DIPLOMA IN MOUNTAIN MEDICINE

Many countries offer regular courses in mountain medicine. The medical commissions (Medcom) of UIAA and ICAR, together with the International Society for Mountain Medicine (ISMM) established minimal requirements for these courses in August 1997 (Interlaken, Switzerland). Many course organizers adopted these standards and the Diploma in Mountain Medicine (DiMM) has become a widely respected qualification. The regulations have been updated to reflect developments in mountain medicine, internet communications and to ensure that the high standard of the DiMM is maintained. The member organizations approved the changes in the regulations on the 8th of August 2010 at a joint meeting in Arequipa, Peru.

Organisers of mountain medicine courses can apply to endorse their courses with the labels of UIAA Medcom, ICAR Medcom and ISMM by sending a standard application form and the course programme to Dr David Hillebrandt (dh@hillebrandt.org.uk) or John Ellerton (ellerton@enterprise.net). Applications are to be English and a separate form is required for specialty modules. New course organisers are encouraged to discuss with, and/or invite, members of the UIAA Medcom, ICAR Medcom and ISMM to observe their courses. For new courses, approval is for two years. When a course reapplies for approved, the organiser must provide information on the number of successful and unsuccessful candidates during the previous period. Re-approval is for four years. The names of approved courses, their geographic location, main language and contact email address will be posted on the member organisations’ websites.

Courses can be organised for medical doctors (including medical students near graduation) and/or registered nurses or paramedics. Participants should be interested and/or experienced in mountaineering, and have current (< 5 years) training in basic life support. The course can be divided into different parts appropriate for the organizing country (e.g. summer, winter; basic, specialty etc.) but must include the common course syllabus to award a diploma. This must have a minimal study time (lectures, workshops and practical work) of 100 hours. Course organisers can determine who can attend the course and the specialty offered. In addition, course organisers may seek University status for the course. All courses should have some form of valid theory assessment and demonstration of practical skill with a fail potential. Candidates should be encouraged to complete and maintain a logbook to demonstrate continuing professional development. Appendix 1 outlines the level of mountaineering skill required. On successful completion, the course organiser can award the following qualifications:

<table>
<thead>
<tr>
<th>Type of student</th>
<th>Course</th>
<th>Qualification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medically qualified doctor</td>
<td>Common course</td>
<td>UIAA/ICAR/ISMM Diploma in Mountain Medicine</td>
</tr>
<tr>
<td>Medically qualified doctor registered in their country of origin to practise emergency medicine</td>
<td>Common course &amp; rescue speciality course</td>
<td>UIAA/ICAR/ISMM Diploma in Mountain Medicine and title ‘Mountain Emergency Doctor’</td>
</tr>
<tr>
<td>Nurse or paramedic</td>
<td>Common course</td>
<td>UIAA/ICAR/ISMM Certificate in Mountain Medicine</td>
</tr>
<tr>
<td>Nurse or paramedic registered in their country of origin to practise emergency medicine</td>
<td>Common course &amp; rescue speciality course</td>
<td>UIAA/ICAR/ISMM Certificate in Mountain Medicine and title ‘Mountain Emergency nurse or paramedic’</td>
</tr>
</tbody>
</table>
Administrative team

The administrative team is made up of representatives elected by the member organisations and their respective presidents. The minimum number of persons is three. It will conduct its work by email and be accountable to the member organisations. A representative with a conflict of interest must inform other members of the team of the conflict. Decisions are made by consensus. The administrative team does not have the authority to alter the regulations. Its role is to approve courses by assessing the curriculum and assessment methods, and to keep a record of courses (so that enquiries can be directed to course organisers). The current team are: David Hillebrandt, Urs Hefti (urshefti@bluewin.ch) and Buddha Basnyat (rishibas@wlink.com.np) for the UIAA Medcom; Fidel Elsensohn (fidel.elsensohn@aon.at), John Ellerton and Bruce Brink (avadog@telus.net)/David Watson (heliotrupe3@shaw.ca) for ICAR Medcom; and Martijn Groenendijk (dijkl@hotmail.com) and Marco Maggiorini (klinmax@usz.uzh.ch) for ISMM.

Curricula

COMMON COURSE IN MOUNTAIN MEDICINE

<table>
<thead>
<tr>
<th>Basics of:</th>
<th>Minimal time requirements (hrs)</th>
<th>Instructors</th>
<th>Training:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Altitude</td>
<td>6</td>
<td>high altitude experienced doctor</td>
<td>theory</td>
</tr>
<tr>
<td>Hypothermia</td>
<td>4</td>
<td>experienced doctor</td>
<td>theory + practical</td>
</tr>
<tr>
<td>Avalanche risk assessment, companion search, and medical management of victims</td>
<td>4</td>
<td>experienced doctor + mountain guide or experienced avalanche worker/ski patroller</td>
<td>theory + practical</td>
</tr>
<tr>
<td>Frostbite</td>
<td>2</td>
<td>experienced doctor</td>
<td>theory</td>
</tr>
<tr>
<td>Submersion and immersion in water</td>
<td>1</td>
<td>experienced doctor</td>
<td>theory</td>
</tr>
<tr>
<td>Heat and solar radiation</td>
<td>1</td>
<td>experienced doctor</td>
<td>theory</td>
</tr>
<tr>
<td>Children and mountains</td>
<td>1</td>
<td>experienced doctor (paediatrician)</td>
<td>theory</td>
</tr>
<tr>
<td>Practical traumatology</td>
<td>4</td>
<td>experienced doctor</td>
<td>workshop</td>
</tr>
<tr>
<td>Weather</td>
<td>1</td>
<td>mountain guide or meteorologist</td>
<td>theory</td>
</tr>
<tr>
<td>Improvised rescue techniques (introduction)</td>
<td>1</td>
<td>experienced mountain rescue doctor, team member and/or mountain guide</td>
<td>theory</td>
</tr>
<tr>
<td>Improvised rescue techniques (practical)</td>
<td>2</td>
<td>experienced mountain rescue doctor, team member and/or mountain guide</td>
<td>practical</td>
</tr>
<tr>
<td>Mountaineering techniques in summer and winter, and personal mountaineering equipment (see Appendix 1)</td>
<td>18</td>
<td>qualified mountain guides</td>
<td>practical</td>
</tr>
<tr>
<td>Navigation and survival techniques in hostile weather in the mountains</td>
<td>8</td>
<td>mountain guide</td>
<td>workshop + practical</td>
</tr>
</tbody>
</table>

Information about:

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutrition, fluid balance and exhaustion</td>
<td>1</td>
<td>experienced doctor or nutritionist</td>
<td>theory</td>
</tr>
<tr>
<td>Exercise physiology</td>
<td>1</td>
<td>physiologist or experienced doctor</td>
<td>theory</td>
</tr>
<tr>
<td>Travel Medicine</td>
<td>1</td>
<td>experienced doctor</td>
<td>theory</td>
</tr>
<tr>
<td>Personal first aid kit</td>
<td>1</td>
<td>experienced doctor</td>
<td>theory</td>
</tr>
<tr>
<td>Legal aspects</td>
<td>0.5</td>
<td>experienced lawyer or doctor with medico legal experience</td>
<td>theory</td>
</tr>
<tr>
<td>Stress management</td>
<td>1</td>
<td>experienced doctor</td>
<td>theory</td>
</tr>
<tr>
<td>Pre-existing clinical conditions</td>
<td>3</td>
<td>experienced doctor</td>
<td>theory</td>
</tr>
<tr>
<td>Analgesia in the field</td>
<td>1</td>
<td>experienced doctor</td>
<td>theory</td>
</tr>
<tr>
<td>International mountaineering</td>
<td>0.5</td>
<td>experienced doctor</td>
<td>theory</td>
</tr>
</tbody>
</table>
SPECIALTY COURSE: EXPEDITION AND WILDERNESS MEDICINE

This course is designed for persons going on treks and expeditions with the anticipation that they will be providing medical support.

<table>
<thead>
<tr>
<th>Basics of:</th>
<th>Minimal time requirements (hrs)</th>
<th>Instructors</th>
<th>Training:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Altitude</td>
<td>4</td>
<td>experienced expedition doctor</td>
<td>theory and workshop</td>
</tr>
<tr>
<td>Cold</td>
<td>3</td>
<td>experienced expedition doctor</td>
<td>theory and workshop</td>
</tr>
<tr>
<td>Travel Medicine</td>
<td>4</td>
<td>doctor specialized in tropical or travel medicine, or experienced doctor</td>
<td>theory</td>
</tr>
<tr>
<td>Traumatology</td>
<td>4</td>
<td>experienced expedition doctor</td>
<td>workshop</td>
</tr>
<tr>
<td>Improvised rescue techniques</td>
<td>4</td>
<td>experienced expedition doctor or IFMGA guide</td>
<td>workshop</td>
</tr>
<tr>
<td>Survival techniques in high altitude and personal equipment for high altitude mountaineering</td>
<td>10</td>
<td>mountain guide experienced in high altitude climbing</td>
<td>workshop and practical</td>
</tr>
<tr>
<td>Expedition medical kit</td>
<td>1</td>
<td>experienced expedition doctor</td>
<td>workshop</td>
</tr>
<tr>
<td>Team building</td>
<td>2</td>
<td>experienced team leader</td>
<td>workshop</td>
</tr>
<tr>
<td>Common expedition problems</td>
<td>8</td>
<td>experienced expedition doctor or leader</td>
<td>workshop</td>
</tr>
<tr>
<td>Total</td>
<td>40hrs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SPECIALTY COURSE: RESCUE

This course is designed for doctors (and if the course organiser wishes, registered nurses and paramedics) who are (or becoming) members of an organised rescue system. They should have been trained in Advanced Life Support and be experienced in mountaineering to an appropriate standard. Curriculum A focuses on medical aspects of terrestrial mountain rescue and is the prerequisite for the attainment of the Diploma. The Add-on Module ‘Air Rescue’ (Curriculum B) is recommended for air rescue operations in mountainous terrain and should at least attain the minimum standards and regulations of the region or nation.

Curriculum A (Terrestrial Mountain Rescue)

<table>
<thead>
<tr>
<th>Basics of:</th>
<th>Minimal time requirements (hrs)</th>
<th>Instructors</th>
<th>Training:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rescue techniques in organised rescues</td>
<td>19</td>
<td>qualified, experienced mountain guides and rescue doctors</td>
<td>theory + workshop + practical</td>
</tr>
<tr>
<td>Helicopter rescue techniques</td>
<td>6</td>
<td>experienced helicopter persons</td>
<td>theory</td>
</tr>
<tr>
<td>Mountain rescue in airborne sports</td>
<td>2</td>
<td>experienced mountain rescue doctor</td>
<td>theory + workshop</td>
</tr>
<tr>
<td>Canyoning rescue</td>
<td>2</td>
<td>experienced doctor and canyon guide</td>
<td>theory + workshop + practical</td>
</tr>
<tr>
<td>Hypothermia, avalanches and</td>
<td>8</td>
<td>experienced doctor</td>
<td>theory + workshop +</td>
</tr>
<tr>
<td></td>
<td>Minimal time requirements (hrs)</td>
<td>Instructors</td>
<td>Training:</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------------------------------</td>
<td>-------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Cave rescues</td>
<td>2</td>
<td>experienced caving doctor</td>
<td>theory + workshop</td>
</tr>
<tr>
<td>Risk management</td>
<td>1</td>
<td>experienced doctor</td>
<td>theory</td>
</tr>
<tr>
<td>Mountaineering skills (see Appendix 1)</td>
<td>10 qualified and experienced mountain guides</td>
<td>practical</td>
<td>practical</td>
</tr>
<tr>
<td></td>
<td><strong>Total 50 hrs</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Curriculum B (Air Rescue)**

<table>
<thead>
<tr>
<th>Basics of:</th>
<th>Minimal time requirements (hrs)</th>
<th>Instructors</th>
<th>Training:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helicopter rescue</td>
<td>16</td>
<td>experienced helicopter persons and air rescue doctors</td>
<td>theory + practical</td>
</tr>
<tr>
<td></td>
<td><strong>Total 16 hrs</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This document was originally produced by Urs Wiget and Bruno Durrer (January 1998); it subsequently revised by David Hillebrandt (DH) (April 2004), DH and John Ellerton (September 2007 and June 2010)

**Appendix 1 - Minimum mountaineering skills**

Please note these are minimum standards; many courses will expect their candidates to achieve a higher mountaineering standard.

**A) Common course**

- Summer: Knots and their uses: Fishermen’s knot, figure of eight, Prusik, clove hitch, Munter (Italian) hitch; tying into a harness; creating an anchor system; belaying; abseiling with descender and prusik; ascent of fixed rope with prusiks; ability to follow on a UIAA grade 3 climb: preparing a landing site for helicopter evacuation; ground-to-air hand signals.
- Winter: Glacier travel and walking on ice with crampons; belaying by using a variety of techniques suited to snow and ice; climbing grade WI (Winter Ice) 2; improvised crevasse rescue including simple pulley systems; locating a buried avalanche victim using a transceiver and probes, extracting the victim and preparing for rescue.

**B) Specialty Rescue module**

As above plus the following:

- Risk assessment of mounting an organised rescue
- Summer: additional knots and their uses; pulley and hoist systems; extracting an patient from steep terrain; rock climbing - leading UIAA grade II/III and following UIAA IV with doctor’s rucksac.
- Canyoning: additional knots (figure of nine, releasable rope attachments); safety in canyoning; information about swimming techniques in swift water, abseiling techniques with fixed and releasable systems and tyrolienne techniques.
- Winter: safe off-piste skiing; successful search of a buried person by using a transceiver within 3 min; successful probing and efficient extrication of a buried person; glacier travel; crevasse rescue in improvised and organised rescue situations; belaying by using ice-screws and the construction of an Abalokov/V-thread; walking on ice with crampons; climbing grade WI (Winter Ice) 2/3
- Helicopter: Helicopter operations and rescue techniques appropriate to country; Helicopter ground to air communications; preparing a patient in a rescue bag for winch operation.

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