

MOUNTAIN WALKING LEADER AWARDS

SYLLABI 2005

**South African Mountaineering
Development and Training Trust**

Basic Mountain Walking Leader (BML)

Advanced Mountain Walking Leader (AML)



Only Service Providers approved and accredited by the South African Mountaineering Development and Training Trust (MDT) may provide training and assessment that will lead to MDT accreditation.

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Mountain Walking Leader Awards

Syllabi

The complete Advanced Walking Leader syllabus meets the UIAA model standard for mountain walking leaders

These awards are designed to equip the holder with training and skills required for walking trips, including trips into mountainous areas of South Africa. The awards take into consideration obstacles normally encountered in such terrain.

Advanced Mountain Walking Leader - The Award is intended for those leading groups on walking expeditions in remote country where walkers are completely dependent on themselves without backup. (All Red writing need not be completed by Basic Level candidates)

Examples:

- ▶ *Persons who lead trips into remote areas of South Africa;*
- ▶ *Persons who lead trips off-trail;*
- ▶ *Persons who lead trips above 2400 meters above sea level.*

Basic Mountain Walking Leader – This award is intended as an entry level award for those leading groups in easy to moderate terrain, clearly defined paths and trails or easy off trail areas. (Only un-shaded topics must be covered)

Examples:

- ▶ *Persons who lead trips on trail & at low altitudes*

The skills required of all mountain walking leaders (Basic & Advanced) are essentially the same except for the depth of knowledge required. It is beyond the scope of this syllabus to explain this difference, which will be explained in the Trainer / Assessor Guide.

This syllabus has been developed with each module laid out in three sections:

- A purpose statement giving information as to why the candidate needs the particular skill, then information detailing appropriate scope under the heading "**This includes**".
- The specific practical skills required are listed under the heading, "**The candidate must be able to:**"
- Knowledge behind these skills is listed under the heading, "**The candidate must be familiar with:**"

Module 1 - NAVIGATION

Competence as a navigator is a basic pre-requisite of any walking leader. The candidate is expected to choose an appropriate navigation technique for the conditions & be able to navigate efficiently and confidently.

This includes:

- During good visibility conditions, following a path, a ridge or a stream without a map and compass;
- During varying conditions, following a route using a map only (*terrain association*).

The candidate must be able to:

- Recognise and follow different forms of way-marking on paths;
- In good and restricted visibility conditions, lead a group between given points over known terrain without the use of navigation tools;
- Accurately estimate walking time between given points;
- Choose the most appropriate and safest route between entry and exit points;
- Accurately communicate their position to others;
- Use relevant grid systems found on local maps;
- Use different types of scales;
- Select appropriate routes from a map and prepare a route card;
- Accurately obtain an estimated position on a map;
- Measure distance on the ground & on a map;
- Estimate expected time needed to walk routes given on a map;
- Interpret the ground underfoot and relate this to the map and visa versa.

The candidate must be familiar with:

- Methods of recording routes;
- Topographical features;
- Relevant maps, scales and conventional map symbols;
- Contours and other methods of showing relief;
- The dangers of reliance solely on GPS systems for positioning, the pro's and con's;
- A basic working knowledge of how GPS systems work.

Off-Trail Navigation

Leaders of groups in remote areas will often have to navigate off-trail and in limited visibility conditions. But even on trail it will be sometimes necessary to use a compass to determine basic direction as for example path junctions. The skills required include all those listed under the navigation module, but the leader must also possess other more advanced skills.

This includes:

- Using a compass for navigation;
- Navigating across difficult terrain during poor visibility conditions;
- Navigating in featureless terrain.

The candidate must be able to:

- Convert for magnetic variations;
- Accurately 'Fix' their position on a map using a magnetic compass;
- Follow a compass bearing;
- Determine the bearing to follow from a map;

- Prepare a route card suited to micro navigation in limited visibility conditions;
- Accurately use a compass to follow a bearing in limited visibility conditions. (*Dead Reckoning*);
- Follow a route across unknown country in limited visibility conditions without using a GPS;
- Accurately navigate in restricted conditions such as dense vegetation;
- Accurately navigate in featureless terrain;
- Use an altimeter in conjunction with other techniques for position finding or route maintenance.

The candidate must be familiar with:

- Compasses & other navigational tools;
- Methods of navigating across country in poor visibility and in darkness;
- Methods of navigation in restricted conditions such as, forests, bush, swamps, gorges;
- Methods of navigation in featureless terrain such as deserts;
- The concept of what a map datum is and how it is determined;
- The potential impact of using an incorrect datum when referring to a geographic position;
- Problems associated with altimeters.

Module 2 - ACCESS & THE ENVIRONMENT

Arranging access into controlled and uncontrolled areas whilst respecting privacy and environmental conservation is considered to be a critical skill for all group walking leaders. The candidate is expected to be able to make all the necessary arrangements for access and ensure that sustainable use principles are adhered to.

This includes:

- An appreciation of conservation issues and awareness of the long term effects of human pressure on the environment;
- An appreciation of litter and waste management and its impact on water resources;
- An appreciation of the significance of access arrangements and servitude in utilised areas, having regard to the fact that a large proportion of these areas are in private ownership;
- The geology and geography of utilised areas.

The candidate must be able to:

- Brief and de-brief their group in order to minimise environmental impact and ensure long term sustainability and access;
- Gather and use information about access, using where appropriate guide books and maps, state authorities, nature conservancy, local landowners and other agencies;
- Arrange permits and complete registers for controlled areas.

The candidate must be familiar with:

- The "multiple use" environment;
- The application and practice of the mountain code;
- The nature of specially designated areas and limitations on their use (*nature reserves, national parks etc.*)

Module 3 - HAZARDS AND RISK MINIMISATION

Outdoor environments all carry a certain associated risk. The walking group leader should be competent in identifying hazards and taking the appropriate action as and when necessary to minimise or remove the risk.

ENVIRONMENTAL HAZARDS

The candidate must have an awareness of the major environmental hazards expected in the walking environment outdoors and how best to deal with them.

This includes:

- Water hazards, steep ground hazards & hazards associated with weather.

Water Hazards

Any walking group leader should be able to evaluate the dangers posed by a river or other water hazards

The candidate must be able to:

- Identify signs that indicate a swollen river;
- Choose the best crossing points for rivers and streams;
- Cross rivers with and without the use of a rope;
- Demonstrate individual and group crossing techniques;
- Instruct a group in preparation of self and equipment before crossing a river;
- Instruct a group in proper crossing technique.

The candidate must be familiar with:

- An understanding of the dangers of moving water and methods of avoidance;
- Knowledge of the hazards associated with a rope in a swift water environment;
- Preparation of the group and safety precautions when crossing rivers.

Steep Ground

This section of the syllabus is not intended to train the candidate as a rock climber, nor is it intended for these people who set out with the intention of using a rope to negotiate steep terrain. Situations do arise however, where a rope may be necessary to safeguard members of the group. The purpose of this section is to familiarise the candidate with elementary techniques, to enable them to recognise difficulties and potential dangers and to give competent help in cases of emergency. Even without using a rope, there are a multitude of techniques which may be used to mitigate the risks associated with steep ground.

It is emphasised that the techniques employed are not necessarily those that would be suitable for rock climbing. Any method used should involve the use of the rope alone without any additional equipment.

The candidate must be able to:

- Personally ascend and descend steep ground, grass, scree and boulder chaos;
- Traverse steep ground;
- Choose safe routes through difficult terrain;
- Follow narrow ridges safely;
- Supervise a group on short easy sections of rock, both with and without a rope;
- Set up and use hand-lines for ascent, descent and exposed traverses;
- Supervise groups safely across sections of snow covered terrain;
- Provide security using a rope for ascending and descending group members;
- **Move a group simultaneously on steep terrain.**

The candidate must be familiar with:

- Route selection and the choice of a line on steep terrain;
- Basic knots;
- The suitability of different types, diameters and lengths of rope;

- The use and limitations of the walking rope for the following purposes:
 - Protecting descents and ascents by waist and direct belay;
 - Carrying injured or exhausted party members (*rope stretchers, coil carry methods*);
 - Lowering of group members or equipment where appropriate;
 - Abseiling, without a safety rope, on moderate terrain. (*Abseiling is for the leader only, and not for group members.*)
 - Confidence roping

Weather

The candidate must have an elementary knowledge of weather, be able to relate regional weather forecasts to utilised areas and make short-term forecasts from observed meteorological conditions.

The candidate must be able to:

- Carry out elementary practical identification of cloud types, wind speed and temperature;
- Demonstrate correct lightning avoidance procedures when with a group or alone;
- Carry out elementary interpretation of weather maps;
- Identify changing weather conditions and take appropriate action.

The candidate must be familiar with:

- Storm development;
- Wind flow and direction of usual prevailing winds;
- Weather developments associated with major weather systems;
- Campsite set-up precautions relating to expected weather;
- Weather conditions specific to mountain environments.

High Altitude

Altitudes above 2400 meters above sea level pose specific risks to walking groups. The leader of these parties needs to have specific knowledge and skills.

This includes:

- Predicting the possible occurrence of altitude related conditions;
- Taking preventative action to acclimatise the group;
- Identifying the medical conditions;
- Treating the medical conditions in the field.

The candidate must be able to:

- Correctly advise groups on acclimatisation;
- Identify and field treat acute mountain sickness (*AMS*);
- Identify and field treat high altitude pulmonary oedema (*HAP0*);
- Identify and field treat acute high altitude cerebral oedema (*HACO*).

The candidate must be familiar with:

- Characteristics of physical activity at altitude on the human body;
- The causes of altitude related illnesses and their treatment in the field;
- The effects of altitude on appetite and digestion.

MEDICAL

The candidate must have an understanding of the medical conditions associated with walking expeditions, their causes, signs, symptoms, prevention and treatment:

This includes:

- Predicting the possible occurrence of the condition based on observable factors;
- Taking preventative action to avoid the medical condition;
- Identifying the medical condition;
- Treating the medical condition in the field.

The candidate must be able to:

- Identify and field treat hypothermia, cold injuries and heat disorders;
- Identify and field treat bites, stings & venomous injuries;
- Identify and field treat inherent human medical conditions;
- Field treat common trauma injuries appropriate to the activity;
- Assemble an appropriate first aid kit for the activity and their own level of training.

The candidate must be familiar with:

- Physical preparation for the activity;
- Tiredness and recuperation in the outdoors;
- Contributing factors to gastro-intestinal illnesses;
- Energy requirements for walking expeditions;
- Hydration and its effect on energy;
- **Characteristics of physical activity on the human body;**
- **Energy management (incl. insulin rebound)**

RISK ANALYSIS

The candidate should be able to carry out a risk analysis of the planned activity, and make recommendations to minimise unnecessary risk.

This includes:

- Identifying the risks;
- Treating risks;
- Monitoring changing risks.

The candidate should be able to:

- Undertake a risk analysis of a walking expedition;
- Assess the changes in the level of risk created by changing environmental circumstances and their impact on the planned activities;
- Adapt the planned activity to accommodate changing levels of risk;
- Assess the risk posed by (inter alia) aggressive animals and/or criminal elements along the route of choice.

The candidate must be familiar with:

- What constitutes acceptable and unacceptable risk;
- Acceptable risk associated with adults and children;
- Methods of managing unacceptable risk;
- Methods of mitigating the potential risks posed by aggressive animals and/or criminal elements.

Module 4 - EMERGENCIES

Walking leaders often operate unassisted in remote areas and should be able to recognise and deal with common emergencies that may occur.

This includes:

- Lost party members or equipment;
- Trips that are delayed resulting in groups being in the field longer than expected;
- Injuries requiring first aid or evacuation.

The candidate must be able to:

- Organise a rescue appropriate to the level of activity undertaken including setting tasks for those involved and deploying outside agencies;
- Use radios and other communication systems as necessary;
- Demonstrate limited methods of search and evacuation;
- Carry out improvised rescue;
- Coordinate a group during helicopter operations;
- Provide first aid.

The candidate must be familiar with:

- National search and rescue structures;
- The limitations of improvised rescue;
- Rescue equipment as appropriate to the activity so as to be able to assist outside agencies during a rescue;
- Emergency visual and auditory techniques of attracting attention or communicating a situation of distress;
- Hazards associated with helicopters;
- Group management techniques specific to the rescue situation.

Module 5 - EQUIPMENT

Knowledge of the personal equipment required for walking expeditions is vital to ensure safe and comfortable trips, as is the ability to advise groups on suitable equipment or alternatives.

This includes:

- Different types and makes of clothing, tents, sleeping bags, rucksacks and other lightweight equipment;
- Care and maintenance of equipment.

The candidate must be able to:

- Choose suitable equipment for various expeditions and advise groups on alternatives which are suitable;
- Demonstrate and advise others on the packing and carrying of personal and communal equipment;
- Conduct basic in field maintenance of common equipment;
- Demonstrate the use of a wide variety of basic equipment.

The candidate must be familiar with:

- Suitable equipment in relation to weather & climate conditions;
- Common materials used, construction, & performance of basic equipment;
- The concept of 'warmth : weight : bulk' in relation to equipment;
- The layering system;
- Common problems associated with certain equipment. (e.g. stoves, tents etc.)

Module 6 - EXPEDITION SKILLS

LEADERSHIP

The candidate must be familiar with the responsibilities of the group leader, particularly for the care and safety of the group and organise expeditions for groups lasting one or more days. They should also be aware of the needs and limitations imposed by the group and regulatory authorities.

This includes:

General Responsibilities:

- To individual party members; the sponsoring authority, club or organisation sanctioning the expedition;
- To the general public, to environmental conservation interests, to local residents, to farmers and to the mountaineering fraternity.

Specific Responsibilities:

- To identify the underlying aims and objectives, define the specific purpose of the expedition & carry out the detailed preparations.

Operational Responsibilities:

- To manage the group effectively by setting and reviewing targets, by positive decision-making, by delegation where appropriate, by proper group control and discipline, and by good communication;
- To meet the changing needs of the group and its members by observation, anticipation and good judgement, by sensitivity to the state of the group and its members, with particular regard to their health and fitness, by maintaining confidence and enthusiasm despite uncertainty or stress and by adopting a leadership style appropriate to the situation;
- To provide a safe and rewarding experience for each group member through involvement, interest, enjoyment and achievement; through imparting appropriate technical skills and competence and through fostering environmental awareness.

The candidate must be able to:

- Define the objectives of a trip and suggest a suitable plan that will meet these objectives;
- Carry out all planning related for a trip including permits, consents, medical clearances and insurance;
- Present detailed plans for routes, equipment lists, weather forecasts, and brief the group;
- Manage a group safely and effectively whilst on the trip;
- Adapt the trip plan according to changing situations & needs whilst on the trip;
- Impart appropriate technical skills to assist group members to become self reliant;
- Log and report back on the expedition where necessary.

The candidate must be familiar with:

- Their responsibilities as a walking group leader;
- Leadership styles appropriate for walking groups;
- Insurance requirements;
- Legal requirements for walking leaders.

WALKING SKILLS & GROUP MAINTENANCE

Walking group leaders by definition require skills that enable a person to confidently and efficiently travel on foot in the outdoors. These skills are in addition to the fundamental skills of navigation etc.

This includes:

- Organisation and control of the group in an outdoors environment so as to maintain effective management;
- Specific walking skills to optimise efficiency;
- Adaptation of the program to suit different groups.

The candidate must be able to:

- Maintain the integrity of the group in easy and difficult terrain by efficient group control;
- Use efficient walking techniques to maximise energy efficiency;
- Modify routes to ensure the best is followed taking into account the group members abilities and good conservation practice.

The candidate must be familiar with:

- Pace & rhythm whilst walking;
- Foot placement;
- Conservation of energy;
- Balance;
- Leader and tail-persons for group control;
- Psychology of the group and using corporate strength;
- Group maintenance techniques in limited visibility.

HYGIENE

Leaders of groups away from normal sanitary systems and waste management need to be able to ensure the health of group members as well as the environment in a way that is appropriate to the expedition.

This includes:

- Management of waste in a way that is not harmful to the environment;
- Ensuring hygiene amongst the group members.

The candidate must be able to:

- Arrange procedures for personal and group hygiene and advise the group of these;
- Manage waste in an appropriate manner.

The candidate must be familiar with:

- Methods of disposing of human and other waste in the outdoors.

CAMPCRAFT

Camping away from fixed infrastructure is a fundamental skill of all walking group leaders who lead groups on overnight expeditions; some of these skills are also required for single day walking leaders.

This includes:

- The ability to set up camp in tents, caves, huts or bivouac;
- Food planning and preparation.

The candidate must be able to:

- Select suitable campsites;
- Set up tents;
- Prepare food on expedition using a variety of methods for self and others;
- Organise an improvised bivouac for a group and manage a group in difficult conditions.

The candidate must be familiar with:

- The basic rules governing the use of huts and caves;
- Positioning a campsite according to topography and weather considerations;
- The selection of suitable foods, quantities and packaging;
- Prepare menus tailored to the expedition and nutritional needs;
- Preparation and use of emergency shelter.

Module 7 - INTERESTS

Walking leaders are looked upon as mentors to inexperienced group members and as such should acquire a wealth of knowledge relating to the activity and environment, so as to enhance the practical and learning experience.

This includes:

- Knowledge of the environment;
- Knowledge of organisations actively involved in the pursuit of the activity;
- Knowledge of sources of information that would assist them as a leader;
- Knowledge of activities incidental to walking such as photography.

The candidate must be able to:

- Brief a group on the physical environment;
- Brief a group on active clubs and organisations they could join;
- Provide advice on ways of furthering a participants experience or skills.

The candidate must be familiar with:

- The topographical environment, geology, flora, fauna, local history, photography;
 - Clubs and organisations. The leader should know about or have access to information on suitable training organisations, clubs, guidebooks and literature;
 - The organisation and functions of the MDT & UIAA.
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Walking Leader Awards Acknowledgements

1. **South African Mountaineering Development and Training Programme**
Technical Committee.
 2. **Mountain Club of South Africa. National Training Sub-committee (1994)**
Mountain Leadership Training Scheme. Proposed Policy and Guidelines a Consultative Document.
 3. **Union Internationale des Associations d'Alpinisme**
Working Group Training Standards
Model Training Standards for voluntary Leaders and Instructors.
 4. **Mountain Leader Training Board (UK)**
Mountainwalking Leader Training Scheme Prospectus and Syllabus.
 5. **United Kingdom Mountain Training Board (1995)**
National Guidelines.
 6. **Adventure Qualifications Network cc**
Quality Management Systems
 7. **Australian Qualifications Framework**
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This complete Syllabus meets the requirements of the UIAA Model Standard for walking leaders



This complete Syllabus meets the requirements of the UIAA ENVIRONMENT Label