

# HIGH LATITUDE RANGE MANAGEMENT

## University of Alaska Fairbanks Northwest Campus

The High Latitude Range Management (HLRM) program offers two levels of recognition. The HLRM certificate is a part-time three-year program. Including distance-delivered online courses, students participate in two or three intensive 9-day sessions annually, to complete the program requirements and UAF certificate requirements. The HLRM Occupational Endorsement program focuses coursework on a smaller set of courses (13 credits); a benchmark achievement on the way to the 31-credit certificate program.



## PROGRAM REQUIREMENTS

### **BIOL F104X: Natural History of Alaska (4 cr)**

The physical environment peculiar to the North and important in determining the biological setting; major ecosystem concepts to develop an appreciation for land use and wildlife management problems in both terrestrial and aquatic situations.

### **HLRM F120: History of Domesticated Alaskan Ungulates (1 cr)**

Review the history of domesticated ungulate populations, free-ranging and fenced systems, in Alaska beginning from the 1890s to present. Emphasis on traditional activities on the Seward Peninsula.

### **HLRM F130: Research Field Logistics (2 cr)**

Learn the skills, techniques, and equipment used in remote scientific fieldwork in Alaska. Course includes methods for processing and storing animal/plant tissue samples, orienteering, navigation, GPS, wilderness first aid, Arctic survival, bear safety, boat safety, as well as ATV, boat, and snowmachine operation, maintenance and repair.

### **HLRM F140: High Latitude Range Management (2 cr)**

Policies and terminology of range and range management specific to Alaska and the Arctic. Review current vegetation inventory techniques used by federal and state agencies. Identify and sample Alaska forage plants. Examine range production systems in Alaska for a variety of species; domesticated and wild. Development of a high latitude range management plan.

### **HLRM F150: Alaskan Ungulate Husbandry (2 cr)**

Intro to management skills, facilities design and nutritional needs for domesticated ungulates in Alaska. Examines traditional knowledge combined with contemporary research in herding and husbandry for open range and fenced systems. Field trips to reindeer, elk, bison, and/or cattle operations will demonstrate husbandry techniques and data collection procedures.

### **HLRM F160: Meat Production (2 cr)**

The production of meat-type domesticated ungulates in Alaska and the science and technology of their conversion to food, value-added products and by-products. A review of the current state regulations and methods on proper field slaughtering, and intro to the preparation, handling and storage of meat.

## HLRM PROGRAM REQUIREMENTS

<b>HLRM Certificate</b>	<b>includes all 31 credits</b>	<b>Cr</b>
WRTG F111X <b>Writing Across Contexts</b>		3
Select one of the following:		3
<ul style="list-style-type: none"> <li>• ABUS F155 <b>Business Math</b></li> <li>• MATH F113X <b>Numbers and Society</b></li> </ul>		
Select one of the following:		3
<ul style="list-style-type: none"> <li>• ANTH F100X/SOC F101X <b>Individual, Society &amp; Culture</b></li> <li>• ABUS F154 <b>Human Relations</b></li> </ul>		
NRM F101 <b>Natural Resources Conservation &amp; Policy</b>		3
BIOL F104X <b>Natural History of Alaska</b>		4
HLRM F205 <b>Report Writing in Range Management</b>		2
<b>HLRM Occupational Endorsement</b>	<b>13 credits</b>	<b>Cr</b>
HLRM F120 <b>History of Domesticated Alaskan Ungulates</b>		1
HLRM F130 <b>Research Field Logistics</b>		2
HLRM F140 <b>High Latitude Range Management</b>		2
HLRM F150 <b>Alaskan Ungulate Husbandry</b>		2
HLRM F160 <b>Meat Production</b>		2
HLRM F170 <b>Health Issues in Domesticated Ungulates</b>		2
HLRM F201 <b>Field Techniques for Range Management</b>		2

### **HLRM F170: Health Issues in Domesticated Ungulates (2 cr)**

Ruminant anatomy and physiology specific to high latitude ungulates. Overall health issues and problem solving techniques for domesticated ungulates, including a review of indicators for disease or parasitic infections. Vaccinations and Rx treatments; including use in food animals. Field necropsy techniques and blood and tissue collection procedures.

### **HLRM F201: Field Techniques for Range Management (2 cr)**

Provides hands-on instruction in field and laboratory techniques in range evaluation for domesticated ungulates. Basic methods for sampling and studying grazing systems at the high latitudes will be introduced. Students will participate in data collection and analysis procedures as part of an independent research project.

### **HLRM F205: Report Writing in Range Management (2 cr)**

Provides the basic technical reporting methods, writing, and research skills necessary to analyze, interpret, and document field and laboratory data. Incorporating field data collected in HLRM F201 and the skills, knowledge, and techniques learned in other required courses, the student will produce a written technical report and make a presentation.

### **NRM F101: Natural Resources Conservation & Policy (3 cr)**

Conservation of natural resources including history, ecological and social foundations. Examines principles of sustained yield, carrying capacity, supply and demand, and world population growth as applied to agriculture, range, forest, wildlife, fisheries, recreation, minerals and energy management. A wide range of perspectives is presented to help students develop a personal philosophy toward natural resources.



# HLRM *student highlights*



HLRM certificate graduates Daborah and Toby Anungazuk celebrate their achievement at 2018 Northwest Campus commencement.

**Toby and Daborah Anungazuk** approached the HLRM program seeking to grow within their respective careers. Daborah, a long-time teacher in rural Alaska, says having this degree will improve her position as a bilingual / bicultural instructor educating students about food security and climate change. Toby works for the Chinik Eskimo Environmental Department. This certificate will help him to understand the future of food security for the region. He believes HLRM can be part of the solution as food security is threatened.

**Bonnie Scheele's** family has been reindeer herders since the 1960's. Bonnie believes knowing how to herd efficiently and manage the land resources sustainably is a responsible, priceless gift to herself and to her family for their future. Through HLRM, Bonnie has learned it is the responsibility of the herder to identify sustainable grazing areas for the reindeer, how to safely interact on the range with other wildlife, to perform livestock selection and culling for healthy, peak reindeer traits, and much more. Bonnie says HLRM has instilled a passion within her for continued education and for impressing to others the need for informed decision making.



HLRM program student Bonnie Scheele poses for a photo alongside her son while out working on her family's ranch.

## HIGH LATITUDE RANGE MANAGEMENT

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The High Latitude Range Management (HLRM) program combines academic and indigenous knowledge at the local, national and international levels to offer courses which help prepare students for entry-level jobs in the field of natural resources or to become a reindeer entrepreneur.

**Possible career fields include:**

- **Natural Resource Management**
- **Biologist**
- **Environmental Scientist**

Students learn field-based techniques that agencies use to inventory, monitor and manage plant and animal populations as well as the land. The HLRM program may be used to apply for admission into advanced-level university programs and international student exchanges.



## READY TO GET STARTED?

Want to know more about the High Latitude Range Management Program certificate and occupational endorsement and where these programs can take you? Contact:

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