



**MALASPINA**  
UNIVERSITY-COLLEGE

**Natural Resources Extension Program  
(NREP)**

900 Fifth St., Nanaimo,  
British Columbia, Canada V9R 5S5  
<http://www.mala.ca/nrep/>

**Aboriginal Environmental Technician Certificate Program**

<b>Course Title:</b>	<b>Core Skills</b>
<b>Course Hours:</b>	24 hours
<b>Description:</b>	An introduction to core skills including: notebook and reporting forms; recording notes; importance of accuracy and precision; communication equipment; primer on measurement systems and conversion to/from metric; measuring units; use of measuring tools (Eslon tape, hip chain, meter stick, rangefinder, clinometer, Abney level). Includes field exercises to practice and reinforce skills.
<b>Prerequisites:</b>	None.
<b>Evaluation:</b>	Attendance (minimum of 90% of the course hours); demonstration of practical skill, achieving a minimum of 70%; and assignments.

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<b>Course Title:</b>	<b>Orienteering</b>
<b>Course Hours:</b>	24 hours
<b>Description:</b>	Introduction to orienteering, including use of compass, maps, and aerial photographs in conjunction with GPS to navigate on land and interpret landforms. Topics include: locating and recording locations; marking way points; delineating areas; recording elevations; assisting with navigation; determining time and date, speed of travel, distance between points.
<b>Prerequisites:</b>	None
<b>Evaluation:</b>	Attendance (minimum of 90% of the course hours); demonstration of practical skill, achieving a minimum of 70%; and assignments.

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**Course Title:** **Stream Measurements**  
**Course Hours:** 24 hours  
**Description:** An introduction to hydrology and stream measurements. Topics include: measuring and quantifying fish habitat features, determining channel flow, discharge, volume, area; cross-sectional profile using flow meters; measurement and graphing tools and programs.  
**Prerequisites:** None.  
**Evaluation:** Attendance (minimum of 90% of the course hours); demonstration of practical skill, achieving a minimum of 70%; and assignments.

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**Course Title:** **Weather Station Data**  
**Course Hours:** 8 hours  
**Description:** An introduction to the management and analysis of environmental field data and information. Participants learn standard procedures to entering field data, employing graphing, statistical software to analyze and present field data.  
**Prerequisites:** None.  
**Evaluation:** Attendance (minimum of 90% of the course hours); demonstration of practical skill, achieving a minimum of 70%; and assignments.

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**Course Title:** **Freshwater Sampling Methods**  
**Course Hours:** 8 hours  
**Description:** An introduction to techniques for effluent and ambient water quality sampling. Topics include: quality assurance measures; identifying sampling locations; developing safety plans; conducting field filtration and preservation; recording field notes and identifying chain of custody; and conducting water quality sampling using (and calibrating) field meters and other types of sampling equipment.  
**Prerequisites:** None.  
**Evaluation:** Attendance (minimum of 90% of the course hours); demonstration of practical skill, achieving a minimum of 70%; and assignments.

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**Course Title:** **Invertebrate Sampling Methods**  
**Course Hours:** 8 hours  
**Description:** An introduction to invertebrate sampling methods. Topics include: identifying stream sampling sites; setting up and maintaining field sampling equipment; conducting invertebrate sampling; identifying, tallying and classifying captured specimens; calculating and conducting sample preservation (archival) techniques; conducting replicate sampling; recording appropriate field notes.  
**Prerequisites:** None.  
**Evaluation:** Attendance (minimum of 90% of the course hours); demonstration of practical skill, achieving a minimum of 70%; and assignments.

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**Course Title:** **Soil Sampling Methods**  
**Course Hours:** 8 hours  
**Description:** Introduction to soil sampling methods. Topics include: techniques for conducting terrestrial and vegetation surveys; establishing plots; determining soil composition and properties; determining appropriate sites for soil sampling; collection; transport; and interpretation.  
**Prerequisites:** None.  
**Evaluation:** Attendance (minimum of 90% of the course hours); demonstration of practical skill, achieving a minimum of 70%; and assignments.

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**Course Title:** **Vegetation & Wildlife Sampling Methods**  
**Course Hours:** 20 hours  
**Description:** Introduction to vegetation sampling methods. Topics include: techniques for conducting terrestrial and vegetation surveys; establishing plots; determining species composition and age; determining appropriate sites for vegetation sampling; collection; transport; and interpretation.  
**Prerequisites:** None.  
**Evaluation:** Attendance (minimum of 90% of the course hours); demonstration of practical skill, achieving a minimum of 70%; and assignments.

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**Course Title:** Sediment Sampling Methods

**Course Hours:** 4 hours

**Description:** Introduction to sediment sampling methods. Topics include: techniques for conducting sediment surveys in lakes and streams; establishing plots; determining appropriate collection sizes; interpreting results; determining appropriate sites for sediment sampling; collection; transport; and interpretation.

**Prerequisites:** None.

**Evaluation:** Attendance (minimum of 90% of the course hours); demonstration of practical skill, achieving a minimum of 70%; and assignments.

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**Course Title:** Rod and Level Survey Methods

**Course Hours:** 24 hours

**Description:** Introduction to rod and level surveying. Topics include: identifying surveying equipment, tools and procedures; conducting rod & level surveys for a wide variety of applications; environmental site assessments; road design & layout; stream crossing installations; and fish habitat restoration projects.

**Prerequisites:** None.

**Evaluation:** Attendance (minimum of 90% of the course hours); demonstration of practical skill, achieving a minimum of 70%; and assignments.

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**Course Title:** Electrofishing: Theory, Uses, & Safety

**Course Hours:** 16 hours

**Description:** An introduction to electrofishing (EF) theory, safety and practices. The program meets current WorkSafeBC requirements for certification. Emphasis is on safety but the theory and practice of backpack electrofishing is also reviewed. Participants identify and adjust EF components; manage an electrical field in water; operate the EF unit to reduce impact/injury; and conduct a safe and efficient electrofishing field session.

**Prerequisites:** None.

**Evaluation:** Attendance (minimum of 90% of the course hours); demonstration of practical skill, achieving a minimum of 70%; and assignments.

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**Course Title:** Fish Inventory Methods

**Course Hours:** 16 hours

**Description:** Introduction to fish inventory methods. Topics include: review of standard adult and juvenile salmonid inventory methods; capture of fish using minnow traps and pole seines; calculation of Catch Per Unit Effort (CPUE); and design of sampling program using these tools.

**Prerequisites:** None.

**Evaluation:** Attendance (minimum of 90% of the course hours); demonstration of practical skill, achieving a minimum of 70%; and assignments.