



Advanced Snow Avalanche Mapping Course

The Canadian Avalanche Association (CAA) and the National Search and Rescue Secretariat (NSS) have initiated a project to develop national guidelines for snow avalanche mapping. The project is part of the NSS New Initiatives Fund, which is intended to improve accident prevention and response. Avalanche mapping guidelines are an accident prevention initiative.

Co-sponsored by the Canadian Avalanche Association and the Forestry Continuing Studies Network (FCSN), this ten-day course is intended for experienced avalanche professionals with relevant academic training, or persons from related fields with relevant academic training and a basic foundation in recognition of snow avalanche terrain.

COURSE GOALS

By the end of the course, participants will be able to:

- Explain mapping applications & terminology
- Describe Canadian mapping & zoning practices
- Analyze required direct field evidence, terrain interpretation, snow supply data, historical data, and exposure of people and property
- Apply avalanche models
- Interpret the protective role of forests
- Produce maps & reports
- Explain professional responsibilities, ethics and scope of practice

PRE-REQUISITES

Potential participants must meet the following pre-requisites:

- be physically fit and accustomed to working in the bush
- be computer literate, and able to use spreadsheets and word processing packages
- be accurate when working with data

Four years experience in either:

- working full time in an established avalanche safety operation,
- OR working in planning, engineering, forestry, geoscience, geography, hydrology, or related fields *for the winter mountain environment where avalanche terrain is present.*

ALSO

Successful completion of:

- Level 1 CAA Avalanche Safety Course (Operations or Transportation & Resource Industry) or equivalent
- CAA Introductory Avalanche Mapping Course, or Introduction to Map and Air Photo Interpretation course with demonstrated applications in mountainous terrain
- University or university transfer level introductory courses in:
 - Probability & statistics
 - Calculus
 - Physics

Note: Prior learning assessments of equivalent learning may be possible in either *Calculus* or *Physics*. Successful completion of a written assessment will be required.

COURSE MATERIALS

Course manuals will be provided to each participant. Participants will be expected to bring the following to the course:

- engineering scale
- compass
- magnifying lens
- altimeter
- camera and film
- field book and pencils
- hand-held gps unit
- clinometer
- increment borer
- stereoscope
- calculator with statistical functions, which is able to calculate inverse tangents
- laptop computer with spreadsheet and word processing programs
- personal copies of the following:
 - McClung, D. & Schaerer, P. (1993). *The Avalanche Handbook*. Vancouver, B.C.: Douglas & McIntyre. ISBN 0-89886-364-3
 - Canadian Avalanche Association. (1995). *Observation Guidelines and Recording Standards for Weather, Snowpack and Avalanches*. Canadian Avalanche Association. ISBN 0-96999758-0-5.
 - Mears, A.I. *Snow Avalanche Hazard Analysis for Land Use Planning and Engineering*: Bulletin B49, Colorado Geological Survey (to order, call: (303) 866-2611 or e-mail: cgspubs@state.co.us)



COURSE DESIGN & ACTIVITIES

Fifty percent of the course time will be spent working in classrooms and labs. The other half of the course will be spent conducting field work at avalanche sites in the area. Some assignments may entail work in the evenings in the air photo lab.

COURSE EVALUATION

Participants' learning in this course will be evaluated based on the daily activities and the final assignment. Participants must attend the entire course and receive a passing mark on all assessments in order to receive a certificate for the course.

DATES, LOCATION, TIME & FEES

June 10 – 20, 2002 – Revelstoke, BC

Times: 8:30am - 5:30pm each day (with the exception of June 16 - no class will be held on this day)

Early Registration:

\$ 2,010 + gst (if applicable)
if payment received on or before May 24, 2002

After Early Date:

\$ 2,200 + gst (if applicable)
if payment received after May 24, 2002

WHAT CAN YOU GET FROM THIS COURSE?

This course is intended to introduce participants to advanced techniques of avalanche mapping through theory and practical examples. Participants must recognize that *skills gained from this course must be applied in practice under an experienced avalanche mapper in order to achieve proficiency in avalanche mapping.*

NOTICE! PLEASE READ

RELEASE OF LIABILITY, WAIVER OF CLAIMS
ASSUMPTION OF RISKS AND INDEMNITY AGREEMENT
Please Read Carefully!

The courses offered by the Canadian Avalanche Association, including Advanced Snow Avalanche Mapping, are often conducted in hazardous mountain terrain. These courses involve risks, dangers and hazards in addition to those normally associated with being in a mountain environment. All course participants are required to sign a comprehensive Release of Liability, Waiver of Claims, Assumption of Risks and Indemnity Agreement prior to participating in the course. By signing this Agreement you will waive or give up certain legal rights, including the right to sue should you be injured during the course. A copy of this Agreement will be forwarded to you prior to the start of the course. Please read this agreement thoroughly, since you will be asked to sign a copy of the Agreement at the commencement of the course, in the presence of the course instructors, in order to participate.

COURSE CONTACT

Kandy Akselson, FCSN Region Manager
Tel: 250-367-7916 Fax: 250-367-0136
E-mail: Kandy.Akselson@fcsn.bc.ca



The Canadian Avalanche Association is a non-profit society which was created in 1981. It is dedicated to bringing together professionals to develop knowledge and understanding of avalanches, to encourage communication and promote industry standards, and to provide high quality avalanche education. There are currently over 500 members, active in all aspects of snow avalanche safety from research to avalanche control.

In October of 1991, with assistance from the National Search and Rescue Secretariat, the Canadian Avalanche Association opened the Canadian Avalanche Centre. Over the past seven years, the Centre has become Canada's national avalanche agency, providing information to the public through Public Safety Services, coordinating the Canadian Avalanche Association Training Schools, and managing an Industry Information Exchange™ service.



The National Search and Rescue Secretariat (NSS) is an independent agency of government, reporting to the Lead Minister for Search and Rescue (the Minister of National Defence). The NSS was established in 1986 to support and promote the activities of the National SAR Program (NSP) as a means to achieve highly effective and economically responsible search and rescue programs throughout Canada.



The Forestry Continuing Studies Network is a not-for-profit society established to develop and deliver continuous learning programs to professionals, technical staff, forest workers, private landowners, First Nations, communities/municipalities and the adult public. We work with individuals, agencies and organizations that are currently involved in forestry continuing studies to develop appropriate programs.



REGISTRATION – INVOICE –

Advanced Snow Avalanche Mapping Course

_____		_____	
NAME (Last, First, Initial)		BIRTH DATE * (D/M/Y)	
_____		_____	
BUSINESS NAME / ORGANIZATION (where applicable)		(B) TELEPHONE #	
_____		_____	
BUSINESS MAILING ADDRESS		FACSIMILE #	
_____		_____	
CITY		PROVINCE POSTAL CODE	
_____		_____	
HOME MAILING ADDRESS		(H) TELEPHONE #	
_____		_____	
CITY		PROVINCE POSTAL CODE	
_____		_____	
EMAIL		FCSN SOCIETY MEMBER #	

PAYMENT FEE: Calculate fee listed for on or before early payment date OR after early payment date
 Please remit with registration – you are ***not*** registered until payment is received

\$ _____ + gst @ 7%¹ _____ = \$ _____ Total Payment

Payable to: Forestry Continuing Studies Network Cheque VISA MasterCard

Card # _____ Expiration Date: _____

Name (as on card): _____ Signature: _____

NOTE: GST # 890167026-RT. ¹ Provincial government exempted from paying GST.
 Registration fee includes: see information under Date, Location, Time and Fee for each event. Participants are responsible for their own accommodation. Exceptions will be noted in the course advertisement. Cancellation of session(s) may be necessary due to insufficient registration or circumstances beyond our control. If you are planning to register after the Early Payment Date, please check with the Network on the status of the session(s). Registration fee is processed only when the registration are sufficient for confirmation. By Registering with the FCSNetwork you agree to abide by the internal procedures governing admissions, rules of conduct, dispute resolution and dismissal. If you wish to review these document, please contact the Vancouver office.

REFUND POLICY: Full refund – written notification of withdrawal received 14 or more full calendar days before first day of session
 50% refund – written notification of withdrawal received 7 - 13 full calendar days before first day of session
 No refund – written notification of withdrawal received less than 7 full calendar days before first day of session
 Substitution – permitted without penalty, please notify Forestry Continuing Studies Network

** Your birth date is required in our registration system to distinguish between people with similar names, and to establish a permanent record of your continuing education activities should you require a transcript in the future.*

REGISTRATION:
 Mail: Forestry Continuing Studies Network
 2665 East Mall, Vancouver, BC V6T 1W5
 Fax: 604-222-1730
 Tel: Vancouver area: 604-222-9157
 Toll free within BC: 1-877-222-9993
 Online: www.fcsn.bc.ca

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