

# **Alpine Helicopter Rescue Specialty Course Module**

**October 2019**

ICAR Air Rescue Commission

# AGENDA

PART 1 – Diploma in Mountain Medicine - Overview

PART 2 – DiMM Programs Worldwide

PART 3 – AHEMS Course

PART 4 – Next Steps

PART 5 – Air Rescue Commission Discussion

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# Diploma in Mountain Medicine (DiMM)

The medical commissions (MedCom) of UIAA and ICAR, together with the International Society for Mountain Medicine (ISMM) established minimal requirements for a formal Diploma course in August 1997. Many course organizers adopted these standards and the resulting **Diploma in Mountain Medicine (DiMM)** has become a widely respected qualification.

Additional training DiMM module components for the DiMM include helicopter rescue. The curriculum for this module was developed by medical and helicopter rescue specialists worldwide.



# An Introductory Video...



## DiMM Course Approval

Organisers of mountain medicine courses worldwide can apply to endorse their courses with the label of *Diploma in Mountain Medicine* by an application.

A “DiMM Regulation and Assessment Committee” reviews the application. The course may be approved, rejected with reason(s) or referred to the UIAA and ICAR MedComs and the ISMM.

New courses are approved for 2 years. New course organizers must invite members of the UIAA MedCom, ICAR MedCom or ISMM to observe their courses.

# DiMM Regulation and Assessment Committee

CHAIR: JASON WILLIAMS, University of New Mexico

## **For the UIAA MedCom**

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## **For ICAR MedCom**

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## **For ISMM**

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Hermann Brugger – [hermann.brugger@eurac.edu](mailto:hermann.brugger@eurac.edu)

## **With a special focus on the specialty rescue module.**

Oliver Reisten – a [oliver.reisten@air-zermatt.ch](mailto:oliver.reisten@air-zermatt.ch)



## DiMM Accreditation (Initial and Renewing)

Programs must go through a complex endorsement process that includes peer-review accomplished by site visits.

Peer-reviewed renewals take place on a regular schedule

- 2 years after initial endorsement
- 4 years thereafter



# Qualifications/Requirements for Students

The DiMM qualification can only be awarded to Health Care Professionals registered with a national professional regulatory body (Physicians, Paramedics, Nurses, etc.). The Diploma in Mountain Medicine cannot be awarded to basic life support personnel (EMT's, First Responders, First Aid, etc.).



University of New Mexico School of Medicine

## Diploma Awarded

The DiMM is awarded upon completion of the Foundation Course in Mountain Medicine (120 hours).

**Additional Specialty Rescue Course modules include:**  
**Helicopter Rescue,**  
Expedition and Wilderness Medicine, and Terrestrial Rescue.



**Wilderness Medical Society**

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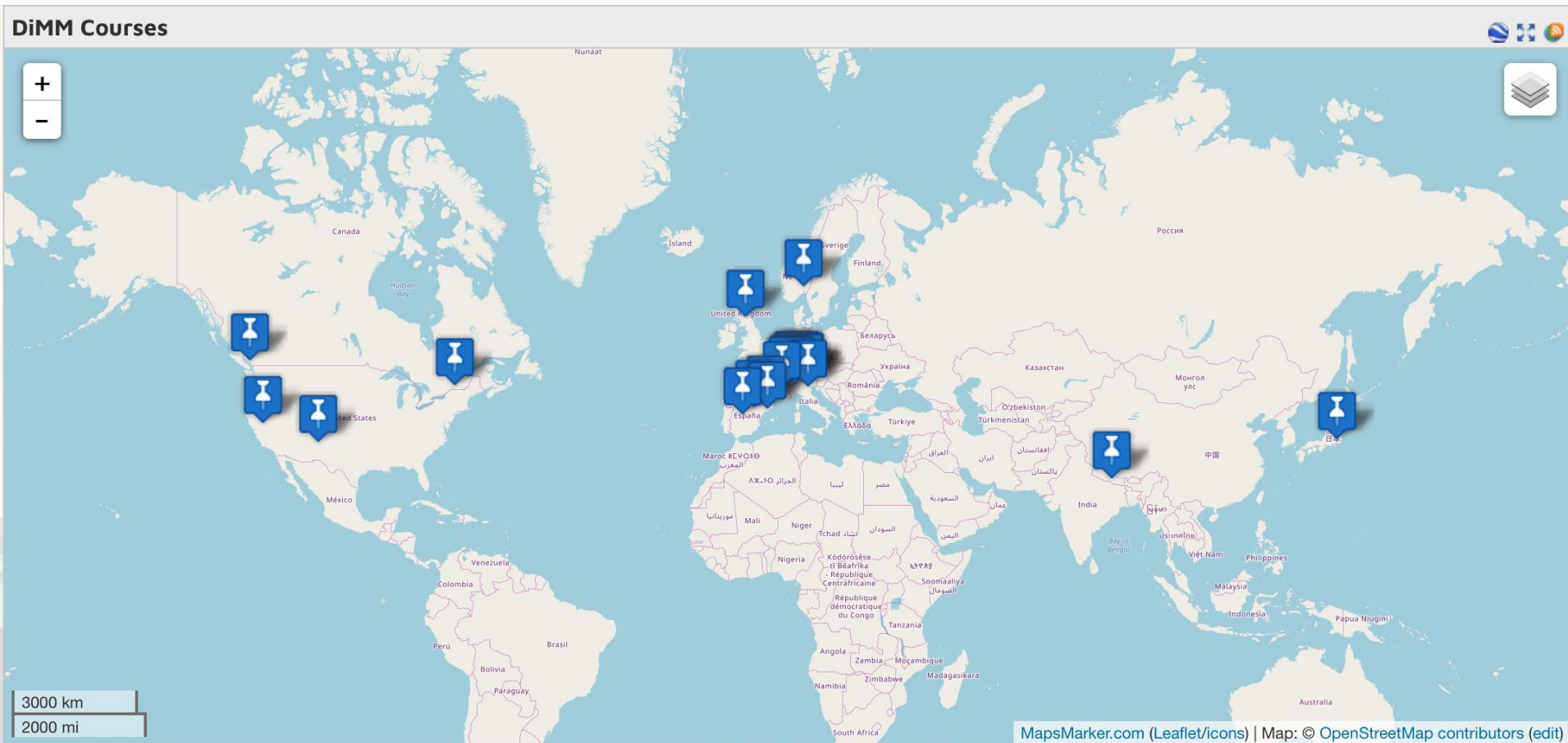
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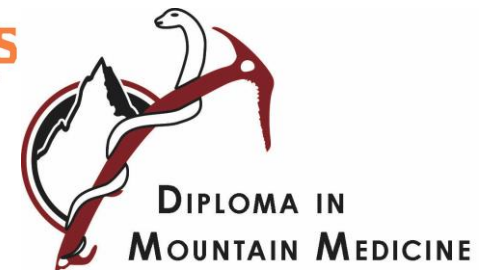


# 28 DiMM and DiMM Specialty Courses



## 28 DiMM and DiMM Specialty Courses

- (22) Foundational DiMM Courses
- (9) Wilderness & Expedition Medicine Courses
- (6) Terrestrial Rescue Specialty Courses
- (3) Alpine Helicopter Rescue Specialty Courses



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# Specialty Rescue Courses

Specialty Rescue Courses are designed for Health Care Professionals who are (or are becoming) members of an organized rescue service, and have been trained in Advanced Life Support (ALS).

- **Alpine Helicopter Rescue Specialty Course Module** focuses on air rescue operations in mountainous terrain and should at least attain the minimum standards and regulations of the region or nation.
- **Terrestrial Mountain Rescue Specialty Course Module** focuses on terrestrial mountain rescue.

Instructional faculty of the Specialty Rescue Courses must have real-world mountain rescue patient care experience.



# Alpine Helicopter Rescue Specialty Course Module (AHEMS & Alpine Flight Crew Emergency Survival Training AFCEST)

**A 54-hour module that is intended to support the work of health care professionals who are part of an alpine helicopter emergency medical team.**

Presently, the required helicopter rescue curriculum is **well-developed and detailed.**



Topic area:	Hours	Instructors / facilitators	Suggested venue / activity:
Alpine Helicopter Rescue Specialty Course Orientation	0.5	AHEMS Course Faculty	Theory
Personal protective equipment (PPE) / personal gear / alpine gear	0.5	AHMES Course Faculty / Guide	Theory
Low hover exit/entry dry land and flight training	3	Pilot, AHEMS Course Faculty	Simulator + flight training
Air Regulations – helicopter emergency medical system (HEMS), human external cargo (HEC) helicopter hoist operation (HHO)	1	Pilot, AHEMS/Faculty	Theory
Crew Resource Management	1	AHEMS Faculty / pilot	Simulator**
Aviation and HEMS checklists	0.5	Pilot, AHEMS Faculty	Simulator
Providing a passenger safety briefing	1	Pilot	Theory - hangar
Cleaning and refueling the helicopter, use of ground handling equipment, remove/replace ski basket, doors and seats, remove, service and reinstall HEMS equipment	3	AME / AHEMS faculty or pilot	Line aircraft
Install/remove/inspect and document HEC/HHO equipment, assist with HHO cable inspection	3	Hoist operator / AHEMS faculty	Hanger
Theory of dynamic HEC and HHO flight profile	0.5	AHEMS faculty / pilot	Theory
Pilot / HEMS crew signals - with and without radio	1	AHEMS faculty	Simulator
Initial solo HEC circuits	2	Pilot, AHEMS faculty	Flight training
Confined space / radio directed HEC	2	Pilot, AHEMS faculty	Flight training
HEC circuits with simulated patient and aerial rescue platform (ARP)	2	Pilot, AHEMS faculty	Flight training
Helicopter medivac configuration	1	AHEMS faculty	Practical
Management of complex trauma and medical cases during helicopter transport	1	Physician, AHEMS faculty	Simulator
Landing zone (LZ) selection and preparation	0.5	AHEMS faculty	Theory
Weight and balance	0.5	Pilot	Theory
HEC insertion/extraction with tagline, non- ambulatory patient and ARP in confined space / radio directed	2	Pilot, AHEMS Faculty	Flight training
HEC wall pickoff un-injured subject	2	Mountain guides / AHEMS faculty	Simulation
HEC wall pickoffs of an injured and/or ambulatory subject	2	Pilot, AHEMS faculty	Flight training
Rescuer insertion and extraction of patient in ARP by HHO	4	Pilot, hoist opera- tor/AHEMS faculty	Simulation + flight training
Analgesia and anesthesia in AHEMS operations	1	Physician, AHEMS fac- ulty	Theory + simulator
Theory of flight for non-pilots	1	Pilot or HEMS faculty	Theory
Aviation Communications Systems AM/FM/data	2	Pilot, AHEMS faculty	Theory + simulator
Infection control and aircraft decontamina- tion	0.5	AHEMS faculty	Theory + practical
Weather	1	Pilot, mountain guide	Theory
Aviation navigation systems	1	Pilot, AHEMS faculty	Simulator
Altimeter, map/chart, compass and GPS use in orientation and navigation	3	Pilot, mountain guide or AHEMS faculty	
Hero versus professional discussion	0.5	AHEMS faculty	Theory
Information technology in the mountains	0.5	AHEMS faculty	Workshop
Emergency Signaling Systems, pyrotech- nics etc.	0.5	AHEMS faculty	Outdoor workshop
Navigation and route finding in hostile mountain weather. crevasse rescue (ter- restrial and HEC/HHO)	8	Mountain Guide/ AHEMS Faculty	Glacier - deplane onto protection***
Survival training, use of kits, shelter, signaling, procuring food and water, making fire, low hover insertion	Overnig- ht	AHEMS/AFCEST Fac- ulty	flight training
Total number of hours	52		

# DiMM Programs Offering AHEMS

Which DiMM programs are offering AHEMS?

- Air Zermatt Training Center
- University of New Mexico – International Mountain Medicine Center
- Canadian Society of Mountain Medicine

# Air Zermatt Alpine Rescue Center



- Zermatt program modeled for DiMM AHEMS specialty course
- Courses started 2007
- 18 courses completed



# Air Zermatt Alpine Rescue Center



Video Example...







# University of New Mexico

## International Mountain Medicine Center

- Collaborative effort with Bernalillo County Sheriff's Department and Fire Department
- Gained AHEMS endorsement August 2019
- Planned first course in late fall of 2020
- Albuquerque, New Mexico USA (winter and summer environments)



# University of New Mexico International Mountain Medicine Center

Video Example...



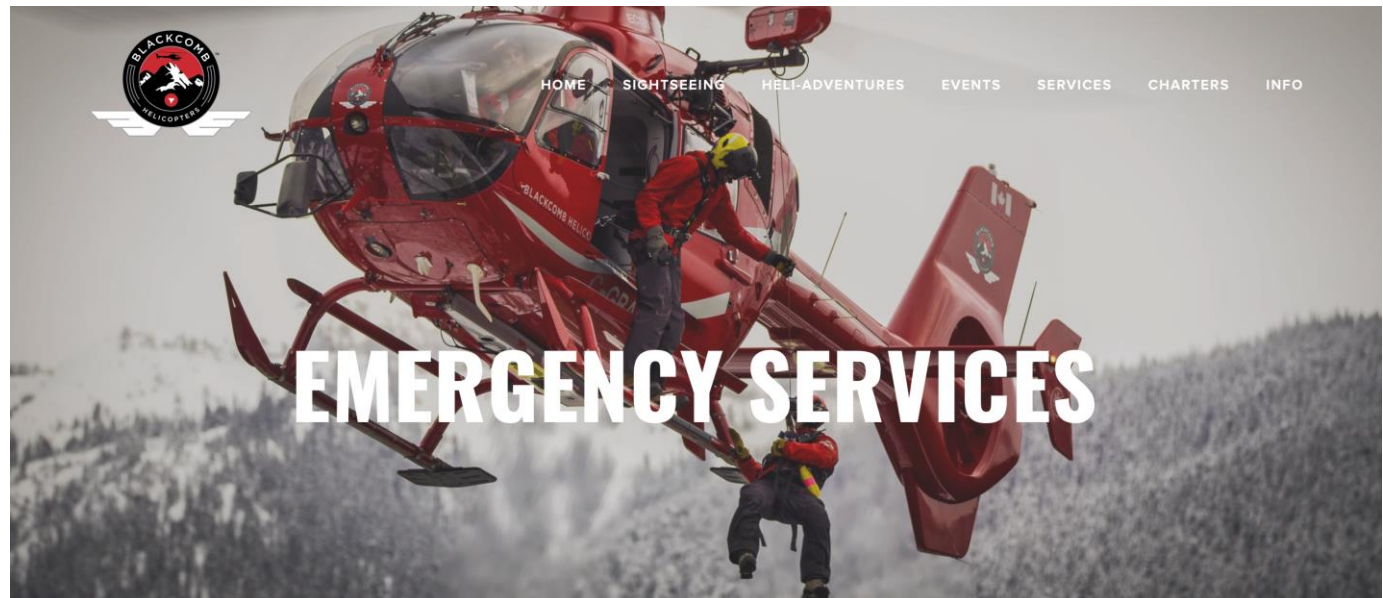
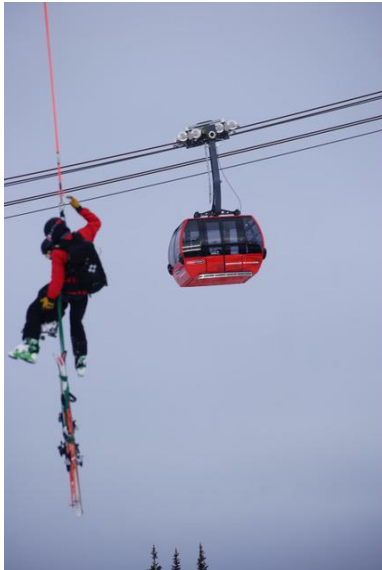




# Canadian Society of Mountain Medicine



- First course planned fall of 2020
- Partnership with Blackcomb Helicopters



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## Next Steps for DiMM

- The DiMM continues to set an international standard for healthcare providers in mountain rescue
  - Adapts clinical practice to the mountains
  - Students held to a high standard
  - In some countries a requirement for medical rescuers
- Importance of oversight and endorsement
- Emerging rescue specialty courses worldwide
  - **AHEMS is a valuable new addition**
  - **AirCom and other stakeholder collaboration is key**



## RECOMMENDATION for AirCom

**The ICAR Air Rescue Commission (AirCom) should review and advise the DiMM organizers on the components related to helicopter rescue in the alpine environment.** The AirCom should:

- Review the components of the current curriculum
- Determine if there should be requirements for program instructors
- Determine if the DiMM Regulation and Assessment Committee should include a member of ICAR AirCom
- Determine ICAR AirCom should offer site assessors for the AHEMS module

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## AirCom Discussion

Any further ideas?

A VOTE on our participation...

# THANK YOU!

ICAR Air Rescue Commission