Guidelines for EEB Field Trip Content:

Participation in one of the field trips offered during the timeframe of a student’s degree is a requirement of the Ecology and Evolutionary Biology Graduate Program. Students in the EEB program come from a diverse set of educational backgrounds and have varying preferences regarding the content and nature of the field trip they will attend. As a program, EEB strives to provide a diversity of options (e.g., locations, cost, biological systems) within the typical timeframe to degree (5-7 years). However, the field trip experience should be standardized to a degree that ensures the educational objectives of the program for this course are met. The field trip course, EEB 585, is described on the EEB website:

“The field trip (EEB 585A and 585B) provides students an opportunity to study the major terrestrial and aquatic ecosystems of an eco-region and gain hands-on field experience. Trips are offered once per academic year and range from 10-14 days. Depending upon the destination, the trip may be offered during winter break, spring break, or the summer. Participants enrolled in the course meet regularly through the semester (or the semester prior) to plan the trip and discuss the topic of study. In addition to the trip fee, a written report is required. The course is worth two credits. Students may enroll in the course more than once, if space is available.”

More specifically, the EEB Supervisory Committee recommends that the following basic content be included in all field trips to ensure students receive a somewhat standardized experience.

Specific Educational Objectives:
Faculty should develop specific learning objectives for the course and are encouraged to consider the guidelines posted here: Tips on course goals and learning objectives

Past courses have included the following objectives and should provide guidance in designing learning objectives for future field trips:

- Identify and understand the drivers and dynamics of a particular ecosystem
  - Characterize abiotic environmental gradients and how they interact with species distributions
  - Survey biological communities and explore the drivers of their diversity, including both species richness and evenness
○ Explore any potential drivers of rapid environmental change, their cascading effects through ecosystems, and strategies for mitigating damage to ecosystems

○ Demonstrate examples of species' adaptations to distinct environments and consider evolutionary processes (e.g., gene flow, genetic drift, natural selection) in a field setting

• As a class, group, or individually, formulate a research question and list of hypotheses, design a study to address hypotheses, conduct analyses, and summarize results

• Provide opportunities for students to present their research to their colleagues

• Provide opportunities for students to practice giving constructive feedback to colleagues on proposed research and/or experimental results

• Facilitate the growth of students' professional networks and their interactions with scientists outside of their immediate field of interest

In summary, to the extent possible, the field trip should strive to expose students to the organisms, communities, biota, and ecosystems of particular geographic regions, both through the primary literature and hands-on activities on-site.

Activities should be included that facilitate accomplishing the stated learning objectives. Depending on the semester the course is offered, weekly meetings prior to the trip should be used to familiarize students with location(s) to be visited and develop research questions and experimental designs that can be carried out during the field portion of the course. Past courses have taken advantage of diverse locations to provide students with an appreciation of different biomes that may not be easily experienced in Iowa. However, continued efforts are also being made to provide field-trip opportunities close to home (e.g., the Iowa Lakeside Laboratory) to minimize costs for students (an important consideration for all field trips regardless of location) and to demonstrate how the disciplines of ecology and evolution can contribute to basic biological discovery in Iowa and further the land-grant mission of ISU.