



## Avalanche Skills Training 1 – MAST 146

### Mountain Adventure Skills Training Program

### Course Outline

COURSE IMPLEMENTATION DATE: January 2003  
OUTLINE EFFECTIVE DATE: September 2019  
COURSE OUTLINE REVIEW DATE: March 2024

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#### GENERAL COURSE DESCRIPTION:

The Avalanche Skills Training program provides a national standard for entry level and intermediate level decision making in avalanche terrain. The curriculum provides a decision making framework suitable for use by people with a moderate degree of training and experience. This course covers two introductory certifications: AST 1 and Companion Rescue Certifications and focuses on safe travel practices in avalanche terrain. Several Canadian Avalanche Centre educational products are utilized to develop route finding, hazard awareness, companion rescue and decision making skills.

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**Program Information:** This course is the prerequisite for MAST 156, MAST 143, MAST 162, and has elements that form the basis for all ski touring and ski mountaineering and is required for completion of MAST Program.

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**Delivery:** This course is delivered face-to-face.

**COTR Credits:** 2

**Hours for this course:** 36 hours

#### Typical Structure of Instructional Hours:

Instructional Activity	Duration
Lecture Hours	12
Seminars / Tutorials	
Laboratory / Studio Hours	
Practicum / Field Experience Hours	24
Other Contact Hours	
<b>Total</b>	<b>36</b>

#### Practicum Hours (if applicable):

Type of Practicum	Duration
On-the-job Experience	N/A
Formal Work Experience	N/A
Other: Field Experience	48
<b>Total</b>	<b>48</b>

**Course Outline Author or Contact:**

Sarah Osberg, MAST Program Coordinator/Instructor

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Signature

**APPROVAL SIGNATURES:**

Department Head  
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Department Head Signature

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Dean Signature

EDCO

Valid from: September 2019 – March 2024

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Education Council Approval Date

**COURSE PREREQUISITES AND TRANSFER CREDIT:**

**Prerequisites:** None

**Corequisites:** None

**Flexible Assessment (FA):** AST Level 1 Certification

Credit can be awarded for this course through FA  Yes  No

Learners may request formal recognition for flexible assessment at the College of the Rockies through one or more of the following processes: External Evaluation, Worksite Assessment, Demonstration, Standardized Test, Self-assessment, Interview, Products/Portfolio, Challenge Exam. Contact an Education Advisor for more information.

**Transfer Credit:** For transfer information within British Columbia, Alberta and other institutions, please visit <http://www.cotr.bc.ca/Transfer>.

Students should also contact an academic advisor at the institution where they want transfer credit.

**Prior Course Number:** MAST 146 Avalanche Skills Training  
**New Course Number:** MAST 146 Avalanche Skills Training 1  
**Date changed:** June 2018

## Textbooks and Required Resources:

Textbook selection varies by instructor and may change from year to year. At the Course Outline Effective Date the following textbooks were in use:

Avalanche Canada; Avalanche Skills Training Level 1 Course Manual 2018  
Staying Alive in Avalanche Terrain – 3<sup>rd</sup> Ed. Bruce Tremper; 2018  
Canadian Avalanche Association; Observation Guidelines and Recording Standards for Weather, Snowpack and Avalanches; Prepared by: Canadian Avalanche Association, 2014

*Please see the instructor's syllabus or check COTR's online text calculator  
<http://go.cotr.bc.ca/tuition/tCalc.asp> for a complete list of the currently required textbooks.*

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## LEARNING OUTCOMES:

Upon the successful completion of this course, students should be able to

- use the Avaluator™ as a filtering tool to determine when additional planning and travel techniques are required to travel safely;
  - be familiar with Avalanche Danger Ratings verification techniques for personal use on a local scale;
  - be familiar with the ATES technical model as a means to develop personal, local terrain ratings and identify avalanche terrain;
  - use route finding to take advantage of nuances in terrain to manage personal risk;
  - use travel techniques in avalanche terrain appropriate to the avalanche conditions;
  - proficiently carry out a companion rescue; and
  - understand the limits of your training.
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## COURSE TOPICS:

- The Formation & Nature of Avalanches
  - Properties of the Mountain Snowpack
  - Significance of observations and field books
  - Demonstration of Weather readings at a standard observation plot
  - Backcountry safety measures and Companion Rescue
  - Transceiver practice and testing
  - Weather forecast discussion and effect on stability forecast
  - Avalanche Terrain & Terrain Traps
  - Avalanche Terrain Exposure Scale – Public Model, ATES
  - Avalanche Danger Ratings and Public Info
  - Decision Making Competence;
  - Trip Planning 1 – Avaluator, Personal Risk Zone, Route Planning
  - Danger Trends, Forecast Key words, Weather, Minimal Risk
  - Factors in Accidents, Human Factors, Group and pre-departure assessment
  - Equipment and Emergency Plans
  - Terrain recognition, route finding, safe travel, group management
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## EVALUATION AND ASSESSMENT (Face-to-Face Delivery):

Assignments	% Of Total Grade
Participants are evaluated by practical and written tests in:	
1. weather snowpack and avalanche observation methods	20%
2. knowledge of avalanche terrain	20%
3. formation of avalanches	20%
4. the use of essential rescue equipment	20%
5. formal record keeping skills.	<u>20%</u>
Total	100%
A mark of 70% in each section above is required to pass	

*Please see the instructor's syllabus for specific classroom policies related to this course, such as details of evaluation, penalties for late assignments, and use of electronic aids.*

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### EXAM POLICY:

Students must attend all required scheduled exams that make up a final grade at the appointed time and place.

Individual instructors may accommodate for illness or personal crisis. Additional accommodation will not be made unless a written request is sent to and approved by the appropriate Department Head prior to the scheduled exam.

Any student who misses a scheduled exam without approval will be given a grade of "0" for the exam.

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### COURSE GRADE:

<b>COM</b>	Completed to standard – 70%
<b>NCG</b>	No Credit Granted

Note: Students must attend all lecture and planning classes and complete 4 of 5 field days to complete the standard.

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### ACADEMIC POLICIES:

See [www.cotr.bc.ca/policies](http://www.cotr.bc.ca/policies) for general college policies related to course activities, including grade appeals, cheating and plagiarism.

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**COURSE CHANGES:**

Information contained in course outlines is correct at the time of publication. Content of the courses is revised on an ongoing basis to ensure relevance to changing educational, employment and marketing needs. The instructor will endeavour to provide notice of changes to students as soon as possible. The instructor reserves the right to add or delete material from courses.