The new International Master course in Mountain Expedition Medicine, born with the objective to creating a new type of expedition doctor or paramedic, highly specialized, able to handle any medical emergencies, and also logistics on the field, providing professional support to the work of rescue teams, in case of accidents or sudden illnesses. The aim is to create a health personnel who, knowing management of emergencies in the field, and knowing in depth the technical skills in mountaineering and climbing, places it as a leader and as a second guide in the expeditiions.

A specialist who knows how to deal with the expedition guide and participants, assessing correctly their skills and physical fitness, and comparing them to the expedition field. This role was already done in part, by Master in Mountain Medicine, but now we want to create a figure with greater specialization and experience and high academic preparation of theoretical and technical level. This is achieved by combining the expertise and experience of the previous course of the University of Insubria, the skills of Air Zermatt Training Center, those of the Austere Course and Mountain Medicine at the University of New Mexico, and those of medical staff and guides in the Denali Park in Alaska.

A course so comprehensive and complex in its development, does not exist at the time in the world. The new Master Course, which takes largely theoretical part of the Master in Mountain Medicine and Master in Mountain Emergency Medicine, provides trips and practical training on the field among others, in Zermatt at altitude below the Matterhorn, in the Grand Canyon in Arizona and in New Mexico, in the Denali Park in Alaska, in Chamonix, with weekly schedule distributed over two years.

The comparison with mountain guides of great experience and professionalism, with renowned mountaineers, with alpinist doctors as Oswald Oelz or Tom Hornbein, will complete the educational path, after which there will be a similar assessment to the other masters with multiple choice questions, the presentation of a thesis, and an assessment of skills and attitudes in the field, to create a professional profile able to better manage expeditions or groups of climbers all over the world.

There is a maximum number of 50 places available and the course is approved by the following international organizations: ISMF - UIAA, EMTA - IAW, while the number is limited to a total number of 1,624 hours as academic regulations, 904 among lectures, internships and 720 practical training.

Lights and practical training will be held, among others, at the University of Insubria in Varese, at the EURAC headquarters of the Institute of Mountain Medicine and Emergency in Bolzano, at Frazionario, Chambery, University of New Mexico/Sandia Canyon, Air Zermatt Training Center, Research Park, Alaska.

Following completion of the course, a formal academic ceremony will be held, where each student will receive a graduate certificate recognized worldwide. To obtain the graduation certificate each candidate will place to be present at 75% of lessons and medical practical training. A final course examination, consists in a multiple answer test, a practical evaluation on the field, and the thesis presentation previously arranged.

TUTION FEE

The entrance fee for the course is Euro 7,000.00. The fee includes:

- A written and oral test by two doctors on the program and corresponding overnights.
- In cooperation with the following International Organisations:
  - Club Alpino Svizzero CAS
  - Schweizer Alpen-Club
  - MEDCOM UIAA
  - di Circolo Ospedale di Lugano
  - Club Alpin Suisse Sezione Ticino
  - Fondazione Lancelet - University of Insubria
  - Maria Antonia Neri University of Saragoza, Spain
  - Antonio Giorgi University of Bologna
  - Olaf Born University of Bern
  - Mario Antonino Maria University of Saronico, Italy
  - Antonio Forlano University of Bologna
  - Colorado Air Care - University of Colorado
  - Jason Williams University of New Mexico
Module 1
Basis, Diagnosis, Treatment of Altitude Sickness 50 hours
- Altitude sickness
- Children and the mountain
- High altitude training
- The medical practice of mountain
- The elderly and the mountain
- Cardiovascular patients and mountain training
- Pulmonary failure and mountain training
- Neurological disease and the mountain
- The woman and the mountain

Module 2
Hyperthermia: Diagnosis and Treatment 32 hours
- Hyperthermia
- Frostbite
- Sunstroke, heatstroke
- Notions on personal technical
- Equipment and apparels
- Diving medicine

Module 3
Trauma in Mountain: Diagnosis and Treatment 42 hours
- Anaesthesia on the field
- Abdominal trauma
- Thoracic traumatology
- Orthopedic trauma
- Basic radiology
- Interventional radiology
- Vascular trauma
- Neurosurgical trauma
- Wrist and hand traumas in mountain training
- Emergencies odontostomatology
- Traqueotomy
- Shock
- Septic diagnosis and treatment

Module 4
Emergency Rescue in Mountain: 129 hours
- Avalanche
- Electrocution, lightning
- Mountain rescue techniques
- Helicopters rescue techniques
- Hubs on personal equipment
- Stress management in mountain rescue
- Organized rescue on the mountain
- The intensive care unit and alpine trauma
- Alpine trauma and rescue services
- Helicopter Rescue Team (c/o Air Zermatt, REGA)

Module 5
The Doctor and Alpine Medical Practice 68 hours
- Introduction
- Mountain training techniques and basics of skimauntracing
- Basics of climbing techniques
- Mountain rescue techniques

Module 6
The Doctor and the Mountain 36 hours
- Decompression sickness
- Survival and navigation techniques
- Nutrition in mountain training
- Travel medicine
- The doctor on expeditions
- Medical legal aspects in mountain training
- Legal aspects
- International mountain training organization
- Medical communication
- Geographical characteristics and rescue techniques
- Risk management
- Meteorology and mountain
- Diving in mountain training
- Historical and cultural aspects of mountain training

Program Winter
- Basics on survival techniques, protection of the patient against further harm, self protection, bivouac
- Glacier travel, bailing up in ice and snow
- Organized crevasse rescue, tension, blood, crevasse container, ice hammer
- Conrade aid and organized rescue in avalanche accidents, transceiver search, helicopter search, Resco, shovelling probing, ABS-Pack and other systems against burial, medical aspects of avalanche accidents, pronogesis in avalanche victims
- Working with the helicopter in winter conditions
- Management of a mountain casualties, during winter season. In cold and snow conditions

Chamonix - Fremmont
Place : FREMONT Chamonix
- Theoretical lesson : rescue and ressucitation in austere environment - Presentation of few rescue places in Europe
- France - Italie - Suisse - Tchêque - Catalogne
- Anagis and ressucitation in austere environment
- Place : Annecy Dropping Zone (Base Meythet - Annecy)
- « Simulation rescue »
- Projection of EC145 and Dropping Zone
- mountain exercise with a simulator EC 145 (EAC5) Victim care management - Boarding, wiring and landing Workshop with virtual trauma cases
- Personal material : mountain clothing, mountain or ski shoes, harness, helmet, gloves,
- Place : Parmelan (close from Annecy)
- « Theorical lesson : rescue and ressucitation in austere environement » Presentation of 
- Workshop : crevasse extraction, management, treatment and evacuation of the victim by EC 145
- Place : Courmayeur (Italy) Refugio Cai Uget
- Workshop : rescue without helicopter, self rescue
- ESA, rescue in avalanche, management of victim on the field with using sledge

Program Summer
- Parent bag, vacuum mattress, stretcher, horizontal net
- Training on improvised rescue techniques
- Rescue on via ferrata
- Suspension trauma: rescue in lights sports
- Working with helicopters... hovering ...
- Introduction to HEC (human external cargo), .. procedures on longline, load transfer system

Denaill Park - Alaska
1: Kiahotta
Utilize the Kiahotta Base camp area. Likely set up camp using a bit up glacier from the main camp. Demonstrate / instruct the points of camp set up on a glacier (crevasse probing, safe tent sites, hygiene, cooking, etc).
- Annecy Dropping Zone (Base Meythet - Annecy)
- « simulating rescue »
- Place : Parmelan Massif (closes from Annecy)
- « Workshop in real condition »

Lectures on important topics will be presented in some cases.

MEDICAL TRAINING
10 hours
Clinic Mountain Medicine
C/o Ospedale U. Parini Aosta / Chamonix
20 hours
Cardiology
C/o Istituto Auxologico Italiano, Università Bicocca Milano
40 hours*
Emergency Department
C/o Ospedale Niguarda-Cà Granda Milano

* Pratical part on Glacier