Our primary goals in this course will be to understand the theoretical underpinnings of basic ecological processes including population growth, competition and predator-prey interactions, and to link theory to the real world using our own observations and field data. Through a mix of field and class work, students will move rapidly from foundational theory, to hands-on field work and data collection, to the basics of analyses. For us to progress smoothly during the class week, 3+ weeks of background reading and study are necessary. Pre-class materials, including homework assignments, will be posted on the course’s Desire to Learn (D2L) website 2 months before the first day of class.

Field Work. We will be based out accommodations in or near Yellowstone National Park. We will spend each day in the field observing wildlife, studying field craft, generating hypotheses, learning about study design, and gathering data to test our hypotheses. Evening class work will be a combination of lecture, data analyses, and exercises designed to familiarize students with foundational ecological theories and the processes involved in hypothesis testing.

Grading: Grades will be based on a combination of pre-class homework (1/3); mid-class progress and discussion (1/3); final report (1/3).

Text: A Primer of Ecology, by Gotelli, fourth edition. In addition there will be readings from the primary literature, in particular, research done in the GYE. These will be posted on the class D2L website content page in late October.

Physical Requirements. Field days will be long (up to 8 hours) and moderately strenuous. Students must be prepared to spend the better part of 5 days hiking, snowshoeing, and doing field work in cold weather at high (~7000’). Those coming from low elevation areas are encouraged to arrive 7 to 10 days early and spend that time at or above 5000’ to acclimatize before class begins.