

# NATURAL RESOURCES AND ENVIRONMENTAL MANAGEMENT, PH.D.

## Degree Requirements

### Program Requirements

PhD students entering with a Master's degree may take up to 21 credit hours in total. Students must take NRI 7310 Ph.D. Thesis Research Seminar (3). A minimum of 6 credit hours of courses must be completed within the Natural Resources Institute. The remaining 9 credit hours of 7000 level NRI electives will usually include one of:

- NRI 7222 Human Dimensions of Natural Resources and Environmental Management (3)
- NRI 7232 Ecological Dimensions of Resource and Environmental Management (3)
- NRI 7182 Sustainability, Economics, and Natural Resources (3)

unless credit has already been received for one of the three courses above.

Individual programs of study will vary from student to student depending on each student's research interest and the recommendations of each student's advisor and Ph.D. advisory committee. Students will be encouraged to use the pool of Natural Resources Institute required and elective courses as well as appropriate graduate courses available outside of the Natural Resources Institute in order to select the best set of courses to complement their programs.

Student academic progress will be reported annually to the Faculty of Graduate Studies. A minimum Grade Point Average of 3.0, with no grade below C+, must be maintained in order to continue in the program.

**Expected Time to Graduate:** 4 years

### Progression Chart

Course	Title	Hours
<b>Year 1</b>		
GRAD 7300	Research Integrity Tutorial	0
GRAD 7500	Academic Integrity Tutorial	0
Select a minimum of 6 credit hours of NRI courses and select a minimum of 12 and maximum of 21 credit hours of the following or other U of M courses at the 7000 level or above:		12-21
NRI 7310	Ph.D. Thesis Research Seminar (Required)	
NRI 7070	Readings in Natural Resources Management 1	
NRI 7080	Readings in Natural Resources Management 2	
NRI 7110	Field Seminar	
NRI 7160	Projects in Natural Resources Management 1	
NRI 7170	Projects in Natural Resources Management 2	
NRI 7180	Sustainable Development and Natural Resources	

NRI 7182	Sustainability, Economics, and Natural Resources	
NRI 7190	Natural Resources Administration and Law	
NRI 7200	The Role of Information Management in Sustainable Resource Use	
NRI 7222	Human Dimensions of Natural Resources and Environmental Management	
NRI 7232	Ecological Dimensions of Resource and Environmental Management	
NRI 7242	Resource and Environmental Management Policy	
NRI 7252	Environmental Management Practice	
NRI 7290	Environmental Impact Assessment	
NRI 7302	Conservation Biology and Biodiversity Management	
NRI 7320	Environmental Risk and Hazards	
NRI 7330	Water Resources: Analysis, Planning and Management	
NRI 7340	Environmental Justice and Ecosystem Health	
NRI 7350	Study Design and Quantitative Methods for Resource and Environmental Management	
NRI 7360	Qualitative Field Methods for Community-based Resource and Environmental Management	
NRI 7370	Sustainable Livelihoods, Food Resources and Community Food Security	
<b>Hours</b>		<b>12-21</b>
<b>Year 2</b>		
Doctoral Thesis		0
GRAD 8010	Doctoral Candidacy Examination	0
GRAD 8020	Doctoral Re-registration	0
<b>Hours</b>		<b>0</b>
<b>Total Hours</b>		<b>12-21</b>

The proposal, Candidacy Exam, first draft and oral defence meetings are required. The proposal meeting is held in year 1 followed by data collection, analysis and writing. The Candidacy exam takes place during the second year. For more information on the thesis process, please refer to the PhD student Handbook at the Natural Resources Institute.