

NATURAL RESOURCE MANAGEMENT (NRI)

NRI 7070 Readings in Natural Resources Management 1 3 cr

Student planned research in an area of interest. Course syllabus designed by student and approved by NRI faculty.

NRI 7080 Readings in Natural Resources Management 2 3 cr

Student planned research in an area of interest. Course syllabus designed by student and approved by NRI faculty.

NRI 7110 Field Seminar 3 cr

Exploration of selected issues in resource and environmental studies in field settings, arranged for groups of students. This course is subject to a field trip fee.

NRI 7120 Mineral Resources Management and Policy 3 cr

This course provides an interface between managers and mineral resources, focusing on a selection of practical topics related to minerals and mining. Role of mining activities in the development process; global, national, and provincial distribution of resources; policy issues relating to environmental, economic, and political consequences of non-renewable resource exploitation.

NRI 7130 Energy Resources Management and Policy 3 cr

This course covers global energy issues, objectives, strategies, and policies, and the environmental impacts of alternative energy sources; Canadian energy issues, objectives, strategies, and policies. The course stresses the need for a sound understanding of energy issues of fundamental importance, ability to assess alternatives, appreciation of policy strategies and instruments, and the ability to formulate an energy policy for a region.

NRI 7160 Projects in Natural Resources Management 1 3 cr

Team research project in an area of interest. Application of problem-solving skills to current issues in natural resources management.

NRI 7170 Projects in Natural Resources Management 2 3 cr

Team research project in an area of interest. Application of problem-solving skills to current issues in natural resources management.

NRI 7180 Sustainable Development and Natural Resources 3 cr

An examination of the context, concepts, principles, and applications of sustainable development and natural resources at the international, national, and regional levels. Sustainable development is considered from three perspectives - environment, economy, and peoples' well-being. Particular attention is focused upon the implications of sustainable development for natural resources and environmental management. Permission of the instructor required. Students are advised to consult with Institute faculty prior to admission.

NRI 7182 Sustainability, Economics, and Natural Resources 3 cr

Economic aspects of sustainability are a critical component of sustainable development. The relationship between environment, economy, and the human dimensions of natural resources comprise the primary focus of the course. Specific topics include environmental/ecological economics, externalities, project assessment, benefit cost analysis, the economics of renewable and non-renewable resource management and economic aspects of globalization.

NRI 7190 Natural Resources Administration and Law 3 cr

The objective of this course is to explore the legal frameworks and processes in Canada related to natural resource management. After a general review of the Canadian legal system with a particular focus on administrative law, national and international regulatory frameworks related to the ownership and disposition of specific natural resources are explored. Through class discussion, case studies and presentation, the law governing the use and development of natural resources is examined and critiqued. This course is cross-listed with LAW 3980 "Natural Resources Law."

NRI 7200 The Role of Information Management in Sustainable Resource Use 3 cr

This course reviews some of the key concepts of spatial analysis including geographic information systems, remote sensing, image processing, and cartography. The second part of the course is based on the application of these concepts to a resource management issue using a case study approach. Students will gain familiarity with the following software: Idrisi for GIS; Adobe Photoshop for image processing; and Adobe Illustrator for cartography. Classes will have three components, discussion/presentation; lecture; and lab.

NRI 7222 Human Dimensions of Natural Resources and Environmental Management 3 cr

The human dimensions of Natural Resources and Environmental Management will be considered through the following thematic units: definitions, history, and paradigms of management; intersection of science with politics, actors, groups and participatory processes; Traditional Ecological Knowledge (TEK), communications and environmental perception; institutions, common theory and adaptive co-management.

NRI 7232 Ecological Dimensions of Resource and Environmental Management 3 cr

Current concepts and theories in landscape ecology, plant and animal ecology, life-history strategies, food webs, and population and community ecology are discussed as they relate to management. Common themes throughout the course include the importance of scale, the influence of science on management, adaptive management, and critical thinking.

NRI 7242 Resource and Environmental Management Policy 3 cr

The complexity of natural resources and environmental policy formulation, implementation, and analysis is the primary focus. Specific topics include: modern state, government and policy development processes; policy community and stakeholders, and role of pressure and interest groups; policy analysis, research and evaluation are examined from a variety of perspectives. Theory and practice are linked in addressing course objectives.

NRI 7252 Environmental Management Practice 3 cr

Environmental Management systems (e.g. 14001 and Natural step), best management practices and project management. Tools: Awareness (Environmental Policy, Environmental Impacts, Risk Assessment, Life Cycle Assessment), Action (Objectives, Targets, Risk Reduction, Indicators, Monitoring, Activities), Advance (Sustainability Report, Triple Bottom Line, Environmental Audit).

NRI 7262 Master's Thesis Research Seminar 3 cr

This course will provide a practical introduction to thesis research. The core objective is to assist students in designing their research, including such tasks as considering an appropriate research paradigm, establishing researchable problems, setting goals and objectives, choosing appropriate methods, analyzing data, preparing research proposals, project administration, among other topics. Special attention will be paid to conducting interdisciplinary research in the field of natural resources management.

NRI 7280 Regional Development in Northern Manitoba 3 cr

A comprehensive examination of natural resources, socio-economic conditions, and institutional structures forms the basis for an evaluation of long-term sustainability and developmental strategies for Manitoba's North. Permission of the instructor required. Students are advised to consult with Institute faculty prior to admission.

NRI 7290 Environmental Impact Assessment 3 cr

Course is a fundamental tool of decision making regarding natural resources and the environment and will provide students with an understanding of how environmental assessment is designed, administered and operates in the field.

NRI 7302 Conservation Biology and Biodiversity Management 3 cr

The course explores management and conservation of biodiversity at the genetic, species, and ecosystem levels of biological organization, and from local to global scales. Emphasis is placed on understanding human impacts on biodiversity, critically evaluating the importance of biodiversity conservation, and political, economic, ecological, and philosophical implications and drivers of conservation.

NRI 7310 Ph.D. Thesis Research Seminar 3 cr

Designing research and methodology specific to a project; reviewing the philosophy of interdisciplinary approaches to Natural Resources and environmental management and trends in the field; analyzing appropriateness of a project with trends and directions in interdisciplinary research; conducting and administering research; communicating and disseminating results of research.

NRI 7320 Environmental Risk and Hazards 3 cr

Environmental risk and hazards are viewed in terms of complex processes of natural systems and social formation. Analysis of processes and events is assisted by theoretical formulation, development of models and examination of site- or type-specific empirical cases.

NRI 7330 Water Resources: Analysis, Planning and Management 3 cr

Considering fresh water as a resource, this course initially examines theoretical models and management approaches and practices; water supply requirement, measurements, and management; demand management; and environmental sustainability. The second part encompasses selected aspects of watershed hydrology and management; water and ecosystem health; and river basin management strategies and policies. The final part evaluates institutional arrangements and jurisdictional responsibilities; transboundary issues, opportunities and implications.

NRI 7340 Environmental Justice and Ecosystem Health 3 cr

Explores Ecosystem health and environmental justice issues to realize both the possibilities and barriers to sustainability. Risk, resource distribution and power/decision-making are analyzed across race, gender and class differences. Diverse views, theories and methods on community health consider well-being, quality of life, vulnerability and ecological integrity.

NRI 7350 Study Design and Quantitative Methods for Resource and Environmental Management 3 cr

This course addresses the quantitative analysis of environmental and natural resources data, emphasizing strong study design to prevent analytical difficulties. Focus is on preparing graduate students in environmental and resources management for dealing with the typical characteristics of environmental data, and for analyses specific to resources data.

NRI 7360 Qualitative Field Methods for Community-based Resource and Environmental Management 3 cr

The purpose of this course is to provide students with the knowledge and skills necessary to undertake qualitative research relevant to CBRM. The course will be offered in a studio format with an emphasis on student participation in a research team and the practical application of data collection procedures in field setting.

NRI 7370 Sustainable Livelihoods, Food Resources and Community Food Security 3 cr

About one third of a household's total environmental impact is related to food considering all the effects of livestock, agriculture and the food industry on water, soil and air, the overuse of fish resources, transport and packaging waste. This course analyzes sustainable livelihoods and food security/sovereignty in the food system (production, processing, marketing, etc.).

NRI 7380 Project Management in Natural Resources and Environmental Management 3 cr

This pass/fail course will provide students with a grounding in the knowledge and skills required to undertake a project within a professional workplace. The core objectives of this course are to encourage critical thinking about project management and develop the skills necessary to formulate, undertake and evaluate a project in the field of NREM.