2023-2025

INTERNATIONAL MASTER IN SLEEP MEDICINE

A postgraduate master on sleep-wake-circadian physiology, consciousness and related disorders

In collaboration with:
Basic Knowledge

The first part of the program provides basic tools, skills and competences to understand sleep physiology, diagnosis and treatments of sleep and consciousness disorders. The program covers a wide range of topics such as the regulation and function of sleep, sleep research methods as well as first looks at clinical topics like insomnia, hypersomnia, parasomnia and other disorders.

Advanced Knowledge

The second part of the program allows the students to deepen their knowledge while also offering a holistic look into further clinical topics as well as disorders of consciousness. The modules also provide in-depth theoretical and practical insights into sleep scoring in a self-study mode.

Specialization

Building up on the previous programs, these modules of the MAS offer more specific learning contents based on the student’s personal preferences. In addition each participant will be able to gain international working experience by completing a two to four weeks internship in one of our partner labs all around the world.

INTERNATIONAL MASTER IN SLEEP MEDICINE
A postgraduate master on sleep-wake-circadian physiology, consciousness and related disorders

The International Master in Sleep Medicine - in collaboration with the University of Bern and the Università della Svizzera Italiana as well as 13 International partner Universities - offers unique postgraduate programs, which provide advanced medical and scientific insights into sleep physiology, chronobiology and sleep medicine. All of our programs are under the patronage of the European Sleep Research Society (ESRS), the European Academy of Neurology (EAN), the Swiss Society for Sleep Research, Sleep Medicine and Chronobiology (SSSSC), the German Society of sleep Research and Medicine (DGSM) and the German Society of Pneumology (DGP).

Program Overview

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Who can apply

Eligible for the Program are applicants with the following backgrounds:
- medical degree with or without specialization
- psychologists and neuropsychologists
- candidates with a bachelor degree in a biology and/or health related disciplines
- candidates with a Master degree in natural science or engineering

**Fees and Highlights**

- **Credits**
  - Basic Knowledge: 14 ECTS
  - Advanced Knowledge: 15 ECTS
  - Specialization: 31 ECTS

- **Online modules**
  - Basic sleep medicine & interdisciplinary approach
  - Primary sleep disorders
  - Objective sleep measures
  - Sleep scoring

- **Application Deadline**
  - March 2023

- **Start**
  - May 2023

- **Duration**
  - MAS: 30 months

- **Language**
  - English

For further information please visit: [www.asc.unibe.ch](http://www.asc.unibe.ch)

or contact: info@asc.unibe.ch

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Start: May 2023

Credits: MAS | 60 ECTS

Application Deadline: March 2023

Duration: MAS | 30 months

Language: English
MAS Sleep Medicine

In all modules, interactive in-depth courses (such as journal club, webinar, case discussion, FAQ session etc.) are offered.

MODULE 1: Basics Sleep Medicine
4 ECTS (mandatory)
- Sleep-Wake cycle, consciousness and their disorders: An Introduction
  C. Bassetti
- How is vigilance assessed?
  R. Khatami
- How is sleep assessed?
  L. Ferini-Strambi
- Circadian rhythms and their assessment
  C. Garbazza
- International classification of sleep disorders
  M. Manconi
- Strategies in sleep research
  A. Adamantidis
- Sleep and circadian rhythm
  M. Schmidt
- Sleep regulation
  P. Luppi
- Sleep and digitisation
  A. Tzovara

MODULE 2: Sleep Medicine Summer School
3 ECTS (mandatory)
Visit the official site: www.europeansleepfoundation.ch/schools-and-masters/sleep-medicine-summer-school/

MODULE 3: Interdisciplinary Approach
4 ECTS (mandatory)
- Circadian, sleep and health
  H. van Dongen/A. Amidi
- Sleep and sport
  D. Etterich
- Sleep and gender medicine
  M. Levy-Anderson
- Sleep and aging and lifespan
  H. Fröhnden
- Sleep and covid
  C. Blume
- Sleep and nursery
  F.P. Cappuccio/S. Stranges
- Sleep health
  C. Bassetti
- Sleep and consciousness
  S. Laureys

MODULE 4: Sleep Science Winter School
3 ECTS (mandatory)
Visit the official site: https://www.europeansleepfoundation.ch/schools-and-masters/sleep-science-winter-school/

MODULE 5: Basics Science
5 ECTS
- Network neurophysiology
  F. Fröhlich
- Network physiology-pathology
  K. Schindler
- Network physiology of the sleep-wake cycle
  A. Adamantidis
- Genetics of sleep and sleep disorders
  M. Tafti
- Circadian clocks:
  S. Brown
- Mechanisms and functions
- Sleep across the life span and species
  M. Schmidt
- Neurobiology of the consciousness system
  S. Sarasso
- Sleep, epilepsy and chronobiology
  M. Baud
- Animal model of narcolepsy
  T. Scammel
- Animal model of RBD
  P.H. Luppi

MODULE 6: Primary Sleep Disorders
6 ECTS
- Circadian rhythm sleep-wake disorders
  C. Garbazza
- Sleep-Related movement disorders
  A. Headbrecker
- RLS/PLMS: clinical aspects and treatment
  M. Manconi
- Parasomnias and state dissociations
  L. Nobili
- REM parasomnias and treatment
  P. Bargiotas
- Treatment of insomnia: pharmacological and psychotherapeutic approach
  D. Remann

MODULE 7: Objective Sleep Measures
4 ECTS
- Imaging during sleep
  (fMRI, PET, NIRS)
  P. Maquet
- Electrical activity during sleep
  (EEG, HD-EEG, MEG, LFP, Unit recordings)
  R. Huber
- Objective measurements of sleep in the sleep laboratory
  F. Pizza
- Introduction of sleep scoring
  A. Castelhano
- Introduction of RemLogic and sleep scoring with RemLogic
  A. Roussac
- Practical study with remote access to RemLogic
  Self-study

Pediatric sleep medicine
- O. Bruni
- Sleep apneas
- R. Heinzer
- OSA treatment: options and complications
  R. Heinzer
- Physiology and phenomenology of dreaming
  F. Siclari
- Pediatric narcolepsy
  G. Pazz
- Primary central disorders of hypersomnolence I
  C. Bassetti
- Primary central disorders of hypersomnolence II
  C. Bassetti
MODULE 8: Specialization I | 5 ECTS

Latest approaches to automated sleep scoring
- F. Faraci

Oscillatory analysis for comatose patient outcome prediction
- M. De Lucia

Unobtrusive telemonitoring of sleep and daily activities
- T. Nef

Sleep clock and society
- T. Roenneberg

Sleep and electromagnetic fields
- P. Achermann

A history of sleep and sleep research
- H. Arheim

Functions of sleep and clocks
- T. Roenneberg/
  C. Rodi/
  M. Schmidt/
  M. Blumberg/
  C. Cirelli/
  S. Aton

Sleep and brain plasticity
- A. Adamantidis

Circadian clocks, timing metabolism
- S. Brown

MODULE 9: Specialization II | 4 ECTS (choose 3 topics)

TOPIC 1 | Disturbances of Consciousness

Coma: definition, anatomy, pathophysiology
- A. Rossetti

The neurology of consciousness: lessons from neuro-imaging in coma & related states, sleep anesthesia and epilepsy
- S. Laureys

TOPIC 2 | Sleep and Pulmonology

New pathophysiological concepts, phenotyping and clinical implications in obstructive sleep apnea
- W. Randerath

Definition, epidemiology, clinical presentation & outcome of obesity-related hyperventilation
- W. Randerath

TOPIC 3 | Sleep and Psychiatry

Insomnia and mental health
- D. Riemann

Sleep in patients with mental disorders
- T. Paunio

TOPIC 4 | Sleep and Pediatrics

Treatment of chronic insomnia in children and adolescents with neurodevelopmental disabilities
- O. Bruni

Sleep and circadian rhythmicity in ADHD
- M. Lecendreux

TOPIC 5 | Sleep and Neurology

Sleep and stroke
- C. Bassetti

Effect of sleep on CSF Amyloid-Beta
- B. Lucey

Local sleep and Alzheimer’s disease
- B. Mander

Risk and predictions of dementia and parkinsonism in idiopathic REM sleep behaviour disorder
- A. Iranzo

Treatment approaches for sleep disturbances in Parkinson disease
- A. Vidovic

TOPIC 6 | Advanced Sleep Scoring

Sleep scoring of motor events
- M. Manconi

Sleep scoring or respiratory events
- M. Schmidt

MODULE 10: Internship Sleep Laboratory | 4 ECTS

Practical internship for 2 - 4 weeks

MODULE 11: MAS-Thesis | 15 ECTS

MODULE 12: Transferable Skills | 3 ECTS

Healthcare leadership training
International Faculty

• Antoine Adamantidis (Switzerland)
• Panagiotis Bargiotas (Cyprus)
• Claudio Bassetti (Switzerland), Chair
• Thomas Berger (Switzerland)
• Jan Born (Germany)
• Steven Brown (Switzerland)
• Alexandre Datta (Switzerland)
• Leja Dolenc-Groselj (Slovenia)
• Francesco Fanfulla (Italy)
• Luigi Ferini-Strambi (Italy)
• Russell Foster (UK)

• Flavio Fröhlich (USA)
• Martin Hatzinger (Switzerland)
• Jan Hedner (Sweden)
• Raphaël Heinzer (Switzerland)
• Reto Huber (Switzerland)
• Alex Iranzo (Spain)
• Ulf Kallweit (Germany)
• Ramin Khatami (Switzerland)
• Lyudmila Korostovzeva (Russia)
• Gert-Jan Lammers (Netherlands)
• Steven Laureys (Belgium)
• Claudio Liguori (Italy)
• Pierre-Hervé Luppi (France)
• Mauro Manconi (Switzerland)
• Pierre Maquet (Belgium)
• Marcello Massimini (Italy)
• Dafin Muresanu (Romania)
• Christoph Nissen (Switzerland)
• Allain Pack (USA)
• Teresa Paiva (Portugal)
• Tiina Paunio (Finland)
• Dirk Pevernagie (Belgium)
• Fabio Pizza (Italy)
• Jean-Louis Pépin (France)
• Giuseppe Plazzi (Italy)
• Thomas Pollmächer (Germany)

• Flavio Fröhlich (USA)
• Martin Hatzinger (Switzerland)
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• Claudio Liguori (Italy)

Partner Universities

• Università Vita-Salute San Raffaele, Italy
• Université Grenoble Alpes, France
• University of Ljubljana, Slovenia
• University of Freiburg, Germany
• University of Tübingen, Germany

• University of Witten/Herdecke, Germany
• University Hospital of Liège, Belgium
• University of Ghent, Belgium
• Almazov National Medical Research Center, Russia
• Carol Davila University of Medicine and Pharmacy, Romania

• Iuliu Hațieganu University, Cluj-Napoca, Romania
• FUCS University, Colombia
• University of Cyprus

For further information please contact info@asc.unibe.ch