WILDERNESS FIRST COURSE

MODULE I

Fundamentals and Scene Management

- Introduction to remote medicine: Differences between urban and wilderness medicine; the 3 Es (Environment, Equipment, Training).

- Legal and ethical aspects: Implied consent, abandonment, the duty to act, and the scope of practice outside the hospital network.

- Risks and scene management: Hazard assessment (weather, terrain, wildlife), rescuer safety, and the scene assessment triangle.

MODULE II

Assessment and Extended Life Support

- Advanced anatomy and physiology: Systemic review applied to field diagnosis.

- Advanced patient assessment (SOC/SOAP): Detailed physical examination, SAMPLE history, and vital sign assessment in challenging conditions.

- CPR and Life Support: Use of AEDs in the field, oxygen management, and CPR termination protocols in remote areas.

- Airway Management: Asphyxia and advanced devices adapted to the expedition kit.

MODULE III

Trauma and Hemorrhage Control

- Critical Hemorrhage: Stop the Bleed protocol, tactical use of tourniquets and hemostatic agents.

- Wound Management: Pressure irrigation, basic debridement, wound closure (Steri-Strips/glue), and long-term infection control.

- Burns: Classification, hydration of the burn patient, and occlusive dressings.

MODULE IV

Orthopedic Medicine and Evacuation

- Musculoskeletal Injuries: Differentiation between fractures, sprains, and dislocations. Reduction of dislocations in the field (shoulder, fingers, patella).

- Immobilization: Commercial splints (SAM Splint) vs. improvised immobilization (backpacks, crutches).

- Traction and Spine: Management of femur fractures and cervical spine clearance protocols in remote locations.

- Transport: Lifting techniques, improvised stretchers, and self-extraction.

MODULE V

Internal Medicine and Medical Emergencies

- Altered states of consciousness: Shock (hypovolemic, anaphylactic, neurogenic), fainting, and management of the unconscious patient.

- Chronic and acute conditions: Diabetes (hypo/hyperglycemia), seizures, epilepsy, and cardiac emergencies during exertion.

- Allergies: Management of anaphylaxis and use of adrenaline.

- Toxicology: Poisoning from ingestion, stings, and bites from local fauna.

MODULE VI

Environmental Medicine and Specific Environments

- Thermoregulation: Hypothermia (management of rescue wraps) and hyperthermia (heat stroke).

- Altitude and Diving: Acute mountain sickness (AMS), pulmonary/cerebral edema, decompression sickness, and barotrauma.

- Aquatic Environment: Secondary drowning and ocean emergencies.

- Other: Motion sickness and managing behavioral problems/survival psychology.

MODULE VII

Expedition Logistics and Pharmacology

- Pharmacology of remote areas: Use of analgesics, broad-spectrum antibiotics, and expedition-specific medications.

- Medical Kits: Designing first-aid kits according to the type of activity, duration, and number of participants.

- Communications and Evacuation: Distress call protocols (SAT, radio, visual signals).

MODULE VIII

Key Scenarios

- Scenario 1: Axe Accident (Module: Hemorrhage and Shock) Context: A base camp 6 hours from the trailhead. A companion suffers a deep thigh laceration while preparing firewood. It is raining, and the ground is soaked. The Victim: Presents with massive arterial (pulsatile) bleeding. Begins to show signs of shock (pallor, rapid/weak pulse, confusion). Challenge for the student: Immediate control: Apply a tourniquet (commercial or improvised) in less than 60 seconds. Thermal management: Prevent the "Deadly Triad" (Hypothermia + Acidosis + Coagulopathy) by insulating the patient from the wet ground. Assessment: Complete the SOAP report to request evacuation by radio.

- Scenario 2: Rockfall (Module: Assessment and Spine) Context: A climber falls 3 meters onto their back. They were not wearing a helmet. The participant was unconscious upon arrival but regained consciousness after 2 minutes (lucid period). The victim presented with midline cervical spine pain, tingling in the hands, and an open fracture of the forearm. Student challenge: Spinal Protocol: Decide whether the spine can be cleared (clearing protocol) or if continuous manual immobilization is required. Improvised Splint: Immobilize the forearm using only materials from the backpack

(trekking poles, clothing, insulation). Monitoring: Detect signs of increased intracranial pressure (Glasgow Coma Scale).

- Scenario 3: The Reaction on Trekking (Module: Allergies and Airway) Context: During a midday hike, a participant is stung by a wasp or ingests an allergenic food. There is no cell phone signal. The Victim: Difficulty swallowing, stridor (a high-pitched sound when breathing), generalized urticaria, and facial edema (angioedema). Challenge for the student: Differential diagnosis: Differentiate between a local reaction and anaphylaxis. Treatment: Administer the (simulated) epinephrine auto-injector and position the patient to maximize airflow. Evacuation plan: Decide whether the patient can walk after temporary improvement or if a transport stretcher should be set up.

- Scenario 4: Carrying a Hypothermia Victim (Module: Environmental and Transport) Context: A group gets lost and is caught in a storm. They find an outside hiker who has been in the rain for hours, is soaked, and is no longer shivering (moderate/severe hypothermia). The Victim: Altered level of consciousness (appears intoxicated), clumsy movements, cold and cyanotic (bluish) skin. Student Challenge: Gentle Handling: Understand that sudden movement can cause cardiac arrest (myocardial vulnerability). Packing: Construct a "vapor wrap" or "hypothermia burrito" using garbage bags, thermal blankets, and sleeping bags. Hydration: Discuss why this patient should not be given anything to drink until they are conscious and rewarmed.

END OF COURSE