



Adult ECMO Training Course Comprehensive



Overview

Hartford Hospital's ECMO program, now spanning more than two decades, is proud to announce its collaboration with the Extracorporeal Life Support Organization to offer a comprehensive Adult ECMO training course in Hartford, Connecticut. This course integrates didactic education, high-fidelity simulation, and hands-on training to equip clinicians with the knowledge and practical skills necessary to effectively manage patients supported with ECMO.

This course fulfills the Step 1 and Step 2 requirements to sit for the ELSO Adult ECMO Certification (E-AEC) examination, providing participants with both foundational education and simulation-based competency training aligned with ELSO standards. The E-AEC certification process is designed to assess clinical knowledge and expertise in ECMO through a standardized examination utilizing NBME-style questions.





Intended audience

- Physicians
- ECMO Specialists
- Nurses
- Respiratory Therapists
- Advanced Practice Providers
- Perfusionists
- Any other healthcare professional who provides direct care for patients supported on extracorporeal membrane oxygenation

Location

The Center for Education, Simulation & Innovation



22 Jefferson Street, Hartford
Connecticut 06106

CESI is an international destination for training, education and medical device development, located right on the Hartford Hospital campus. At nearly 50,000 square feet, CESI is among the largest and best equipped medical simulation centers in the country.

- Bio skills Wet Lab: 5 separate suites comprising sixteen spacious workstations
- Clinical Simulation Lab: Ten dedicated, specialty simulation rooms, each linked to its own control room
- Procedural Task Training: 1,200 square foot arcade
- Meeting space: Up to 3-35 people (each in 7 classrooms)
- Amphitheater: Seats 75 people
- Fully enabled A/V integration throughout CESI
- Live streaming capabilities from numerous clinical sites within Hartford Hospital into CESI classrooms and remote locations

Registration



External \$2500

Internal \$250

Resources

Program Questions

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Registration Questions

Continuinged@hhchealth.org

Hotel and Travel

Hartford HealthCare

Center for Education, Simulation & Innovation

CESI is pleased to offer our customers the following discounted rates for local hotels.



DELAMAR

DELAMAR
1 Memorial Road
West Hartford, CT 06107
(860) 937-2500
Discounted Rate: **\$269**
(Deluxe Room, King or Double)
Promo Code: Hartford Healthcare

The Delamar is located in downtown West Hartford, BlueBack Square, which is approximately 5 miles from CESI. This area offers a variety of fantastic dining options, exceptional shopping, historical attractions, local breweries and outdoor recreation. – includes complimentary valet parking for all overnight guests, complimentary glass of prosecco upon arrival, complimentary breakfast served at Artisan, complimentary bottled water and 24-hr concierge services with access to fitness and spa facilities.



MARRIOTT
Hartford Marriott Downtown
200 Columbus Boulevard
Hartford, CT 06103
(866) 373-9806
Discounted Rate: **\$229**
(Standard King, Double or Queen)
Promo Code: HFA

The Hartford Marriott Downtown is located in the Front Street District of Hartford, overlooking the Connecticut River, which is approximately one mile from CESI. This area is within walking distance to a number of great restaurants, music halls, museums and historical attractions.



SHERATON
1911 1911
Sheraton Hartford South Hotel
100 Capitol Avenue
Rocky Hill, CT 06067
(860) 257-6000
Discounted Rate: **\$139** (Room)
Promo Code: Ask for Hartford Hospital rate;
[Link](#)

Sheraton Hartford Hotel is a suburban-style-Mid-rise hotel located in Rocky Hill, CT, approximately 10 miles from CESI. It is off of I-91 and offers a relaxing escape from the city buzz. – includes free high-speed internet, pool, fitness center, parking. The hotel is also pet friendly.



The Goodwin
The Goodwin
One Haynes Street
Hartford, CT 06103
(860) 246-1881
Discounted Rate: **\$224** (Deluxe King)
Promo Code: Ask for the Hartford Healthcare rate

The Goodwin is located in the heart of downtown Hartford, approximately one mile from CESI. This boutique hotel, built in the late 1800s, offers an architectural blend from eras past and renewed eclectic and cosmopolitan influences. It is surrounded by a variety of fantastic dining options, sports arenas, and theatres.



Residence INN. BY MARRIOTT

Residence Inn Hartford Downtown
942 Main Street
Hartford, CT 06103
(860) 584-5550
Discounted Rate: **\$186**
(Deluxe Room, King or Double)
Promo Code: HJHT

Residence Inn is located in the heart of downtown Hartford, approximately one mile from CESI. The hotel faces Pratt Street, a historic, one-block, quasi-pedestrian mall lined with retail shops and rich architecture. It is also a 7-minute walk to Wadsworth Atheneum Museum of Art. – includes daily breakfast buffet, premium Wi-Fi, discounted self-parking garage \$10 per day with unlimited ins and outs.



DOUBLETREE
by Hilton™
DoubleTree by Hilton Hartford Downtown
315 Trumbull Street
Hartford, CT 06103
(860) 728-5151



Discounted Rate: **\$209** (Standard)
Hilton Client ID: 2975864; [Link](#)

DoubleTree by Hilton Hartford Downtown is a modern high rise hotel in Downtown Hartford, a little over a mile from CESI. It is located in the business and dining district and connected to XL Center area via a skywalk and within walking distance to many restaurants, bars and entertainment venues.



AVON OLD FARMS HOTEL
Avon Old Farms Hotel
279 Avon Mountain Road
Avon, CT 06001
(860) 677-1651

Discounted Rate: **\$139**
Promo Code: Ask for Hartford Healthcare rate

The Avon Old Farms Hotel is a boutique hotel tucked among 20 acres of manicured grounds on scenic Talcott Mountain, approximately 10 miles away from CESI. It began as a 24-unit motel in 1955 and through two expansions has grown into a 160-room luxury hotel in Avon, CT. – includes breakfast, seasonal outdoor pool, parking, Wi-Fi, local shuttle service, 24-hour fitness center, sauna and steam room.

Room rates are subject to change based on seasonal availability and number of rooms requested in the hotel block



Speakers



Didactic Day 1



0730-0830	Introduction to ECMO	<i>Jason A. Gluck, DO</i>
0830-0900	History of ECMO	<i>Matthew Figorito, MS, CCP, LP</i>
0900-0945	ECMO Equipment & Circuit Components	<i>Matthew Figorito, MS, CCP, LP</i>
0945-1000	Break	
1000-1045	ECMO Cannulas and Pressure Drop	<i>Dina Al Rameni, MD</i>
1045-1130	Hemodynamic Monitor & Effects with ECMO	<i>Leonard Texidor, MS, CCP, LP</i>
1130-1215	Physiology of VV and VA ECMO	<i>Jason A. Gluck, DO</i>
1215-1300	Lunch	
1300-1345	Physiology of Diseases Treated with ECMO	<i>Leonard Texidor, MS, CCP, LP</i>
1345-1430	Physiology of Coagulation and ECMO	<i>Ashley Weiss, MLS, RRT-ACCS</i>
1430-1515	LV Unloading and Venting	<i>Jason A. Gluck, DO</i>



Didactic Day 2



0730-0815	Pharmacokinetic Considerations in ECMO	<i>Jennifer Callaghan, PharmD</i>
0815-0900	Weaning VV ECMO	<i>Daryl Connolly, MD</i>
0900-0945	Weaning VA ECMO	<i>Jordan Vorrie, DO</i>
0945-1000	Break	
1000-1045	ECPR	<i>Leonard Texidor, MS, CCP, LP</i>
1045-1130	Complications during ECMO	<i>Sheelagh Pousatis, MD</i>
1130-1215	Mechanical Complications on ECMO	<i>Matthew Figorito, MS, CCP, LP</i>
1215-1300	Lunch	
1300-1345	Transporting with ECMO	<i>Ashley Kovalik, BS, RRT-ACCS</i>
1345-1430	Historical Studies of ECMO	<i>Lynn Adamma Pauls, MD</i>
1430-1515	ECMO Research studies	<i>Lynn Adamma Pauls, MD</i>



Simulation Day



0730-0930	Simulation Drill Overview	<i>Matthew Figorito, MS, CCP, LP</i>
0930-0945	Break	<i>Leonard Texidor, MS, CCP, LP</i>
0945-1115	Simulation EXAM Session 1	<i>Kellie Kelley, BS, RRT-ACCS</i>
1115-1200	Lunch	
1200-1600	Simulation EXAM Session 2	

Course Objectives

- Describe the different modes of ECMO support.
- Discuss global trends in ECMO utilization.
- List the key milestones in the development of ECMO.
- Describe the evolution of the Extracorporeal Life Support Organization.
- Define the main components of an ECMO circuit.
- List circuit monitoring tools.
- Describe the differences in ECMO cannula design.
- List the considerations for selecting the appropriate ECMO cannula.
- Describe the requirements of a blood pump used in ECMO.
- Explain the physics and working principles of a centrifugal pump.
- Describe the structure and function of the membrane lung
- Describe the function of the blender
- List the different pressure zones in an ECMO circuit Discuss the utility of monitoring drainage pressure
- Discuss the utility of monitoring pre- and postmembrane lung pressures
- Describe the utility of the flowmeter
- Describe the function of the heater
- Describe the utility of circuit clamps
- List the differences between percutaneous and open cannulation
- Outline the process of percutaneous cannulation
- Discuss the role of ultrasound in cannulation
- List the different configurational options for VV ECMO
- Review the benefits and limitations of specific configurations
- List the different configurational options for VA ECMO.
- Review benefits and limitations of specific configurations.
- Identify complications of ECMO cannulation
- Describe steps to prevent, recognize, and treat complications
- Describe the normal physiology of oxygen delivery and uptake.
- Describe the key determinants of oxygen uptake in the membrane lung.
- Describe the key determinants of carbon dioxide removal in the membrane lung.
- List the hemodynamic changes that accompany VV ECMO
- Describe the changes in hemodynamic monitoring on VV ECMO
- Discuss the hemodynamic changes that accompany VA ECMO
- Describe the changes in hemodynamic monitoring on VA ECMO
- Define and diagnose drainage insufficiency.
- Troubleshoot drainage insufficiency.
- Define return obstruction and identify its causes. Diagnose and manage return obstruction.
- An overview of respiratory failure
- List standard management strategies for respiratory failure
- Discuss the rationale of VV ECMO in respiratory failure Patient
- List the indications and contraindications for VV ECMO support.
- Describe the steps in initiating a patient onto VV ECMO.
- Describe titration of blood flow and gas flow to achieve adequate support on VV ECMO
- Describe the concept of native lung rest
- Define and identify recirculation.
- Troubleshoot recirculation.
- Describe the process of weaning VV ECMO support.
- List exit strategies for the VV ECMO patient.
- Provide an overview of cardiac failure
- List standard management strategies for cardiac failure

Course Objectives

- Discuss the rationale of VA ECMO in cardiac failure
- List the indications and contraindications for VA ECMO support.
- Describe the steps for initiating a patient
- Describe vasopressor use and blood flow titration for cardiovascular support.
- Describe the concept of native heart rest.
- Describe ventilator management and blood and gas flow titration for pulmonary support.
- Describe the mechanism of LV distention
- List strategies to unload the left ventricle
- Define and identify differential oxygenation.
- Troubleshoot differential oxygenation.
- Describe the process of weaning VA ECMO support
- List exit strategies for the VA ECMO patient
- Identify the role of sedation during ECMO support.
- Discuss the paradigm shift towards awake ECMO.
- Describe the rationale for physiotherapy during ECMO.
- Identify appropriate candidates for physiotherapy on ECMO.
- List anticoagulation strategies on ECMO.
- Discuss anticoagulation monitoring on ECMO.
- Discuss considerations for procedures on the ECMO patient.
- Identify the benefits and limitations of administering RRT via a dialysis catheter.
- Identify the benefits and limitations of administering RRT via the ECMO circuit.
- Identify considerations and logistics for intrahospital transport.
- Identify considerations and logistics for interhospital transport.
- List medical and mechanical complications of ECMO.
- List the etiology and risk factors for neurological complications.
- Discuss the management of ischemic and hemorrhagic strokes.
- List the etiology of bleeding
- Discuss the management of bleeding
- List the etiology of thrombosis
- Discuss the management of thrombosis
- Understand the etiology and risk factors of hemolysis on ECMO
- Discuss how to prevent and manage hemolysis
- List the risk factors for developing limb ischemia on VA ECMO
- Describe how to monitor limb perfusion
- Discuss the prevention and management of limb ischemia
- Discuss the management of cardiac arrest on VV ECMO
- Discuss the management of cardiac arrest on VA ECMO
- Define pump failure.
- Describe how to identify and manage pump failure.
- Define membrane lung dysfunction.
- Describe how to diagnose and manage membrane lung dysfunction.
- Define air embolism and its determinants.
- Define strategies to prevent air embolism.
- Describe how to detect and manage air embolism.
- Identify determinants of circuit disruption
- Recognize early signs of circuit disruption
- Manage circuit disruption
- Manage an accidental decannulation
- List the indications for coming off ECMO emergently
- List the steps required to come off and back on ECMO emergently
- List the historical ECMO studies and identify their limitations.
- Interpret the results and limitations of the main cohort studies on VV ECMO.
- Interpret the results and limitations of the CESAR and the EOLIA trials.
- Interpret the results and limitations of the main cohort studies on VA ECMO.
- Describe the results of trials comparing ventricular assist devices to ECMO