Lecture: Tuesdays 2:00 – 4:00, Room: Irving 201 (2 lectures per day will be presented)
Lab: Thursdays 2:00 – 5:00, Room: Irving 208 or BiRD Necropsy Suite
(require escort into secured facility, meet at main entrance to BiRD on 1st floor, BiRD is building behind the museum)

3 credits, Prerequisites: Biol 310 or Biol 111 and 112.
Instructor, Dr. Todd O’Hara
Teaching Assistant; Bonita Dainowski
(Others helping Dr. Nina Hansen)
474-1838, tmohara@alaska.edu
Office Hours: By Appointment (one on one meeting about projects)


Website for USGS text
Field Manual of Wildlife Disease (this is cited in the syllabus)
Disease Emergence and Resurgence: The Wildlife-Human Connection

Helpful website - http://www.wildlifeinformation.org

Course policies

Attendance/tardiness:
Attendance is vital to the grade. Much, if not all, of the exam information will be based on information from lectures, notes, discussion, etc. during class and from activities in the laboratory. These notes from lectures must be obtained from another student when absence is unavoidable. Attendance is recorded occasionally to maintain an idea of who is actually attending. Repeated tardiness will be noted. Out of respect for the instructor and classmates please be on time. Laboratories cannot be missed without prior permission, they are impossible to make up due to the nature of our work (e.g., necropsies, handling biological materials).
Making up an Exam
An exam may be taken ahead of schedule if a suitable time can be agreed upon if there is a good reason. Exams can be made up after the scheduled date but this is at the discretion of the instructor (i.e., it is not guaranteed). The make-up exam, or the early exam, will not be the same exam given to the other students. There will only be one make-up exam offered. Students who miss more than one exam will have difficulty passing the course.

Plagiarism
Simply will not be tolerated in any form. When in doubt cite and quote your sources. If you do not know what this refers to please meet with Dr. O’Hara and/or Ms. Dainowski.

Academic integrity
Examinations are to be performed by the individual and any attempts to gain assistance or knowingly provide assistance during an examination will be punished according to University policy towards “cheating.” Those taking early or make up exams are to not request assistance with the exams nor provide it. The exams should not be discussed until ALL members of the class have taken a specific exam. Please note plagiarism above, and that this applies to any written or oral assignments that are independent projects.

Disabilities Services
The Office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials. The Instructor will work with the Office of Disabilities Services (203 WHIT, 474-7043) to provide reasonable accommodation to students with disabilities. Please make the Instructor aware of any disabilities that may affect access or performance.

OBJECTIVES
The objective of this course is to introduce the natural resources management, fisheries (e.g., marine mammals), wildlife biology and/or biology (e.g., pre-health professional) student to disease processes at the individual animal and population levels. This course is intended to impart a basic understanding of disease processes and a basic knowledge of some common disease entities with a focus on the Arctic and sub-arctic regions (marine and terrestrial). Effects on populations and diseases of human health significance are emphasized. There are numerous taxa to consider and in this course the bias is towards mammals.

The objectives for the laboratory include: 1) To develop a standard technique for the post-mortem examination (necropsy) of vertebrates. 2) To become familiar with the instruments needed to conduct a satisfactory field necropsy and field sampling (capture, biosampling and release). 3) To learn how to collect and preserve suitable specimens for submission to a diagnostic and/or research laboratory. 4) To develop an understanding of zoonotic diseases and the importance of a "clean" technique while handling diseased and decomposing tissues.

APPROACH
The course starts out with a lecture series introducing the mechanisms of disease ending with a discussion on epidemiology. This is followed by lectures on common diseases of mammals and birds using a structure based on disease causing agents (etiology). Using a variety of diseases occurring in wildlife we will discuss the cause, species affected, occurrence, ecology, clinical
disease, pathology, differential diagnoses, specimens for diagnosis, and the significance to the animal and population. It is impossible to discuss all causes of disease but our review of certain disease causing agents will emphasize the importance of proper diagnostics and how the biologist can facilitate this. The focus is on mammals with some time spent of avian species (mostly waterfowl).

The laboratory is divided into 2 parts allowing students to obtain hands on experience in the necropsy suite and to better understand basic biosampling and laboratory techniques (e.g., hematology). Due to limited space for necropsies the class will be split into two groups. One group will meet in the necropsy suite with one of the instructors and the others will meet in the designated room for the laboratory (non-necropsy sessions).

Presentations (oral) and written reports (reviewed) will be conducted during the course as part of the laboratory. This involves direct mentoring by the instructors during the laboratory (early in semester) as well as presented as outlined in the Laboratory Schedule towards the end of the semester. The student is encouraged to select topics of interest to them and then adequately convey this subject matter via oral presentation to the entire group (class). The student is also expected to prepare a report 3-8 pages (double spaced text, additional pages allowed for figures, images, tables, citations, etc.) that is handed in prior to the oral presentation and reviewed by the instructor and the TA. The final paper is due at the time of the presentation (see Laboratory Schedule). The initial draft is not graded, only the final version.

**WHAT THE COURSE CANNOT DO:**

A single semester course in wildlife diseases cannot impart diagnostic skills nor research capacity to address wildlife diseases for an individual. Work that requires diagnostics or research tools must involve trained diagnosticians/researchers, for diagnostics usually veterinary pathologists with wildlife experience and consultation from experienced wildlife biologists. This by no means limits wildlife disease work to individuals with diagnostic training. Wildlife diagnostics is only one part of wildlife disease work and may or may not be necessary in all research projects. In fact, the best wildlife disease work is generally done by teams that include wildlife biologists, population biologists, ecologists, pathologists, toxicologists, microbiologists, parasitologists, etc! We hope to emphasize that with guest lecturers and examples for discussion.

**Wildlife Disease – WLF 305 - Grades**

Laboratory performance and lecture attendance/participation: 10% (50 points)
Presentations (oral and written): 30% (150 points, 75 points each)
Midterm Examination: 30% (150 points)
Final examination: 30% (150 points)

Total Points = 500

Letter grades: no +/- grades given.
A = 85-100%, B = 75-84%, C = 60-74%, D = 50-59%, F <50%