



Natural Resources Extension Program (NREP)

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The Aboriginal Environmental Technician Series is comprised of five, one-week training modules (offered individually or as one, five-week certificate program). Each module is 40 hours in duration, and focuses on 'hands-on', field-based training.

Essential Environmental Skills

An applied review of key or 'core' environmental employment skills. Upon successful completion, students will be able to:

- Identify roles and responsibilities for environmental monitoring crews
- Conduct standard safety operations and procedures
- Identify and compare environmental monitoring field activities
- Identify personal traits of an environmental monitor
- Conduct effective journal entry, data recording, and data management
- Design, set-up and manage a photo point monitoring station
- Design and conduct effective data recording techniques
- Conduct standard use of key field equipment: Elson tape, clinometers, Abney level, laser range finder, electronic scale
- Identify and conduct standard measuring and sampling techniques
- Navigate using standard navigation tools (compass, GPS, maps)
- Map and interpret project data
- Identify Project Planning phases
- Design and budget for environmental field programs
- Identify standards for Professional conduct
- Conduct field communication procedures

Land Monitoring Skills

An applied review of standard vegetation, soil, and wildlife sampling and monitoring field skills. Upon successful completion, students will be able to:

- Identify and conduct standard measuring and sampling techniques
- Navigate using standard navigation tools (compass, GPS, maps)
- Map and interpret project data
- Conduct standard safety operations and procedures
- Compare types of vegetation surveys
- Identify vegetation types (e.g., plants, trees) in the field
- Conduct vegetation survey methods.
- Describe the purpose for collecting soil samples
- Identify soil sampling sites in the field
- Record accurate site information to assist with soil sampling
- Classify soil through observation and field procedures
- Identify the purpose of wildlife surveys
- Identify and describe wildlife survey sites in the field
- Record accurate site information to assist with wildlife surveys
- Describe wildlife survey methods
- Design and conduct a wildlife survey

Water Monitoring Skills

An applied review of standard stream habitat measurement and assessment, water quality surveying, sediment and invertebrate sampling field procedures. Upon successful completion, students will be able to:

- Define the main principles in monitoring freshwater habitats
- Identify standard water quality parameters
- Identify and operate freshwater sampling equipment
- Conduct proper calibration methods of sampling equipment
- Sample effluents, streams and lakes safely and accurately
- Record water quality data precisely and accurately
- Define and contrast types of water sampling field equipment
- Maintain and operate water quality sampling equipment

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Individual Module Overviews



- Define safety considerations
- Conduct standard field sampling methods
- Demonstrate proper use of field measurement equipment
- Conduct standard stream measurement field procedures
- Maintain and operate stream measurement sampling equipment
- Conduct safe wading procedures
- Conduct water velocity and stream discharge procedures
- Identify and describe lake and stream bottom sediment sampling sites
- Record accurate site information to assist with interpreting sample data
- Operate and maintain lake and stream bottom sediment samplers
- Collect lake and stream bottom sediment samples
- Identify and compare aquatic insects and their lifecycle
- Maintain and operate aquatic sampling equipment
- Conduct an invertebrate sampling program
- Design an invertebrate sampling program
- Collect, interpret and manage field data

Fish and Fish Habitat Monitoring Skills

An applied review of standard fisheries field monitoring skills, including electrofishing, fish habitat assessment, water quality sampling, fish inventory methods, and fish population monitoring. Upon successful completion, students will be able to:

- Conduct standard safety operations and procedures
- Identify fish habitat requirements
- Identify fish habitats in the field
- Conduct fish identification using fish identification guides and keys
- Identify freshwater fishes (varies by course location)
- Conduct biological sampling
- Maintain and operate biological sampling equipment
- Collect and record biological data
- Define and compare juvenile fish inventory methods
- Conduct standard minnow trapping procedures
- Conduct standard pole seining procedures
- Conduct standard electrofishing procedures

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Individual Module Overviews



- Conduct fish population estimation procedures
- Calculate basic population estimates
- Complete fish collection data requirements
- Conduct and practice safe wading procedures.
- Respond appropriately to a potentially dangerous electrofishing incident.
- Conduct a safe and efficient electrofishing session

Construction Site Monitoring Skills

An applied review of standard environmental monitoring field skills, including site planning, erosion control, in-water construction and environmental project field skills. Upon successful completion, students will be able to:

- Conduct standard safety operations and procedures
- Contrast phases of environmental construction projects
- Compare phases of monitoring environmental construction projects
- Conduct standard environmental planning field measurements
- Identify key environmental legislation
- Conduct water quality sampling techniques
- Read, interpret Engineering and environmental construction plans
- Identify and compare standard Erosion Control techniques and procedures
- Install temporary and permanent erosion control structures
- Identify and conduct Dry Worksite Isolation Techniques
- Identify, select, and operate pumps
- Determine pump size, total head required
- Identify In-stream sediment control techniques
- Manage and plan timing windows and construction schedule requirements
- Report for environmental monitoring programs
- Maintain and operate on-site equipment
- Install temporary and permanent erosion control structures
- Identify spill response procedures
- Design communication plans and protocols, reports, and
- Identify and conduct key project management and safety procedures.

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Individual Module Overviews

