**UNIVERSITY OF TOLEDO**  
**COLLEGE OF MEDICINE**  
**YEARS 1 & 2 ELECTIVE COURSE**

<table>
<thead>
<tr>
<th>TITLE: Wilderness Medicine Elective</th>
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<tr>
<td>COURSE NO.: SOMN711</td>
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<td>DEPARTMENT: Department of Surgery</td>
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<td>DURATION: Longitudinal elective over 1 academic year</td>
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<td>DIRECTOR: David Ledrick, MD, MEd</td>
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<td>COORDINATOR: Janice Fuller</td>
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<td>FACULTY: David Ledrick, MD, MEd</td>
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<td>SEMESTERS AVAILABLE: All</td>
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<td>NUMBER OF STUDENTS: 8 (exceptions may be made depending on expressed interest)</td>
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| LOCATION: St. Vincent Mercy Medical Center, Toledo OH  
Pinckney State Park, Pinckney MI  
Secor Metro Park, Sylvania, OH |

**GENERAL DESCRIPTION:**

Effective medical education requires a combination of didactic instruction and practical experience. The challenge of providing a practical wilderness medicine experience is that students and teachers must leave the traditional hospital setting. The wilderness medicine elective will encourage students to apply their medical knowledge in non-traditional settings. This will occur through a series of workshops and also in having the students organize the medical wilderness adventure race (MedWAR). MedWAR is an event that requires participants display both preparation and adaptability in the practice of wilderness medicine. The students will work from a curriculum of medical problems and incorporate these into an adventure race format. Students will be required to demonstrate proficiency in: splinting, extrication, wound management, water purification, land navigation, management of hypothermia, triage, and identification of poisonous plants and animals. An open reference test covering an even broader range of topics will be administered as well.
TOPICS TO BE COVERED:

**Musculoskeletal Injury Management**
- Strains/Sprains
- Dislocations
- Fractures – Splinting, Traction

**Soft Tissue Wound Management**
- Lacerations
- Burns
- Puncture – with and without embedded objects
- Blisters
- Infection
- Frostbite – Extremity Immersion
- Animal Bites
- Insect Bites/Stings
- Fishhook Removal

**Exposure Injury and Condition Management**
- Hypothermia – Full-Body Immersion
- Hyperthermia/Heat Stroke
- Altitude/Mountain Sickness
- Dehydration
- Hazardous Materials Exposure
- Poisonings – Injections (Animals, Insects), Ingestions (Foods, Plants, Liquids)
- Contaminated Water/Water Purification
- Food/Electrolyte Deprivation
- Lightning and Other Weather Conditions
- Drowning/River Safety
- Fire Issues – Smoke Inhalation, Fire Safety

**Systemic Injury and Condition Management**
- Shock
- Respiratory Conditions/Respiratory Arrest (CPR)
- Cardiovascular Conditions/Cardiac Arrest (CPR)
- Neurological Injuries/Conditions
- Pre-existing Medical Conditions – Diabetes, Sickle Cell Anemia
- Diarrhea/Fluid Loss

**General**
- Scene Assessment Skills -- Multiple Patients (Wilderness Triage)
- Patient Assessment Skills -- Multiple Injuries
- Pediatric Issues in Wilderness Medicine
- Orienteering
- Medical Kit Planning
- Expedition Gear Planning
- Communication Issues
- Transition-to-Hospital Issues
EDUCATIONAL OBJECTIVES:

Following the completion of the Wilderness Medicine Elective, students will be able to:

1. Recognize the importance of wilderness medicine for medical providers.

2. Identify common wilderness medical problems, conditions, and situations.

3. Describe the knowledge, skills, and techniques necessary for proper management of wilderness medicine.

4. Practice important wilderness medical skills and techniques.

5. Engage in a competitive format for the evaluation of proficiency in wilderness medical skills and techniques.

6. Distinguish the importance of teamwork in the success of wilderness medicine and wilderness activities in general.

7. Recognize the importance of proper preparation, planning, and gear in the prevention and management of wilderness medical situations.

8. Demonstrate the importance of physical fitness and its impact on the execution of healthcare provider duties, especially in a wilderness setting.

9. Identify the potential influences and complications of uncontrolled environmental conditions and settings on the management of wilderness medical situations.

10. Develop bonds of collegiality between participants from different schools, hospitals, professions, areas, and backgrounds.

11. Adapt a familiarity with references and resources for self-education and further development of wilderness medical education.

12. Develop a deeper sense of respect for the environment and the need for proper management and conservation of wilderness areas.

13. Gain experience in organizing a CME event
METHODS OF TEACHING:
Students will learn from:

1. Their own reading. The text for the course will be *Wilderness Medicine: Management of Wilderness and Environmental Emergencies* edited by Paul S. Auerbach

2. Direct contact with the instructors in small group settings. These may occur in classrooms at St. Vincent Mercy Med. Center, Medical College of Ohio, or any of the local Metro parks including Miakonda Boy Scout Reservation. The direct contact in small groups will be somewhat variable based on the student’s interest. An additional 10-15 hours will be spent at Pinckney with interested students before the MedWAR event. The event itself is 7 hours long but takes the entire weekend to complete.

3. Workshops given periodically through the year to equal 10 hours. Again, these may occur at any of the above listed locations.

4. Organization of the Medical Wilderness Adventure Race. The students will work closely with the faculty to create a CME event by developing medical scenarios and orienteering problems at Pinckney Recreation area in SE Michigan. This will require the students to understand the medical problems in depth and explore the various solutions to each scenario. The curriculum is listed above.

METHODS OF STUDENT EVALUATION:
The students will be evaluated by the faculty in terms of the quality and frequency of their participation. There will be an open book exam.

LINKAGE TO EDUCATIONAL PROGRAM OBJECTIVES:
The course is designed primarily to provide an experience for the students. It is expected that the students will have the opportunity to demonstrate proficiency in any of the areas of the above listed curriculum through the medical scenarios that they create for themselves over the course of the year.

ELECTIVE EVALUATION:
The quality of the course will be assured in part by North American Educational Adventure Racing. This is an organization of EM physicians who provide quality control for the nationally recognized Medical Wilderness Adventure Races. Feedback from the MedWAR event comes through the CME office at SVMMC. The students will be given feedback forms to assess faculty and course content.

PREREQUISITES (if any):  None