 5150	Place, Landscape, and Meaning	3		
GEOG 5265	Sustainability in Resources Management	3		
GEOG 5440	Science, Policy and the Environment	3		
<b>Elective Courses (may include courses not taken above in the Science CORE; take as many as needed to fulfill at least the 36 credit minimum program requirement):</b>				
ENVS 6800	Community-Based Research Practicum	4		May count toward one field/lab-based course.
ENVS 5020	Earth Environments and Human Impacts	3		
ENVS 5305	Water Quality and Resources	3		
ENVS 5380	Anthropocene Futures	3		
ENVS 5450	Urban Food and Agriculture	3		
ENVS 5460	Sustainable Urban Agriculture Field Study I	3		
ENVS 5470	Sustainable Urban Agriculture Field Study II	3		
ENVS 5650	Environmental Education	3		
ENVS 5/6840	Independent Study	3		
ENVS 5780	Aquatic Ecology	3		
ENVS 5939	Internship	3		
ENVS 6200	Risk Assessment	3		
ENVS 6230	Environmental Epidemiology	3		

ENVS 5xxx	Environmental Geography: The Food-Energy-Water Nexus along the Front Range	3	
GEOG 5050	Applied Spatial Statistics	3	
GEOG 5060	Remote Sensing I: Introduction to Environmental Remote Sensing	3	
GEOG 5070	Remote Sensing II: Advanced Remote Sensing	3	
GEOG 5080	Introduction to GIS	3	
GEOG 5081	Cartography and Computer Mapping	3	
GEOG 5085	GIS Applications for the Urban Environment	3	
GEOG 5090	Environmental Modeling with Geographic Information Systems	3	
GEOG 5091	Open-Source Software for Geospatial Applications	3	
GEOG 5092	GIS Programming and Automation	3	
GEOG 5095	Deploying GIS Functionality on the Web	3	
GEOG 5230	Hazard Mitigation and Vulnerability Assessment	3	
GEOG 5235	GIS Applications in the Health Sciences	3	
GEOG 5265	Sustainability in Resources Management	3	
GEOG 5300	Children's Geographies	3	
GEOG 5301	Population, Culture, & Resources	3	
GEOG 5335	Contemporary Environmental Issues	3	
GEOG 5350	Environment & Society in the American Past	3	
GEOG 5380	Anthropocene Futures	3	
GEOG 5420	The Politics of Nature	3	
GEOG 5440	Science, Policy and the Environment	3	

GEOG 5640	Urban Geography	3	
GEOG 5680	Urban Sustainability: Perspective and Practice	3	
GEOG 5710	Disasters, Climate Change and Health	3	
GEOG 5990	Travel Study: Costa Rica (Sustainable Development and Adaptive Resources Management)	4	
GEOG 5990	Travel Study: China (Sustainability along the Yangtze)	4	
GEOG 5990	Travel Study: France (Landscapes in the Rhône Valley: From Archaen to the Anthropocene)	4	
GEOG 5995	Travel Study: Patagonia	4	
GEOG 5995	Travel Study: Singapore	4	
GEOG 6220	Toxicology	3	
<b>Other Elective Courses:</b>			
BIOL 5154	Conservation Biology	3	
BIOL 5335	Plant Science	3	
BIOL 5345	Flora of Colorado	4	
BIOL 5415	Microbial Ecology	3	
BIOL 5460	Environmental Toxicology	3	
BIOL 5050	Advanced Biology Topics	3	
BIOL 6764	Biological Data Analysis	3	
*BIOS 6601	Applied Biostatistics I	3	
CVEN 5333	Surface Water Hydrology	3	
CVEN 5334	Groundwater Hydrology	3	
CVEN 5335	Vadose Zone Hydrology	3	
CVEN 5401	Intro to Environmental Engineering	3	
CVEN 5385	GIS Relational Database Systems	3	
*EHOH 6616	Environmental & Occupational Toxicology	3	

*EHOH 6617	Environmental & Occupational Epidemiology	3	
*EHOH 6618	Environmental Health Policy and Practice	3	
*EHOH 6619	Environmental Exposure and Health Effects	3	
*EHOH 6620	Risk Assessment & Decision Making	3	
*EHOH 6624	Infectious Disease, Environmental Contexts	3	
*EHOH 6627	Water Quality and Public Health	3	
*EHOH 6635	Climate Change and Health	3	
PUAD 5631	Seminar in Environmental Policy and Politics	3	
PUAD 5632	Seminar in Environmental Management	3	
SCED 3430	Equity & Culture in Science Education	3	
URPL 6500	Environmental Planning and Management	3	
<i>*Courses offered at the School of Public Health on the Anschutz Medical Campus</i>			

## Advising Notes

- Students should fill out and submit all relevant department forms for their files. Importantly, all petitions for course substitutions and identification of where courses fit as electives, with the subsequent approval/denial, should be submitted to this file.
- By the end of the first semester, each student should identify and declare a graduate advisor in the area of the student's interests or specialization. Students should file the Graduate Student – Faculty Advisor form by the first week of the second semester.
- Additionally, by the end of the first semester, students should determine whether they are pursuing the thesis or non-thesis option. If pursuing the thesis option, students should begin work under the guidance of their graduate thesis advisor (see above) to develop a thesis topic and identify a thesis committee. The Graduate Student – Faculty Committee form is due to the department by the third semester of the student's degree program.
- Many of the electives have pre-requisites; students must have met these requirements to take the course.
- Only one course per sphere is required. If in designing your academic program, you end up taking two courses from the same sphere, the second course can be counted as an elective.
- Students may count up to 6-credit hours of Independent Study toward elective credits (including specialization electives) in the degree program. Independent Studies must be approved by the Graduate Director.
- Students may count up to 6-credit hours of internship, but only 3-credit hours per individual internship. Internships must be approved by the Graduate Director.
- Please note that a maximum of 6 total credit hours of internship and independent study, combined, may apply to the degree program.
- Students may not count 4000-level courses towards electives in the program; this may be petitioned to the Graduate Committee in exceptional cases.
- Students may take a maximum of 2 online courses, or petition to the Graduate Committee in exceptional cases to apply more than two online courses.
- Students may enroll in thesis preparation and writing hours only after submission of the signed committee form (see above), which requires approval of the thesis proposal.
- Students will not receive a grade for thesis preparation and writing hours until the thesis is successfully defended.
- Students must follow the graduate school deadlines for submission of paperwork for the graduation application, comprehensive exam, and any other deadlines, in addition to departmental guidelines and deadlines. Links to these can be found on the GES/MS website: [www.clas.ucdenver.edu/ges/programs/master-science-environmental-sciences](http://www.clas.ucdenver.edu/ges/programs/master-science-environmental-sciences)