

**Evropski centar** za mir i razvoj Terazije 41/II

**ECPD Headquarters** 

European Center for Peace and Development Centre Européen pour la Paix et le Développement Centro Europeo para la Paz y el Desarrollo Evropeiskij centr mira i razvitija



University for Peace established by the United Nations

2 October 2024

The European Center for Peace and Development University for Peace established by the United Nations (ECPD), an international education and research organization from the UN academic system, is honored to inform you that together with the ECPD International Center for Integrative Medicine, within the framework of the ECPD International Program of Transfer of Knowledge System in the field of Biomedical and Medical Sciences organizes

## VIII ECPD INTERNATIONAL SPECIALIST PROGRAM HYPERBARIC MEDICINE

Belgrade, 25 – 29 November 2024

## **UNDERWATER MEDICINE**

#### Belgrade, 2 – 6 December 2024

The aim of this educational program is to provide knowledge in the field of hyperbaric medicine and physiology and pathophysiology of diving. Topics related to indications, contraindications and possible toxic effects of oxygen administration in hyperbaric conditions, as well as the effects of hyperbaric oxygen administration in the prevention and treatment of various pathological conditions, with particular emphasis on the effect of this therapy on peroxidation and antioxidant enzymes are specifically processed. The significance of hyperbaric therapy is emphasized as part of a multidisciplinary approach in the treatment of cardiovascular diseases, diabetes, systemic diseases, radionecrosis, and neurology. Particular attention will be paid to the importance of applying this therapy in the preparation and rehabilitation of sportsmen.

The courses are intended for specialist training of **general practitioners and specialists, medical technicians, physiotherapists, diving club doctors and diving instructors** (course of underwater medicine).

**Co-directors of the program** are **Prim. Dr. med. Miodrag Živković**, specialist in marine, hyperbaric and underwater medicine, physiologist, HBO Medical Center, President of the UG Serbian Health Organization, Belgrade, and **Prof. Dr. Vladimir Jakovljević**, Faculty of Medical Sciences, Kragujevac. The lecturers are distinguished

experts in this field: **Prof. Dr. Žarko Finderle**, Faculty of Medicine, University of Ljubljana, Slovenia, **Ass. Prof. Dr. Branislav Baškot** and other prominent experts in this field.

**The Program** includes the following topics:

#### **HYPERBARIC MEDICINE**

- History of the development of hyperbaric medicine
- History of the development of hyperbaric chambers
- Oxygen physicochemical characteristics, transport and physiological role
- Hypoxia biochemical aspects
- Hyperoxia biochemical aspects, toxic aspects
- Mechanisms of defending the body against hyperoxia
- Indications, contraindications and complications
- Physiological basis for the application of hyperbaric oxygenation

• Urgent application of hyperbaric oxygenation - Absolute indications: gas gangrene (clostridial infection), carbon monoxide poisoning, methemoglobin form poisoning, vascular gas embolism (decompression sickness and barotraumatic gas embolism), botulism, pulmonary artery thromboembolism, acute occlusion of magistral and end arteries, strokes, post-hypoxic encephalopathy, brain and spinal cord injuries, sepsis, non-colloidal anaerobic infection, peritonitis, subileus, opiate poisoning, psychotropic opiates and psychoactive substances

• Hyperbaric oxygenation in internal medicine (in cardiology, rheumatology, endocrinology)

• **Hyperbaric oxygenation in oncology** (new research, post-radiation tissue necrosis)

- Hyperbaric oxygenation in surgery and orthopedics
- Hyperbaric oxygenation in neurology and psychiatry
- Hyperbaric oxygenation in ophthalmology and otorhinolaryngology (ENT)
- Hyperbaric oxygenation in sports medicine
- HBO in the Post-Covid Syndrome
- Drug interactions and HBO
- Measures for the safe operation of hyperbaric chambers
- Analysis of causes of fire in hyperbaric chamber
- International standards
- Practical work with single-use oxygen chambers

#### **UNDERWATER MEDICINE**

- Definition and history of diving development
- History of diving technique development
- History of the development of recompression chambers
- History of the development of subphysical physiology and medicine
- Physical and physiological characteristics of gases
- Diving stress
- Psychophysical abilities in diving
- Effect of increased pressure on organ systems (respiratory, cardiovascular, central nervous system ...)
- Oxidation stress in diving
- Medical selection and medical supervision of divers
- Diving health hazards and health protection measures
- **Negative environmental impact on divers' health** (cooling, drowning, fatigue, injuries, chemically and biologically polluted waters)
- Metabolic aspects of diving energy consumption
- The negative impact of inhalation gases on the health of divers
- Medical selection
- Prophylactic decompression tables (DB prevention)
- **Decompression sickness First aid and treatment** (therapeutic decompression tables)

• **Barotraumatic injuries** (physiology of pressure equalization in middle ear, middle ear barotrauma, inner ear barotrauma, sinus and tooth barotrauma, digestive tract pain, kneading, Alternobaric vertigo - Landgren Syndrome)

• **Barotraumatic gas embolism** - **First aid and treatment** (therapeutic decompression tables)

- Monitoring of a diseased diver in a stationary recompression chamber
- Single-stage transport recompression chambers
- Missed decompression
- Principles of Medical Diving Provision
- Control of living conditions in recompression chambers
- Safety aspects of hyperbaric recompression systems
- Video views of complex diving operations
- Getting to know hyperbaric chambers
- Practical work with chambers
- Admitting to a hyperbaric chamber



#### ORGANIZATION

The curriculum for both courses includes theoretical lectures and hands-on training for the use of hyperbaric chambers for therapeutic purposes. ECPD provides the students with appropriate literature and teaching materials needed to effectively monitor the teaching.

#### CERTIFICATE

On the basis of attendance, acquired knowledge and skills during the Courses and successfully passed exam, participants will receive an internationally valid **Certificate** of the **European Center for Peace and Development UN University for Peace.** 

#### **REGISTRATION FEE AND APPLICATION FORM**

Participation in the Program is possible in-person or online (Zoom platform).

**The registration fee** for personal participation in each of the individual **Hyperbaric and Underwater Medicine Courses** is **690 EUR** and for taking **both Courses together** is **1.250 EUR**. The registration fee for online participation is **reduced by 10%** of the stated amounts.

**Application** should be sent **together** with a copy of your Diploma to: European Center for Peace and Development UN University for Peace, Terazije 41, 11000 Belgrade, Serbia; Tel: +381 11 3246 041; E-mail: office@ecpd.org.rs and ecpd@Eunet.rs; Website: www.ecpd.org.rs

Looking forward to your application and meeting you soon, we remain,

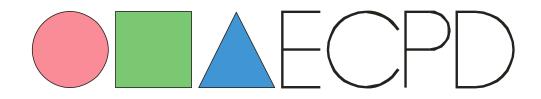
Sincerely yours,

DIRECTOR OF ECPD BIOMEDICAL AND MEDICAL STUDIES (Academician Prof. Dr. Vladimir Kanjuh)

Ankan



ECPD EXECUTIVE DIRECTOR (Academician Prof. Dr. Negoslav Ostojić)



#### EUROPEAN CENTER FOR PEACE AND DEVELOPMENT (ECPD) UNIVERSITY FOR PEACE ESTABLISHED BY THE UNITED NATIONS

# ECPD INTERNATIONAL SPECIALIST PROGRAM HYPERBARIC MEDICINE

(Belgrade, 25 - 29 November 2024)

### **APPLICATION FORM**

IN-PERSON	ONLINE
1. Name and surname	
2. Educational background	
3. Speciality	
4. Organization (name, address, phone) _	
5. Workplace or function	
6. Phone	_Fax
7. E-mail address:	
8. License number:	

**The Application Form** should be submitted to the European Center for Peace and Development UN University for Peace, Terazije 41, 11000 Belgrade, Serbia; Tel: +381 11 3246 041; E-mail: office@ecpd.org.rs and ecpd@eunet.rs

**The participation fee** should be paid through ECPD account. Regarding the payment instructions and pro - forma invoice, please contact ECPD Financial Department: Tel: +381 11 3246 041; E-mail: office@ecpd.org.rs and ecpd@EUnet.rs

Place and date \_\_\_\_\_ Candidate \_\_\_\_\_



#### EUROPEAN CENTER FOR PEACE AND DEVELOPMENT (ECPD) UNIVERSITY FOR PEACE ESTABLISHED BY THE UNITED NATIONS

# ECPD INTERNATIONAL SPECIALIST PROGRAM UNDERWATER MEDICINE

(Belgrade, 2 – 6 December 2024)

### **APPLICATION FORM**

IN-PERSON	ONLINE
1. Name and surname	
2. Educational background	
3. Speciality	
4. Organization (name, address, phone) _	
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