

National Education Entrance Standard vs. Practice Standards



National Standard Course Category	UofL Course (Undergraduate Courses 2022/23)	Knowledge Requirement for a Practice Area				
		Assessment, Remediation, and Management of Contaminated Land	Environmental Monitoring	Land Reclamation	Water Resources Planning and Management	Land Conservation and Management
(credits required)	2022/2023 Program Requirements for B.Sc in Environmental Science (Courses in Bold Type Meet the Knowledge Requirement for that Subject in a Practice Standard)					
Foundational Natural Sciences (15 credits required)						
	Biology 1010 - Cellular Basis of Life					
	Biology 1020 - Diversity of Life					
	Biology 2000 - Principles of Genetics					
	Biology 2200 - Principles of Ecology	√		√	√	
	Biology 2300 - Cell Biology					
	Biology 3300 - Evolution					
	Chemistry 1000 - General Chemistry I	√			√	
	Chemistry 2000 - General Chemistry II					
	Chemistry 2410 - Analytical Chemistry I					
	Chemistry 2500 - Organic Chemistry I	√				
	Geology 2065 - Physical Geology					
	Physics 1000 - Introduction to Physics					
	Physics 1050 - Introduction to Biophysics					
Senior Agrology (24 credits required)						
	Biology 3460 - Plant Physiology	√		√		
	Biology 3560 - Integrated Plant Biology	√	√	√	√	√
	Biology 3630 - Field Biology					
	Biology 3660 - Field Botany	√	√	√		√
	Biology 3700 - Ecosystem Ecology					
	Biology 3710 - Population Ecology					
	Biology 3720 - Community Ecology			√		
	Biology 4605 - Conservation Biology					
	Biology 4840 - Limnology					
	Geography 3060 - Glaciology and Glacial Geomorphology	√				√
	Geography 3300 - Microclimatology					
	Geography 3710 - Field Techniques in the Earth Sciences					
	Geography 4400 - Advanced Hydrology					
	Geography 4725 - Advanced Remote Sensing					
	Geography 4730 - Spatial Statistics					
	Geography 4740 - Advanced Geographical Information Systems					
Introductory Agrology Intro Agrology + Senior Agrology = 60 credits required)						
	Environmental Science 2000 - Fundamentals of Environmental Science				√	
	Geography 1000 - Introduction to Physical Geography				√	
	Geography 2030 - Geomorphology					
	Geography 2090 - Biogeography					
	Geography 2300 - Weather and Climate					
	Geography 2700 - Geographical Data and Analysis		√			
	Geography 2735 - Introduction to Geographical Information Science					
	Geography 3075 - Environmental Resources Management					
	Geography 3080 - Soils	√	√	√	√	
	Geography 3400 - Hydrology	√	√	√	√	√
	Geography 3720 - Remote Sensing					
	Geography 3740 - Geographical Information Systems				√	√
	The following courses may or may not be Agrology related:					
	Environmental Studies 2000 unspecified (LC technical term)					
	Environmental Studies 2000 unspecified (LC technical term)					
	Environmental Studies 2000 unspecified (LC technical term)					
	Environmental Studies 3000 unspecified (LC technical term)					
	Environmental Studies 3000 unspecified (LC technical term)					
Economics						

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(credits required)	2022/2023 Program Requirements for B.Sc in Environmental Science (Courses in Bold Type Meet the Knowledge Requirement for that Subject in a Practice Standard)	Assessment, Remediation, and Management of Contaminated Land	Environmental Monitoring	Land Reclamation	Water Resources Planning and Management	Land Conservation and Management
(3 credits required)	No course identified in Program Requirements for B.Sc Enviro Science					v
Mathematics or Statistics	Statistics 1770 - Introduction to Probability and Statistics	v			v	
(3 credits required)	Mathematics 1010 - Introduction to Calculus					
	Mathematics 1560 - Calculus I					
	Mathematics 1565 - Accelerated Calculus I					
Communications	No course identified in Program Requirements for B.Sc Enviro Science					
(3 credits required)						
The Following Subjects Are Not Listed in the B.Sc Environmental Science Program Requirements But Are Also Required to Qualify for the P.Ag in the Following Practice Areas (Each subject must be 3-credit equivalent course)						
		Assessment, Remediation, and Management of Contaminated Land	Environmental Monitoring	Land Reclamation	Water Resources Planning and Management	Land Conservation and Management
		Hydrogeology	Air Quality	Soil Genesis and Classification	Water Quality	Introductory Animal Science OR Zoology
		At least one of the following:	One of the following:	One of the following:	One of the following:	One of the following:
		<i>Environmental Policy</i>	<i>Environmental Chemistry</i>	<i>Soil Chemistry</i>	<i>Soil Conservation and Management</i>	<i>Ecophysiology</i>
		<i>Environmental Planning</i>	<i>Soil Chemistry</i>	<i>Soil Fertility</i>	<i>Soil Water Conservation</i>	<i>Plant Ecology</i>
		<i>Environmental Impact and Mitigation</i>	<i>Water Chemistry</i>	<i>Soil Physics</i>	Land Use Effects On Water	<i>Disturbance Ecology</i>
		<i>Environmental Law</i>	<i>Air Chemistry</i>	<i>Soil Biology</i>	One of the following:	<i>Restoration Ecology</i>
		<i>Land Use Planning</i>	Sampling Methods and Design	<i>Soil Conservation</i>	<i>Natural Resource Economics</i>	<i>Riparian Ecosystems</i>
		Soil Genesis and Classification	Soil Genesis and Classification	<i>Soil Biogeochemistry</i>	<i>Environmental Economics</i>	<i>Fire Ecology and Management</i>
		Remediation Strategies	Soil Conservation and Management		<i>Agricultural Economics</i>	<i>Landscape Ecology</i>
		Soil Chemistry	Water Quality		Experimental Design	<i>Forest Ecology</i>
		Contaminant Behaviour	Hydrogeology			<i>Wildlife Ecology</i>
		Ecological and Human Health Risk Assessment				<i>Rangeland Ecology</i>
		Toxicology				
		Plant Nutrition				
		Plant Physiology				
		Animal Nutrition				
		Animal Physiology				
		Environmental Sampling Design				