

LIVING LAB CASE STUDY

IOWA

IOWA LAKESIDE LABORATORY

COURSE INFORMATION

- University of Iowa credit courses taught through Iowa Lakeside Laboratory
- Courses are taught in accelerated summer sessions, typically 8 am - 5 pm daily, with one week of instruction equaling one credit

PEDAGOGICAL GOALS

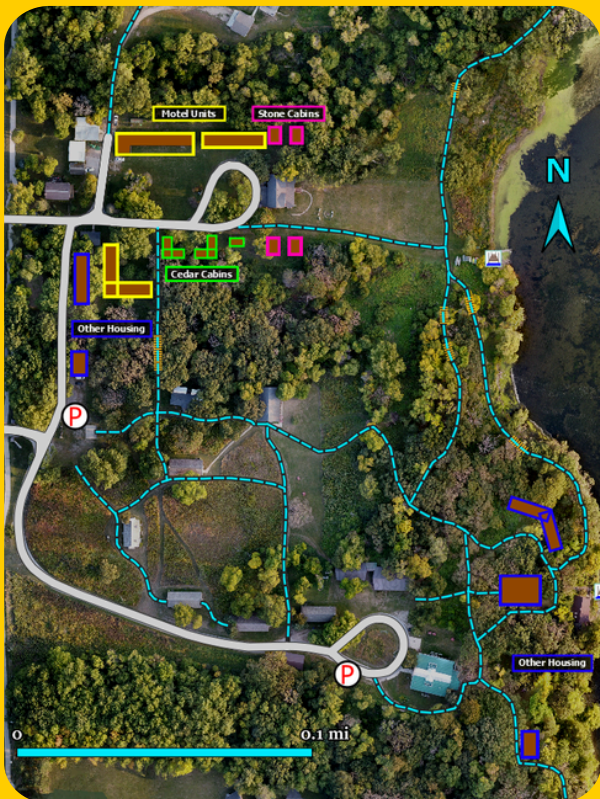
- Build field skills and problem solving skills into courses
- Scaffold learning from other courses into the outdoor classroom
- Study course topics directly in environmental context



LIVING LAB USAGE & INSTRUCTIONAL APPROACH

Classes use Iowa Lakeside Laboratory property on the shoreline of West Okoboji Lake in Dickinson County, Iowa, including 147 acres of natural laboratory space such as restored prairie, wetlands, oak savannah, and shoreline habitats. Students also use kayaks, canoes, and a pontoon boat to access field sites and study aquatic environments.

Lakeside Lab courses are immersive and field-based, with outdoor learning as the primary format of instruction. Students engage in observation, experiments, data collection, and group discussion, allowing them to study course content in context and build practical field skills through direct experience.





STUDENT EXPERIENCE AND OUTCOMES

- Students almost universally respond positively to outdoor learning and often perform better in this immersive format.
- Being outdoors requires attentiveness and concentration, which can help students stay more engaged with the lesson and the surrounding environment.
- Students tend to retain course content more strongly because they are actively experiencing the lesson rather than only hearing about it in a traditional classroom.
- Faculty observations suggest that students develop stronger synthesis of concepts and increased collaboration with both peers and instructors.
- Students report feeling more connected to the material and more invested in the learning process when instruction takes place outdoors.
- Outdoor learning at Lakeside Lab also helps students build confidence in field skills, connect ideas across disciplines, and better understand how course concepts apply in real environments.
- Examples from past courses show that students can translate this work into meaningful projects, including collaborative research and published work, while also gaining a clearer sense of their academic and career interests.



INSTRUCTOR ADVICE FOR IMPLEMENTING OUTDOOR LEARNING

- Be flexible. Sometimes the lesson you planned is not the lesson nature gives you.
- Allow natural conditions and unexpected observations to shape the lesson when appropriate.
- Plan for extra time, since travel, gathering materials, and organizing students in the field often take longer than expected.
- Divide preparation work among students when possible.
- Recognize the weather and changing outdoor conditions can affect the lesson, but can also create valuable learning opportunities.
- Keep group sizes manageable, since outdoor learning is often most effective in small groups.
- Use the outdoor setting to help students connect ideas, practice observation, and build skills through direct experience.