



Avalanche Operations Level 3

READING LIST

The following is a list of required reading prior to the start of the Avalanche Operations Level 3 course. The concepts and terminology covered in these readings form the basis for in-class lessons, discussions and exercises. Demonstrating an understanding of concepts and the use of correct terminology is a core component of written and oral evaluations. Although the readings have been categorized here under specific headings, it is also important understand them from the point of view of how they are interrelated.

Note: All students will receive hard copies of the readings in their student manual. Some of the links provided below require membership in order to access the material.

Reasoning Processes in Avalanche Forecasting

Edward R. LaChapelle. *The Fundamental Processes in Conventional Avalanche Forecasting*. Journal of Glaciology Vol. 26 (1980).

Read pages 75-84

http://www.igsoc.org/journal/26/94/igs_journal_vol26_issue094_pg75-84.pdf

Vick S.G., 2002. *Degrees of Belief – Subjective Probability and Engineering Judgment*. ASCE Press, Reston, VI, 455.

Read pages 181-199

http://books.google.ca/books?id=y3RfK0-bei8C&pg=PA174&dq=Vick+S.G.,+2002.+Degrees+of+Belief+%E2%80%93+Subjective+Probability+and+Engineering+Judgment&hl=en&ei=4_V7TNmUHYSIngeexcX3AQ&sa=X&oi=book_result&ct=result&resnum=1&ved=0CC4Q6AEwAA#v=onepage&q&f=false

Heuristics and Bias

Vick S.G., 2002. *Degrees of Belief – Subjective Probability and Engineering Judgment*. ASCE Press, Reston, VI, 455

Read pages 200-224

(See above)

Tversky A., and Kahneman D. *Judgement under Uncertainty: Heuristics and Biases*. Science, Vol 185.

Read pages 1124-1131

<http://cognet.mit.edu/library/books/mitpress/0262122472/cache/chap25.pdf>

Weighing Data and Evidence

Vick S.G., 2002. *Degrees of Belief – Subjective Probability and Engineering Judgment*. ASCE Press, Reston, VI, 455.

Read pages 215-218 and 282-295

[\(See above\)](#)

Decision-making and Uncertainty

McCammon, I., 2001. *Decision Making for Wilderness Leaders: strategies, traps and teaching methods*. Proc. Wilderness Risk Manager's Conf. Oct. 26–28, 2001, Lake Geneva, WI, pp. 16–29.

Read pages 1-12

<http://www.sunrockice.com/docs/Decision%20making%20IM%202001.pdf>

Perla R.I., 1970. *On Contributory Factors in Avalanche Hazard Evaluation*. United States Forest Service, Alta Avalanche Study Centre, Alta, Utah.

Read pages 414-419

<http://tris.trb.org/view.aspx?id=110581>

Jamieson, B. and Torsten, G., 1999, *Patterns in Unexpected Skier-Triggered Avalanches*, University of Calgary.

Read pages 1-11

<http://www.ucalgary.ca/asarc/files/asarc/patterns.pdf>

United Kingdom Climate Impact Program (UKCIP) Technical Report – *Climate Adaption: Risk, Uncertainty and Decision-Making*.

Read pages 43-53

<http://www.ukcip.org.uk/resources/>

Risk Assessment

Fell R., 1993. *Landslide Risk Assessment and Acceptable Risk*. @ 1994 National Research Council Canada.

Read pages 261-272

<http://pubs.nrc-cnrc.gc.ca/rp-ps/inDetail.jsp?jcode=cgj&lang=eng&vol=31&is=2>

Statham, G. *Avalanche Hazard, Danger and Risk – A Practical Explanation*. Parks Canada, Banff, AB.

Read pages 1-4

http://issw2008.com/papers/P_8153.pdf

McClung, D., Stethem, C., Schaerer, P., Jamieson, B., 2002. *Guidelines for Snow avalanche Risk Determination and Mapping in Canada*. Canadian Avalanche Association, Revelstoke, BC.

Read Pages 1-22

<http://www.avalanche.ca/caa/store/books>