THE UNIVERSITY OF VERMONT
RUBENSTEIN
SCHOOL OF ENVIRONMENT
AND NATURAL RESOURCES

Wildlife & Fisheries Biology
Lab, Field, & Technical Skills List

Field Skills:

- Capture techniques for birds, small mammals, amphibians, reptiles, fish, invertebrates, and plankton
- Identification and categorization of vertebrate groups related to fisheries and wildlife management
- Terrestrial and aquatic invertebrate and plant taxonomy
- Working on lake research vessels
- Use of pacing, topographic maps, compass, and/or GPS equipment to navigate natural environment
- Risk analysis
- Environmental/habitat assessment and inventory
- Interpretation of field conditions and site impact
- Observation, recording, and reporting field data
- Operate standard field equipment including small mammal traps, bird mist nets, bottom trawls, gill nets, fyke nets, seines, electrofishing gear, pit traps, and camera traps
- Experience in use of field guides and taxonomic keys
- Measurements, dissections, diet analyses, and age estimation of major vertebrate groups

Research Skills and Experience:

- Reading and assessing the scientific literature
- Analyzing and interpreting data
- Statistical analysis
- Working/volunteering with state and federal biologists
- Scientific writing
- GIS, R programming language, etc.
- Microsoft Office (Word, PowerPoint, Excel, etc.)

Certifications:

- Emergency Medical Technician (EMT)
- Wilderness First Aid (WFA) and/or Wilderness First Responder (WFR)
- CPR/AED
- Scuba
- Small boat certification

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Rubenstein School Core Competencies & Knowledge Areas:

COMPETENCIES

1. **Communication:** Employ effective speaking, writing, listening, and digital communication techniques.
2. **Teamwork:** Contribute to collaborative efforts, facilitate contributions of others, and address conflict directly and constructively.
3. **Working Across Difference:** Critically examine dimensions of difference and apply a nuanced understanding of power and privilege through effective communication.
4. **Problem Solving:** Design, evaluate, and employ appropriate frameworks to effect change and generate collaborative solutions to complex problems.
5. **Inquiry & Analysis:** Apply critical thinking skills and employ qualitative and quantitative methodologies to formulate questions and evaluate core knowledge areas.
6. **Integrative Learning:** Synthesize and transfer learning to complex situations across disciplinary boundaries through the application of critical reflection skills.

KNOWLEDGE AREAS

7. **Ecological Processes & Systems:** Identify and describe basic ecological processes and systems.
8. **Social Processes & Systems:** Identify, interpret, and analyze cultural, economic, historical, and political dynamics of environmental issues.
9. **Planning & Management:** Describe effective strategies in ecological planning, management, stewardship, and conservation of natural resources.
10. **Sustainability:** Discuss social, economic, and ecological principles of sustainability.