Zoology 577 (Mammalogy) – Learning objectives

By the end of this course, students should:

1. Be able to list and explain the key defining characteristics of mammals;
2. Be able to identify and explain the key factors responsible for the origin, evolution and radiation of mammals, and the current geographic patterns of their diversity;
3. Be able to explain the unique aspects of mammalian reproduction and their costs and benefits, and apply understanding of ecology and behaviour to explain the variation in mammalian reproduction;
4. Be able to apply information from previous Zoology courses to explain the importance of homeothermy to the diversity and success of mammals, and explain the various ways in which mammals reduce the costs of homeothermy, and the trade-offs involved;
5. Be able to explain the various forms of echolocation amongst mammals, their costs and benefits, and their importance in the radiation of bats and cetaceans;
6. Be able to identify the native mammals of Alberta using external characteristics;
7. Be familiar with and comfortable using a variety of methods to study the presence and behaviour of mammals in the field;
8. Have improved their skills in researching, synthesizing, organizing and writing a critical assessment of scientific literature;
9. Be more confident in developing and giving oral presentations.