1. Course information:
Natural History of Alaska: 1st Summer Session, 2020
Biology 104X, 4 credits,
Prerequisite: reading at high school level
Lectures: MTWR 10:00 a.m.-11:50 a.m. Murie 103/105 (students on zoom)
Labs: virtual: follow instructions each week as listed in CONTENT on blackboard

2. Instructor information: Ronald L. Smith
Office location: Murie 101B
Office hours: TR 9:00 a.m. – 10:00 a.m.
Telephone: 907-978-0843 or 907-479-4644
Email address: rlsmith@alaska.edu

3. Course readings/materials
Readings will be assigned from Interior and Northern Alaska: A Natural History. Other instructional materials including virtual lab handouts and virtual video labs and field trips will all be on blackboard and/or Kaltura. Some videos and movies will be available via streaming through Rasmusson Library website. Go to the Kanopy menu for these movies.

4. Course description
Catalog description-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. May not be used as biology elective credit for a major in biological science.

Content of the course- Exposure to the major plant, and animal species of Alaska, their adaptations, biology and interactions in their ecosystems. Connections will be made with non-science fields including the arts, economics, cultural issues, and politics.

Expected proficiencies to undertake the course- basic reading and reasoning ability, ability to take multiple-choice and short answer exams, willingness to participate in in-class discussions, lab dissections, lab observations and experiments, and short field trips.
5. Course goals:
The major course goal is for the student to gain familiarity with the landforms, plants and animals that are important in Alaska, either biologically, culturally, economically, or historically.

6. Student learning outcomes:
The student should be able to explain in general terms, to friends, children, co-workers, spouses, or members of the public:
   1) What are the important animal species in the state?
   2) What are their general adaptations (ways of coping) with their situation
   3) What are the important plant species and how do they cope?
   4) How does the landscape change, with or without human intervention?
   5) How does science work?
   6) What are the potentials for and hazards of climate change in Alaska?

7. Instructional methods:
Lectures and laboratory experiences are the methods of instruction. Lectures will, typically, follow an outline that will be posted beforehand on blackboard. Lectures will allow for questions, and discussion. I encourage both. Illustrations to be used in lecture will almost always be available, beforehand, on blackboard as part of the lecture materials.
The blackboard postings will also include lab exercises. You may want to download and print these materials. I strongly recommend that you print at least the lecture notes. Printing the lab exercises will be very useful. My advice is to immediately purchase a three-ring binder and immediately put these materials in the binder.

8. Course calendar:

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Lab</th>
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<tr>
<td>May 18 Introduction, AK dinosaurs</td>
<td>Virtual field walk (landscape handout, oxbow video, thermokarst video, beaver article)</td>
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<tr>
<td>May 19 Landforms, ice ages, vegetation</td>
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<tr>
<td>May 20 Alaska ice ages, fauna</td>
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<tr>
<td>May 21 Coping with the cold</td>
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May 25 NO CLASS (Memorial Day)
May 26 EXAM, coping with the cold Virtual birds of Alaska
May 27 Boreal forest: trees, shrubs Virtual antler lab
May 28 Plant succession

June 1 EXAM, moose, black bear Virtual horn and skull lab
June 2 Hare, squirrels
June 3 Grouse, voles, weasels Virtual grouse dissection
June 4 Nutrient and energy flow

June 8 EXAM, tundra vegetation, caribou Virtual parasite lab
June 9 Marmot, ground squirrel Virtual Forest vegetation field trip
June 10 Pika, grizzly, wolf
June 11 Sheep, ptarmigan

June 15 EXAM, Aquatic systems Virtual fish lab
June 16 Salmon Virtual salmon lab
June 17 Pike, grayling, burbot
June 18 Halibut, herring

June 22 EXAM, Pollock, cod Climate change
June 23 Climate change
June 24 Change in Alaska
June 25 Exam

9. Course policies:

There will be five lecture exams. They will be available as announced on blackboard. Typically, when an announcement is posted on blackboard, each student gets an email to alert them. Each exam will have a 70-minute time limit and I will try to make it so that you are not kicked out at the end of the 70 minutes. If you are, there is one more attempt at the test available. The lecture exams are closed-book. That is, study, shut your book and notes, open and complete the test.
Lab responses will take the form of quizzes or writing responses. The quizzes will be short, and will be open-book. During the quiz you may consult the lab handout, and any notes you may have written. The quiz will also be timed. Written responses, usually in the form of a short essay, story or poem, will typically be uploaded to a Google Slide show. Everyone will
contribute to and share the slides. Deadlines for completion of quizzes, essays or other responses will be posted in Announcements.

10. Evaluation
Your grade for the course will be calculated using the scores on five 1-hour exams (500 points total) and the scores of ten lab quizzes/responses (160 points total).
Lecture exams consist of multiple-choice questions, short answer questions and, infrequently, longer answer questions. There will be no true-false, matching or fill in the blank questions. Questions will be drawn both from the lectures, blackboard postings, and from the assigned readings. The lecture exams will be held on Mondays at the beginning of the class period. Lab/field trip questions will include short answer, multiple-choice and identification questions.

There is a lot of material in this course. Keep up with the reading, look at the lecture notes (posted on blackboard) ahead of class. Come to class; what I say in class may clarify the notes or go way beyond the notes. Also, I respond to questions and, in answering, include additional material. The additional material can show up on the exams.

The grading scale is:

A 90-100%
B 80-89%
C 70-79%
D 60-69%
F 0-59%

Support services:
See me if you think you require tutoring or other support services.

11. Disabilities services:
I will work with the Office of Disabilities Services (208 Whittaker Building, 474-5655) to provide reasonable accommodation to students with disabilities.