



Assessment Category	Description Refer to the individual assessment category rubrics on the ensuing pages for more information.	Percentage of Assessment %	Minimum Pass Requirement %
Weather Observation	Weather is assessed as three distinct elements: <ul style="list-style-type: none"> Observe and record study plot weather data (10) Observe and record field weather data (4) Observe and record telemetry data (1) 	15	10.5
Snow Profile	Observe and record snowpack properties Demonstrate and record standardized snowpack instability tests Select appropriate fracture character category in snowpack observations. Describe and identify the properties of mountain snowpack	20	14
Professional Avalanche Rescue	Demonstrate proficiency with avalanche search and rescue skills and techniques	15	10.5
Avalanche Hazard *	Avalanche Hazard is assessed as three distinct elements: <ul style="list-style-type: none"> Identify, classify and analyze avalanche terrain in the field (12). There is no assessment rubric for this category. Apply the process used in avalanche hazard assessment by completing a PM Worksheet (4) Identify, classify and analyze avalanche terrain using photos (4). There is no assessment rubric for this category. 	20	14
Written Exam	Written exam testing comprehension of all course lessons and activities, pre-course readings, and pre-course exercises. Questions include multiple choice, true/false, matching, fill in the blank, and short answer. There is no assessment rubric for this category.	20	14
Field Book	Observe and record weather data Observe and record snowpack data Observe and record avalanche occurrence data Apply pre-trip preparation for travel in avalanche terrain Document professional activities	10	7
TOTAL		100	70

Course evaluation is a combination of written tests and exercises, field book observations, practical examinations and field discussions.

Passing requirements:

- Student must obtain a minimum of 70% on **all** assessment categories to attain the Avalanche Operations Level 1 certificate.
- Failure in **two** assessment categories results in failure of the entire course despite an overall mark greater than 70%.

Retest criteria:

- If a student has an overall mark of 70% but has failed in **one** of the assessment categories, they are eligible to retest the failed category.
- * The above criterium applies to all but the **Avalanche Hazard** assessment category, for example, if a student has an overall mark of 70% but has failed the Avalanche Hazard assessment, the student has failed the entire course.

Weather Observation Assessment Rubrics

Weather Observations Skills are assessed as three distinct elements:

1. *Study Plot Weather Observations (worth 10% of total assessment)*
2. *Field Weather Observations (worth 4% of total assessment)*
3. *Remote Weather Telemetry Interpretation (worth 1% of total assessment)*

Weather Observations – Study Plot Weather Assessment Rubric

		Above Standard Superior performance showing comprehensive, in-depth understanding of subject matter	Meets Standard Average performance with knowledge of principles and facts generally complete. Understanding at least adequate to communicate intelligently in the discipline. May include deficiencies that do not impact usefulness or completeness.	Below Standard Does not meet minimum knowledge and or skill.
Study Plot Weather	Record	Exemplary legibility and adherence to OGRS conventions.	It is legible and adherent to OGRS conventions with correct notation or symbols.	Issues with correct use of notation or symbols. Inconsistent or poor technique with measurements and observations, making some values unreliable. Incomplete understanding of when to re-set instruments. Unclear of the significance of some measurements. Does not recognize anomalous values. Use of time clearly indicates lack of proficiency. Observations recorded with omissions.
	Technique	Exemplary technique with measurements and observations	Good technique with measurements and observations	
	Accuracy & Recognition	Obtains accurate values. Recognizes & corrects anomalous and or highlights unexpected values. Describes any consistent personal variance such as deep PF.	Obtains accurate values. Recognizes & corrects anomalous values.	
	Standards for Obs Period	Describes accurately and in detail when, and how, to re-set instruments. Describes significance of all measurements.	Describes when, and how, to re-set instruments. Describes significance of most measurements.	
	Timely	Completes the observations in a very efficient and timely manner.	Completes the observations in a timely manner.	
	Complete	Complete set of observations.	Complete set of observations.	

Weather Observations – Field Weather Assessment Rubric

		Above Standard Superior performance showing comprehensive, in-depth understanding of subject matter	Meets Standard Average performance with knowledge of principles and facts generally complete. Understanding at least adequate to communicate intelligently in the discipline. May include deficiencies that do not impact usefulness or completeness.	Below Standard Does not meet minimum knowledge and or skill.
Field Weather	Relevancy	Takes a relevant set of observations, describes which were omitted why, includes site appropriate additional observations.	Takes a site appropriate relevant set of observations and correctly omits non-relevant observations.	Takes too many or too few observations. Unsure or does not understand which ones can be omitted. Uses the spreadsheet headers literally to guide what to observe. Uses inconsistent or poor technique and obtains questionable values. Takes longer than necessary to complete the observations.
	Technique	Uses excellent technique and obtains accurate values.	Uses good technique and obtains accurate values.	
	Timely	Completes the observations in a very efficient and timely manner.	Completes the observations in a timely manner.	
	Record	Exemplary notation and symbols	Correct notation or symbols with no omissions	

Weather Observations – Remote Weather Assessment Rubric

		Above Standard Superior performance showing comprehensive, in-depth understanding of subject matter	Meets Standard Average performance with knowledge of principles and facts generally complete. Understanding at least adequate to communicate intelligently in the discipline. May include deficiencies that do not impact usefulness or completeness.	Below Standard Does not meet minimum knowledge and or skill.
Remote Weather	Accuracy & Record	Selects correct data and recognizes anomalous values. Calculates accurate values. And exceptional record.	Selects correct data and recognizes anomalous values. Calculates accurate values. And no errors	Includes bad data in observation or calculation. Incorrect calculations.

Full Snow Profile Assessment Rubric

Value of the Full Snow Profile Assessment Category: 20% of total evaluation

	Above Standard Superior performance showing comprehensive, in-depth understanding of subject matter.	Meets Standard Average performance with knowledge of principles and facts generally complete. Understanding at least adequate to communicate intelligently in the discipline. May include deficiencies that do not impact usefulness or completeness.	Below Standard Does not meet minimum knowledge and or skill.
Legibility & Completeness	Complete and accurate, records are exceptionally legible. Clear and concise site characteristics and objective.	Complete and accurate, records are readable. Good site characteristics and objective.	Incomplete or significant omissions. Inaccurate or significant errors. Field book records are mostly illegible.
Site Selection	Site ideally representative and oriented. Minimal probing accomplishes objective.	Average depth for the area, oriented appropriately for the location. Thorough probing identified site clear of obstructions away from trees or obstructions.	Unrepresentative depth for the area. Poor orientation given site choices. Too close to trees or obstructions. Obstructions that compromise observations were encountered as a result of poor site selection.
Craftsmanship	Craftsmanship is exemplary. Observation wall is shaded with thought to time spent observing. Workspace is always organized with sheltered space for equipment. Work occurs quickly and in an efficient, methodical sequence.	Pit has smooth, plumb walls, and square clean corners. Observation wall is shaded. Workspace is generally organized with sheltered space for equipment. Work occurs in a methodical sequence.	Issues with smoothness plumb walls or square corners that compromise observations. Observation wall is not shaded. Workspace is disorganized and equipment is not sheltered. A somewhat scattered approach to observations.
Air & Snow Temperatures	All thermometers are shaded appropriately, handled with gloves on and left in the snow appropriately. Temps are completed systematically and without any delay following obs wall exposure. Values are accurate.	Thermometers are shaded appropriately, handled with gloves on and left in the snow appropriately. Temps are taken in a timely way given solar radiation and air temp. Values are within expected range.	Thermometers not shaded appropriately, handled with gloves on, or left in the snow appropriately. Temperatures are measured too slowly given solar radiation or air temp. Some measurements are questionable.
Layer Boundaries	Uses 3 or more methods in a systematic fashion to identify layer boundaries. Identifies the significant boundaries and does not include any insignificant layers. Correctly distinguishes between a layer and an interface in all instances. Excellent agreement between layer ID and test results.	Uses minimum of methods to identify layer boundaries. Identifies the significant boundaries and does not include many insignificant layers. May miss-identify and record a layer as an interface. Adds layer boundaries identified by tests.	Inadequate method to identify layer boundaries and as a result has issues. Identifies most of the significant boundaries but includes excessive insignificant layers. Struggles with the distinction between a layer and an interface. Limited agreement between layer ID and tests;
Layer Properties	Accurately measures hand hardness with intermediate values (like 1f+ etc.) Correctly lumps layers together based on properties. Identifies grain forms including subclass, size and wetness. Correctly identifies presence or lack of any snowpack structures that have been seen previously.	Measures hand hardness within 1 step of examiner. Limited use of intermediate values (like 1f+ etc.) Correctly lumps layers together based on properties. Identifies common grain forms and size and wetness. Recognizes snowpack structures that have been seen previously esp. PWL's.	Missing or numerous errors in measurements of hand hardness. too many or too few layers. Missing or numerous errors in grain form and size or wetness. Does not recognize snowpack structures that have been seen previously.
Tests	Compression test is OGRS compliant and technique is exemplary. Fracture character is accurately identified without any uncertainty. Excellent interpretation of test results in the context of the conceptual model of avalanche hazard. Accurately describes the methods and applications of other tests in clear detail.	Compression test is mostly OGRS compliant and technique is satisfactory. Fracture character is accurately identified. Can accurately place test results in the context of the conceptual model of avalanche hazard. Can accurately describe the methods and applications of other tests without prompt.	Compression test deviates from OGRS standards. Fracture character not accurately identified. Cannot place test results in the context of conceptual model of avalanche hazard without prompting. Uncertain or inaccurate about the methods and applications of other tests.

Professional Avalanche Rescue Assessment Rubric

Value of the Professional Avalanche Rescue Assessment Category: 15% of total evaluation

Category & Assigned Points	Category Sum	<p style="text-align: center;">Above Standard</p> Superior performance showing comprehensive, in-depth understanding of subject matter.	<p style="text-align: center;">Meets Standard</p> Average performance with knowledge of principles and facts generally complete. Understanding at least adequate to communicate intelligently in the discipline. May include deficiencies that do not impact usefulness or completeness.	<p style="text-align: center;">Below Standard</p> Does not meet minimum knowledge and or skill.
<i>Technique (5%)</i>	<i>Visualization, Signal, Coarse</i>	Visualizes the terrain and employs excellent strategy for the signal search. Exceptional technique with flawless signal and coarse search.	Visualizes the terrain and employs an effective strategy for the signal search. Satisfactory technique with mostly effective signal and coarse search.	No discernible plan. Gaps or mistakes in the signal, coarse, or fine search.
	<i>Fine, Pinpoint</i>	pinpoint strike on first or very few probes without spiral probing. Probing perpendicular to slope at all times. Quick and confident confirmation of strike.	Moves to spiral probing appropriately in the pinpoint search. Repeats pinpoint without hesitation if needed Probing perpendicular to slope at most times. Confirms the probe strike prior to directing helpers.	Inconsistent or ineffective technique. False probe strike is confirmed
	<i>Multi-Burial</i>	Multi burial technique incorporated seamlessly, team kept aware of multiple burial search status. Clearly practiced, fast, and efficient.	Employs micro strip search or another method to deal with multiple signals, uses transceiver's unique functions. May slow to be effective.	Inconsistent or ineffective technique.
	<i>Strategy, Coverage</i>	Search strategy conclusively eliminates terrain and future need to search again. Clearly on track with no hesitations and does not have to re-search terrain twice. Entire search area has had a transceiver scan within time.	Strategy eliminates obvious terrain not requiring search. Stays on track and does not have to re-search terrain twice. Entire search area has had a transceiver scan within allotment.	Entire search area has not had a transceiver scan.
	<i>Errors</i>	No errors.	Minimal errors in the search process and self corrects.	Gets distracted, searches terrain multiple times, slow to or does not recognize and correct errors.
<i>Organization (%s)</i>	<i>Scene Management</i>	Scene safety is managed exceptionally clearly, correctly, and quickly.	Scene safety is managed clearly. Minor improvement could be made.	Disorganized.
	<i>Interview</i>	Interviews the witness clearly, quickly, and obtains complete information about victim numbers, last seen point, time of occurrence, human or natural trigger, etc. in organized manner.	Interviews the witness and obtains most information about victim numbers, last seen point, time of occurrence, human or natural trigger, etc. in organized manner.	Does not obtain adequate information
	<i>Communication</i>	Calls base clearly and organized with the appropriate emergency response level and	Calls base with the appropriate emergency response level and includes most details	Does not call base. Many elements missing.

		includes complete details about: event, location, time, number of victims, and weather. Base has complete information to respond effectively	about: location, time, number of victims, and weather. Base has minimum information to respond effectively.	
	<i>Direction</i>	Clearly and effectively directs helpers to assemble probes and shovels, to follow in the final coarse search phase. Directs helpers in strategic shovelling appropriate to the situation.	Direction of helpers to assemble probes and shovels, to follow could be improved, Mostly directs helpers in strategic shovelling appropriate to the situation.	No direction
	<i>Omissions</i>	No omissions.	Minor omissions that do not significantly affect the rescue outcome	Omissions that compromise the rescue outcome
<i>Overall Time (5 %)</i>		5 minutes or less	6 to 15 min	More than 15 min

Written Hazard Assessment Rubric

Value of the Written Hazard Assessment Category: 4% of total evaluation

	Above Standard Superior performance showing comprehensive, in-depth understanding of subject matter.	Meets Standard Average performance with knowledge of principles and facts generally complete. Understanding at least adequate to communicate intelligently in the discipline. May include deficiencies that do not impact usefulness or completeness.		Below Standard Does not meet minimum knowledge and or skill.
Legibility, Record	It is very legible. Exemplary record of day with no omissions.	Writing is easily readable. Adequate record of day with minor omissions.	Writing is readable. Record could be improved (examples poor location, blank spaces)	Writing is difficult to read or illegible. Poor record of day with omissions.
Hazard Review & Weather Summary	Includes AM hazard levels. Clearly states change or not and highlights anything notable. Relevant field weather observations are commented on.	Captures important changes but could include more information. Complete field weather.	Minimal information though functionally complete. May include too much information, lack of clarity or difficulty in summarization.	Incomplete, missing, or incorrect.
Snowpack Summary and Synopsis	Summary and synopsis are exemplary – organized and succinct. Structure lumps appropriate critical layers into single problem type. Relevant snowpack characteristics and variability is commented on. Relevant observed tests are accurately described and related to the avalanche problem.	Synopsis correct but could include more information such as weak layer date, range of depth or variability over terrain, and relation to the avalanche problem.	Synopsis incomplete. Prioritizes the one key weak layer and includes test results but omits key information such as variability over terrain or slab character.	Incomplete, missing, or incorrect field weather, snow structure, and avalanche summaries.
Avalanche Summary and Observed Avalanche Problem Type	Summary and synopsis are exemplary – organized and succinct. Avalanche summary is organized logically. Relevant avalanche problem characteristics are noted and related to the hazard. Location and terrain to avoid is accurately described. Notation and content are exemplarily accurate to CMAH. Locations & features clear and concisely described.	Synopsis correct but prioritizes the problem incorrectly. Minor errors of omission. Types reflect structure summary. Locations & features could include more information. Correctly indicates typical value and range.	Omits key information such as avalanche events but identifies the avalanche problems. Spatial distribution and sensitivity align with likelihood. Indication of typical value and range could be improved.	Incorrect, incomplete, or missing. Multiple problems of same type due to multiple layers rather than different elevation bands. Includes problem from outside observed area. Spatial distribution and sensitivity do not align with likelihood.

Field Book Assessment Rubric

Value of the Field Book Assessment Category: 10% of total evaluation

		Above Standard Superior performance showing comprehensive, in-depth understanding of subject matter.	Meets Standard Average performance with knowledge of principles and facts generally complete. Understanding at least adequate to communicate intelligently in the discipline. May include deficiencies that do not impact usefulness or completeness.	Below Standard Does not meet minimum knowledge and or skill.
Completeness, Legibility, Adherence, and Errors	Completeness	Exemplary use is made of field book. More than complete data sets, all special use pages completed.	Book contains complete weather, snowpack, occurrences and trip plan for every day of the course.	Book is incomplete Records of trip information, field weather, and avalanche occurrences for some days of the course with significant omissions in the data. Writing is difficult to read with numerous errors. Significant variance from OGRS conventions. Many erasures. Not original field book.
	Legibility	Exceptional legibility and organized to improve reading.	It is legible. Writing is readable.	
	Adherence	Symbols, notation, and content are exemplarily accurate to OGRS.	Generally adheres to OGRS conventions. Symbols, notation, and content are generally accurate.	
	Errors	Errors in notation are corrected with a clean line thru the inaccurate value.	Errors in notation are corrected with a line thru the inaccurate value.	
Daily Log	Appropriate # of Daily Logs	Use of field book for every day of the course	Records of trip information, field weather, and avalanche occurrences for all field days of the course	Minimal or incomplete record of trip information, field weather & avalanche occurrences. Data gaps are so significant that the document is un-useful for forecasting. Not original field book
	Trip log content – pre-trip	Excellent information for every day.	Minimum information included for each field day.	
	Trip log content – field notes	Excellent information for every field day.	Minimum information included for each field day.	
Daily Snow Profiles	Headers	All snow profiles have complete & accurate headers	All snow profiles have complete & accurate headers.	Many snow profiles have incomplete or inaccurate headers. Full or test profiles have incomplete data set for the profile type. Test results are incomplete or unclear. Symbols, notation, or content have some accuracy issues. Not original field book
	Data Completeness	Full and test profiles have complete data set for the profile type.	Full profiles have complete data set for the profile type.	
	Test results	Test results are exemplary, clear complete, and well organized	Test results are clear and complete.	
Field Book Weather Observation Spreadsheet	Completeness	Complete set of weather observations for more than the scheduled AM PM observations days.	Complete set of weather observations for the scheduled AM PM observations days.	Some significant omissions in the set of weather observations for the course. Writing is read with difficulty; some values or notations are questionable. Many erasures. Significant omissions in the set of weather observations for the course. Writing is difficult to read or unreadable. Many values or notations are unreliable. Not original field book.