

Mechanical Ventilation Course

COURSE LENGTH

Estimated time required to complete the course, including final assessment, is 40 hours.

DESCRIPTION

The Mechanical Ventilation Course has been developed by the members of the ESPNIC Respiratory Failure Section. In over 40 sessions, the basics of paediatric mechanical ventilation will be discussed. Because mechanical ventilation is one of the most common interventions in the paediatric intensive care unit, this course is very relevant for all staff involved in the care of the critically ill child.

TOPICS

Part 1: Introduction

- Basics of mechanical ventilation
- Respiratory physiology
- Practical aspects of ventilators: different types, how to calibrate
- Technical aspects of ventilatory support
- Humidification and nebulisation
- VAP care bundles

Part 2: Conventional Modes

- New Taxonomy
- Conventional Control modes- Principles
- Conventional Control modes- Evidence
- Sequence – Principles & Evidence
- Pressure support

Part 3: Other Modes

- HFOV Principles
- HFOV Titration and troubleshooting
- HFOV Evidence
- NAVA: Principles
- NAVA: Titration and Troubleshooting

Part 4: Ventilation in Different Scenarios

- Restrictive pattern: ARDS
- Obstructive pattern: Asthma
- Ventilation in bronchiolitis
- Pneumothorax
- Cardiopulmonary interactions

- Congenital cardiac and pulmonary hypertension
- Mechanical ventilation during ECLS
- Mechanical ventilation in neuromuscular disease
- Mechanical ventilation in transport

Part 5: Assessment and Further Steps

- Oxygenation monitoring
- Blood gas interpretation
- Monitoring of respiratory function: curves
- Monitoring of respiratory function: loops
- Monitoring of VILI: dp, Stress, strain, mechanical power
- Capnography
- Asynchrony
- Complications in mechanical ventilation

Part 6: Liberation from MV

- Weaning : Definition and criteria
- Extubation preparation
- Elective extubation to NIV
- Long term mechanical ventilation

Part 7: Complementary Treatments

- Nitric oxide
- Bronchoscopy
- Prone positioning
- Recruitment manoeuvres
- Lung ultrasound

FORMAT

This course is composed of 4 elements:

1. Video lectures with accompanying PDF of the presentation slides
2. Short multiple-choice assessment after each lecture
3. Final assessment with multiple-choice questions about the lecture content
4. Post-course evaluation survey

The course materials are hosted on the ESPNIC Education portal. If you are not an ESPNIC member, please create an account to register for the course. Access to the course will be limited to the course period, which runs from 18 September 2023 to 18 December 2023. After 18 December 2023, the course will be closed, and it will no longer be possible to access the course materials or take the final assessment.

ASSESSMENT DETAILS

The course concludes with a multiple-choice final assessment. Participants have 3 attempts to take the final assessment. The highest score will be recorded as the final score for the course. A final score of 75% is required to pass the final assessment.

COMPLETION REQUIREMENTS

To successfully complete the course and receive a certificate of completion, participants must watch all lectures, receive a minimum score of 75% on the final assessment, and complete the course evaluation survey within the course opening period (18 September - 18 December 2023). Participants who attempt the final assessment but do not pass will be eligible for a certificate of participation.

IMPORTANT DATES

Registration Closes	18 November 2023 at 23.59 CEST
Final Date to Complete Final Assessment	18 December 2023 at 23.59 CEST
Course Certificates Issued	Week of 18 December 2023

PRICES

ESPNIC Members	EUR 100
Non-ESPNIC Members	EUR 180

TESTIMONIAL

"This course is very useful for those of us who work in the areas of paediatric and neonatal intensive care, as it addresses the specific and updated points regarding the management of our patients, supported by the experience of the instructors and above all based on scientific evidence." – Participant of course in 2021

CONTACT US

For questions about this course, please email us at education@espniceu.

REGISTER

[Register for the course here.](#)

SELF-PACED ONLINE COURSES

ESPNIC self-paced online courses are delivered asynchronously, where participants can learn on their own schedule without a real-time instructor. The course content can be accessed by participants enrolled in the course at any time on the course platform, as long as the course is active and open. Access to self-paced online courses is typically for 3-4 months. Participants must complete all the required elements of the course, including passing the final assessment, within this time in order to receive a certificate of completion.
