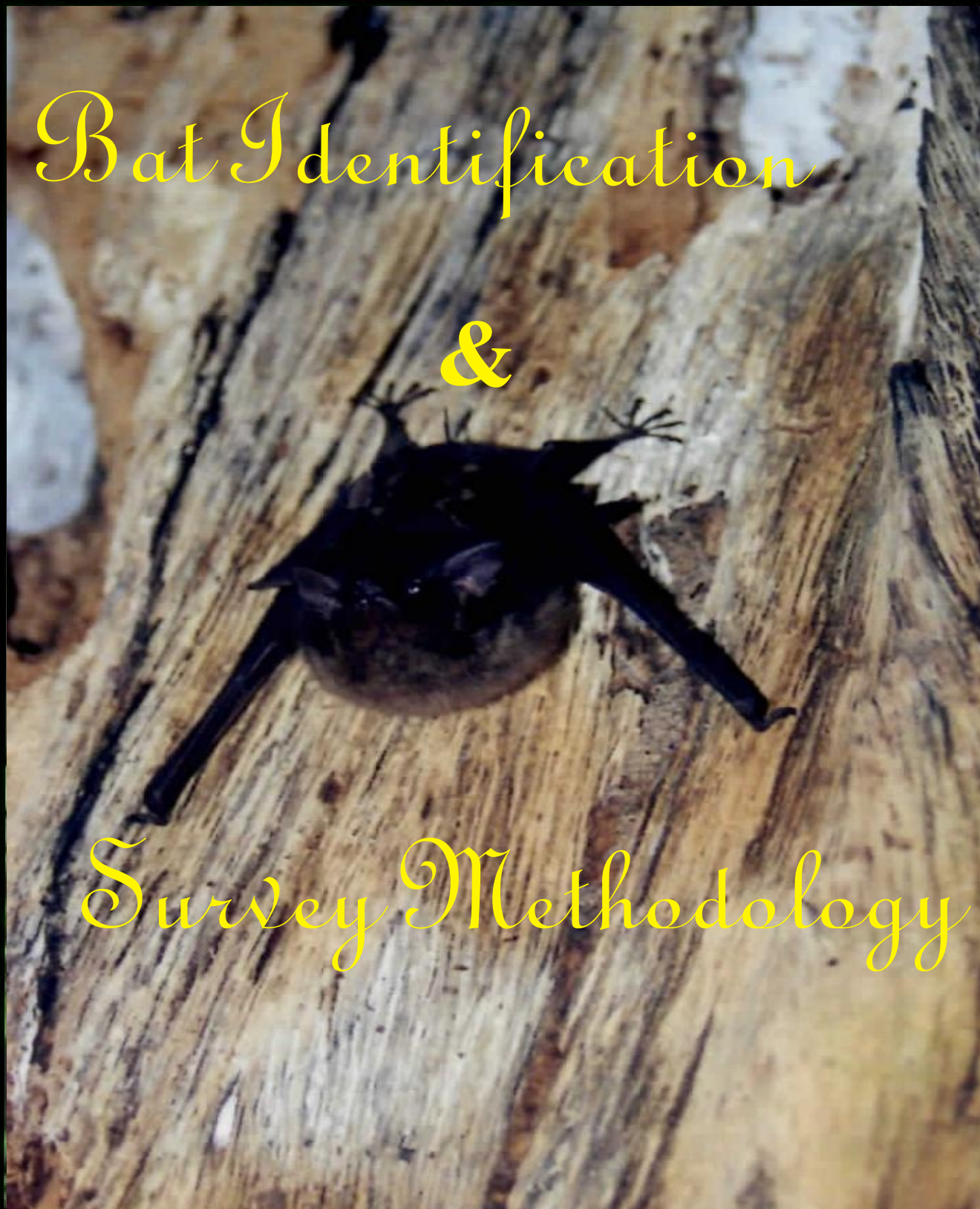


Bat Identification

&

Survey Methodology

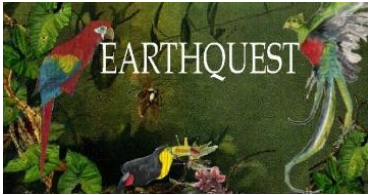


Bat Identification & Survey Methodology

August 12 - 14, 2022 (3 day)

August 12 - 13, 2022 (2 day)

Fully endorsed and supported by



EARTHQUEST
Biological Field



EARTHQUEST
(Canada) for the
Environment



Benefits of Bat ID & Survey Certification

The bat ID & survey certification course is not offered through traditional college or university and may be taken through the

EARTHQUEST Biological Field School to fulfill the provincial standard requirements of surveying bats in Ontario. Our bat course is fully integrated with the requirements for working on a project that requires bat surveys. It is now a requirement for many development projects to include bat surveys since Tri-colored Bat (*Perimyotis subflavus*), Little Brown Myotis (*Myotis lucifugus*), and Northern Myotis (*Myotis septentrionalis*) were recently listed as endangered. The course will follow standard provincial protocol and was developed by the Senior Instructor - Dave Jolly with assistance from Bat Biologist Toby Thorne - in response to this requirement within the environmental industry and to fulfill knowledge gaps associated with properly surveying bats. This shortage is acknowledged by professionals such as **PLW Planning and Environmental Consulting**, who state:

"In my experience, graduates from EARTHQUEST Canada are well qualified to participate in consulting practices and the market is currently in short supply of well qualified individuals."

Skills acquired

Instruction will include;

- Polygon delineation of candidate bat significant wildlife habitat
- Field practicums for how to capture ecological data and incorporate monitoring & mitigation into projects and planning
- Natural heritage assessment of significant wildlife habitat referencing the Provincial Policy Statement (PPS)

Who should take Bat ID & Survey Certification?

This course is a requirement for many projects in terrestrial and wetland ecology.

Many environmental projects involving EIS or EA work now require bat surveys to be conducted to conform to protocol requirements. EARTHQUEST is the first and only organization in Canada to offer bat identification and survey certification within a 3 day structure. Obtaining bat identification and survey certification should substantially increase your capacity to perform bat surveys in Ontario. This course will benefit ecologists, planners, restoration ecologists, foresters, project managers and resource planners. It is incorporates a considerable amount of ecological knowledge and information.

The goal of obtaining bat identification and survey certification is to facilitate the evaluation process involved with surveying natural systems such as watersheds, woodlands and valleylands. Key learning outcomes and objectives of this course will be;



Habitat mapping How to reference guidance documents and technical manuals to identify, assess, evaluate and map wildlife habitat for bats.

Bat surveys How to perform visual, acoustic, and transect surveys, data management and geotagging using GIS software.

Upgrade your field bird & plant field ID skills

The EARTHQUEST Biological Field School offers **6 plant field identification certification courses & workshops** for plants and **2 bird field identification courses & workshops** in terrestrial, wetland and aquatic systems. This includes courses on Species at Risk (SAR).

These certification courses are specifically designed to greatly enhance your field identification and survey skills of vascular plants and birds in terrestrial, wetland and aquatic systems (ie. deciduous and coniferous forests & swamps). The **Level 1 & 2 terrestrial FBT courses** focus on common families and genera typically found in the 5 forest regions of Ontario and Canada while performing field work. The **Level 3 FBT courses** focus on species, sub-species and hybrids. To learn more about these courses please consult;

<http://earthquestcanada.wix.com/plant-courses>
<http://www.earthquestcanada.ca/Birdcourses.htm>

The Instructors

Dave Jolly, B.Sc., Senior Instructor & President, EARTHQUEST Biological Field School, Senior Biologist/Consultant, EARTHQUEST Environmental Consultants

- Since 2008 worked on over 30 Environmental Impact Study (EIS) and Environmental Assessment (EA) projects mapping woodlands, wetlands, natural heritage features, significant wildlife habitat, valleylands, renewable energy project layouts, 60 SAR flora and fauna species, etc.
- Experienced in classifying, describing and identifying candidate significant wildlife habitat for bats on 10 renewable energy projects
- Worked with Conservation Authorities, First Nations, Ontario Parks, National Parks, environmental consulting firms, non-government organizations, the private and public sectors on field projects involving natural areas and inventory
- Completed the Ontario Ministry of Natural Resources and Forestry (MNRF) Bird and Bat Post Construction Monitoring for Renewable Energy Projects Training

Erin Ruggiano, B.Sc., Instructor, EARTHQUEST Biological Field School

- Since 2016 worked as a substitute Teacher in Massachusetts, USA
- Volunteer for Urban Wildlife Rehabilitation since 2014
- Completed the EARTHQUEST Bat ID and survey course in 2017
- Assisted with several EARTHQUEST bat survey projects such in the Bruce peninsula and Hamilton, Ontario areas.

The Course

This field course is available over a 3 day intensive period via personal attendance and may not be offered in subsequent years. This schedule

involves 6 - 8 hours per day of instruction. It provides considerable 1-1 instruction and is recommended to people who enjoy individual attention and practical hands-on learners. In order to maximize interaction among the instructors and students we like to keep the number of participants low. This is a course designed to emphasize bat identification and survey techniques which are best tailored to the layout and deliverables of your project. It is recommended that students have their own computer (lab top) for taking notes and flash drive to obtain course material hand-outs or PowerPoint presentations. Binoculars and a flash light to watch bats at a bat roost site are also highly recommended. To obtain full certification students must participate in the field practicums designed to reinforce class room sessions.

Course outline & Break down

Start time: 9:00 am on **Friday**. The 3 day course will follow this schedule;

Day 1

Morning: Introduction to bats and their habitats, course objectives and outline
Afternoon: History and rationale of bat training.

Day 2

Morning: Working with bats, identification & survey methodology.
Afternoon: Field work, use of guidance documents and survey protocols
Evening: Field work, a visit to a natural area to survey suitable bat habitat

Day 3

Morning: Natural Heritage System mapping: incorporating the Provincial Policy Statement into your bat project; Environmental Impact Studies (EIS) case studies, defining significant wildlife habitat, significant woodland, land use mapping based on Ecological Land Classification (ELC) polygons, etc.
Afternoon: Environmental monitoring and mitigation, determining how to mitigate your project based on existing environmental constraints, buffers, environmental laws, regulations and policies that protect bats and their habitat in Ontario. Course wrap up and conclusions.

Registration Form

Participant information

Affiliation: _____
Name: _____
Address: _____

City: _____ Postal Code: _____
Telephone: _____ Fax: _____
Email: _____

Course dates

August 12 - 14, 2022 (3 day)
August 12 - 13, 2022 (2 day)

Payment

- Please make certified cheques payable to **EARTHQUEST (Canada) for the Environment**. Please write the name of the registrant on the face of the cheque. At this time we do accept Pay pal, if you wish to use a credit card for payment.

- Payment should be emailed to;

Attention: Bat course registration
EARTHQUEST Biological Field School
earthquestcanada@yahoo.com

- Your bat instruction course material will be provided within 1 month of the course start date as PDF files downloaded from our website. Space is limited to a maximum of 3 - 5 students and there is no waiting list, so book early since this course may fill quickly. Please email your completed bat registration form as a PDF document or Jpeg to the attention of **Dave Jolly** at; earthquestcanada@yahoo.com.

Participant information

	# of participants	Fees	Total
Course fee (3 day) (if book before August 1, 2022)	_____	x \$1549	+ \$ _____
Course fee (2 day) (if book before August 1, 2022)	_____	x \$1100	+ \$ _____

Early bird discount

For registration received with payment 7 days prior to registration deadline

_____	x \$25.00	\$ _____
Subtotal:		\$ _____
I would like to register for;		GST (if appl.) \$ _____
<input type="checkbox"/> 3 day course	Grant total	\$ _____
<input type="checkbox"/> 2 day course	Grant total	\$ _____

Method of payment

- Certified cheque or money order(enclosed)
- Deposit through any TD/Canada Trust
- Email money transfer
- Pay pal

Cancellation policy

We maintain a strict policy with no exceptions. This certification course is 100% non-refundable and must be taken within 1 year of acceptance, but we may consider you for transference to another date.

Networking Form

Please help us to meet your needs by filling out the following information:

My area(s) of expertise are:

I am taking this bat certification course because I wish to use it for;

- Career development and upgrade
- Advanced skills
- Terrestrial studies
- Habitat restoration
- Watershed planning
- Development of policy and legislation
- Other

I would like more training in;

Liability and Waiver Release

This training is being conducted to meet the standards of the environmental industry in Canada and the USA. The Instructors, Teaching Assistants, EARTHQUEST (Canada) for the Environment, EARTHQUEST Environmental consultants and the EARTHQUEST Biological Field School are teaching an international field biology course, program or course and cannot be held responsible, liable, accused of anything resulting in the participants dissatisfaction, for the way in which this training is applied to the participants. Participants are responsible for their own health, safety, computers, equipment. This is a field course with ticks carrying Lyme disease, mosquitos, biting insects and diseases that may be carried by bats. EARTHQUEST will can not be held liable for any health issues or ailments resulting from contact with biting insects, anthropods or diseases that may be carried by them. Any and all equipment, course material, supplies, food, computers, rental facilities, etc. are provided as is. It is your responsibility to have your own computer in order to participate. I _____ have read, understood and agree without duress, with all terms and conditions on the EARTHQUEST website at; <http://www.earthquestcanada.ca/Termsandconditions.htm> before paying and gaining acceptance.

I _____, hereinafter referred to as the "participant", agree that I will bring my own computer and this course is not a Ministry of Natural Resources and Forestry (MNRF) course, EARTHQUEST is exempt from registration from the Ministry of Training, Colleges and Universities and this course is included in the International Field Biology Training (FBT) Program, all payments are completely 100% non-refundable and to pay a 15% cancellation fee (33% interest rate) should I drop out, cancel, forfeit, delay or not participate and to indemnify and save EARTHQUEST (Canada) for the Environment, EARTHQUEST Environmental consultants and the EARTHQUEST Biological Field School and its employees harmless from all claims arising in favour of any person, including contacting any other persons, agencies or organizations to ask for a refund or complain, myself, firm or corporation, on account of any dissatisfaction, personal injury (including death) or property damage to the extent resulting from my actions and participation in this Bat Identification and Survey certification course. If the participant does contact any other persons, agencies or organizations to ask for a refund or complain the participant acknowledges, understands and agrees that this may be taken as harassment and slander and subsequent charges relating to this may be laid. The participant acknowledges, understands and agrees to pay any legal fees resulting from such action.

Signature

Date

Terms and Conditions

Please read the following information carefully

How to Book

Request an interview. Once accepted forward your completed application form with your non-refundable deposit to secure placement in the program of your choice with EARTHQUEST (Canada).

Deposits

Deposits for primate Field Biology Training (FTB) programs in Canada or Central America are \$699.00 USD (United States dollars), \$575.00 USD for Ethnobotany or Rainforest Ecology programs, \$580.00 CAD (Canadian dollars) for the Biological Field School. If approved for financial assistance and you have obtained a loan or line of credit to cover course fees then the deposit amount is based on the number of courses taken. For example, if approved for 7 courses then the deposit is \$5600.00 CAD non-refundable. These are 100% non-refundable and may be used to hold your reservation for 7 days from program acceptance (or in some cases the interview date). All funds are processed by 12 Noon on the date submitted. The balance is due 60 days prior to program departure for international programs. Any and all payment of fees toward courses through the Biological Field School are 100% non-refundable in the event that the student cancels, postpones, delays or forfeits participation and are subject to application and cancellation fees if the student cancels, postpones, forfeits, drops out, or changes the format of their program, course or project in any format. Please make certified cheques or international money orders payable to EARTHQUEST (Canada). You may also wire transfer funds via a bank or Western Union to ensure faster service.

Cancellations

Part A of this cancellation policy does not apply to courses taken through the Biological Field School via correspondence or personal attendance. It does apply to field courses taken in Central America in partnership with the La Suerte Field Biological Field Station.

Part A

You acknowledge that should you decide to cancel your international program within 60 days prior to Expedition/Program departure then reimbursement of Expedition/Program costs shall be based on the following cancellation policy; If cancel 45-60 days prior to departure - 25% of Expedition/Project costs retained. If cancel 30-45 days prior to departure - 50% of Expedition/Project costs retained. If cancel 15-30 days prior to departure - 100% of Expedition/Program costs retained. The deposit payable to EARTHQUEST shall only be refunded if you find a replacement suitable to EARTHQUEST, if EARTHQUEST finds a replacement, or if the Expedition/Program is canceled by EARTHQUEST, and that the refund or non-refund of part of all of the balance of the total Expedition/Program costs shall be in accordance with the cancellation policies of the Expedition/Program, which you acknowledge that you have read and understand. You also acknowledge that EARTHQUEST shall not be held responsible for the refund of, or for arranging the refund of the round trip airfare, transportation, accommodations or food.

Part B

All courses taken through the Biological Field School must be via personal attendance unless you are given **special permission** by your Instructor/Teacher in another format such as correspondence & are 100% non-refundable from the date that funds are received. Students will be charged a 15% (of the total tuition) cancellation fee (in addition to any and all 100% non-refundable costs paid), should they be suspended, cancel, forfeit, drop out, delay or change, in any way - courses, programs or projects. Interest rates shall apply to any fees charged, or for late payments. Students that miss, cancel or change a scheduled test will receive a fail for the test or course. Students requesting any switches/changes to their program, courses or projects must request this in writing, provide valid reasons, make an appointment to discuss it and receive permission from their Instructor/Teacher. Fees for any changes or extensions in how you wish to partake in the program, courses, or project will be applied. Please note, certificates are not awarded (as they are generally sent with transcripts) until all courses are successfully completed, the student is in good standing and has passed their program or course(s). This includes completion and passing any tests, assignments or tasks associated with course work.

Upon registration

You will receive immediate confirmation and acknowledgement of securing placement in the program. If you have applied to a FBT Program then you will be mailed, or emailed a FBSST, or FBT Course, which will be due no later than 30 days prior to departure or receipt for evaluation. Remember, you must pass the FBSST, or FBT Course before gaining full acceptance in the program. Failure to do so could expel you from the program. The complete Expedition/Project/Program/Course or briefing material will be mailed to you upon payment of the remaining balance and receipt of ALL application documents.

Expedition/Course/Project/Program Dates/Structure and Leader Changes

You acknowledge that EARTHQUEST and its staff have the right to change or alter itineraries, Expedition/Project/Course costs and prices, or plans without notice or prior approval for the safety or betterment of the Expedition, course, or project, its members and staff. This includes the need to update or revise courses. We will do everything possible to ensure Expeditions/Projects/Courses will operate with the leaders noted and the dates listed. If the student wishes to switch/change a course, project or program they must completely and fully fill out a request to switch/change application form and pay the fee.

Liability

You acknowledge that you have been informed by EARTHQUEST that for some parts of the aforementioned Expedition/Program/Course, no liability insurance is or can be carried by the operators of local transportation or facilities in the destination country, and that you take full responsibility for your health and safety during all portions of the Expedition/Program/Course. Before you participate in any Expedition/Project you will be required to complete a brief confidential personal data, health and liability/agreement form as well as a medical form. No one associated with the liability/agreement form or with the Program has made any representation or promise about the matters covered in the Agreement, apart from what is written in this agreement. In other words, this document contains the entire agreement between the Program participant and EARTHQUEST with respect to the matters covered by the agreement. By reading the terms and conditions presented here, understanding and agreeing to these terms and conditions you acknowledge that EARTHQUEST cannot be held responsible, liable or accused of anything resulting in your dissatisfaction with the Program, courses, our staff, affiliates, agents, partners or representatives. You acknowledge that you agree to waive and release all claims, demands or causes of action against EARTHQUEST and its agents and agree to indemnify them with regard to any financial obligations or liabilities that you may incur personally or any damage resulting from participation in the Program.

Responsibility

All students accepted into our programs or courses will have 1 year from the date they gain acceptance to complete all required program, course or project material for evaluation. Submission of required program, course, or project material or assignments for evaluation past deadline dates will not be accepted and will automatically receive a failing grade. If you are registered for a 12 month International FBT Program and decide to switch/change, shorten the length of your program, course, project, etc. to a 9 month International FBT Program, for example, at any time during your registered 12 month International FBT Program then you **must** receive permission and full approval from your Instructor/Teacher and pay a flat fee of \$200.00 CAD per course before being permitted to continue. This also applies if you wish to extend the length of your program, course or project. Any and all requests for switches/changes must be in writing; signed, dated and witnessed to be considered. If your program length is shortened or extended then you **must** ensure your Instructor/Teacher that you can complete any remaining

Courses within the timeframe that the course is operating. In other words, if you are approved to make the date change and switch into another program, course or project and the course(s) is scheduled to be completed within 90 days and you have 30 days left in the program, course or project you were permitted to switch into, then you will have until the end of the time remaining in the program you switched into to complete any and all courses (ie. within 30 days of the date you are approved to make the date change, not 90 days). Students who submit material after this deadline date will automatically receive a failing grade and participation in the program or course will be terminated. To make a switch/change in any course you must completely and fully fill out the **Request to switch/change application** form. Application forms that are filled out incorrectly will not be accepted and may be returned, thereby delaying your request. To download a Request to switch/change application form simply click on;

<http://www.earthquestcanada.ca/Requesttoswitchchangeapplicationform.pdf>

Students who do not show up for programs, courses, or projects for 1 week (3 in class/field sessions) or accumulate a total of 15 absences without proper notice, permission from their Instructor/Project Coordinator, or valid reasons are considered to have dropped out of their program, course, or project. You acknowledge that EARTHQUEST has the right to terminate your participation in the program, course or project, without refund (if there is blatant indiscretion on the part of the client(s). This includes use of profanity and foul language, drugs, alcohol, submission of required documents such as tests, exams, assignments, course material, lateness, absenteeism, your Agreement with EARTHQUEST, etc., disrespectful behaviour or correspondence, disrespecting the required duties and roles related to the Expedition/Program/Course, the staff, the team or any employees, partners or affiliates working with EARTHQUEST, etc. This includes not showing up, cancelling or forfeiting scheduled tests or field sessions/classes. If participation is terminated it is the client(s) responsibility to withdraw and return home at his/her own expense(s) without refund.

You acknowledge that EARTHQUEST and any employees, agents or affiliates of EARTHQUEST are not responsible for any damages, disappearances, injuries or loss, accidental or otherwise, which may occur or be caused during the course of the Expedition/Project/Course/Program to the destination of your choice.

You acknowledge that the minimum requirement to gain acceptance into the certification courses of the General FAT Program, which are exempt from registration by the Ontario Ministry of Training, Colleges and Universities (MTCU) is a post graduate degree/diploma and/or 3 - 5 years of experience. The minimum requirement to gain acceptance into the international FBT Programs is a High School diploma. To gain acceptance into any EARTHQUEST programs, projects or certification courses that are exempt from registration by MTCU you **must** provide the following documents; a copy of your degree/diploma from a recognized college/university, a copy of your transcript, a current resume, a completed application form, reference forms completed by three (3) elected referees. You acknowledge that you have provided these documents at the time of paying your 100% non-refundable tuition.

EARTHQUEST (Canada) for the Environment and its agents act only as agents for passengers/participants with respect to services provided passenger/participant by others including, but not limited to that service, on the express condition that EARTHQUEST and its agents are not liable for any failure in service, or injury, loss or damage, delay or inconvenience arising out of or in connection with any defect in any vehicle or any act, omission, accident, or error in providing such transportation, hotel, restaurant, or other service. If circumstances beyond EARTHQUESTs control require cancellations or modification of an Expedition/Program/Course before commencement, operator's sole responsibility is refund of payments subject to terms and conditions outlined herein. In case of accident occurring during the land portion of any Expedition/Program/Course, passengers/participants must submit any claim therefore only to the competent judicial authorities where such accident occurred, to be determined exclusively in accordance with the laws of such jurisdiction. By accepting the coupons and tickets and utilizing the service you agree that neither EARTHQUEST nor its agents nor any affiliated companies or representatives shall be liable for any loss, injury or damage to you or your belongings or otherwise in connection with any occurrences beyond their control including breakdown in equipment, strikes, theft, delay or cancellation or changes in itinerary or schedules, etc. Remember, that travel documents, as well as compliance with customs regulations and laws are your responsibility. The ground/tour operator and its agents reserve the right to refuse to accept or retain any person as a member of the Expedition/Program/Course/Project. The right is reserved to withdraw any or all Expeditions/Programs/Courses/Projects or project or portions thereof.

Payment of your non-refundable program, course, project cost is take as acknowledgement of and agreement to the above terms.