

PROGRAM GUIDE

DIPLOMA IN LUNG POCUS

A Certification Program in
Neonatal Lung POCUS



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PROGRAM OVERVIEW

The **Diploma in Lung POCUS** is a Six-month structured training program in neonatal lung point-of-care ultrasound designed to build competency and a basic understanding of performing, interpreting, and reporting neonatal lung ultrasound for clinical decision-making.

This program is delivered by the **Canadian Neonatal POCUS Society - CNPOCUS®**, a non-profit organization supported by, **Neopeds Academy®** and **POCUSVISION®**





ABOUT US



CNPOCUS® is the parent organization responsible for the design, development, and implementation of the POCUS Diploma and training curriculum for international clinicians involved in neonatal care. Established in 2018 as POCUSNEO® and rebranded as CNPOCUS.ORG® in 2025, as a non-profit organization with the leadership of Canadian neonatologists Dr. Muzafar Gani Abdul Wahab (McMaster University) and Dr. Yasser Elsayed (University of Manitoba).

Canadian Neonatal POCUS Society as an educational organization for health care providers, collaborates with over 60 world-renowned faculty members specializing in neonatology and point-of-care ultrasound (POCUS).

CNPOCUS® has a well-structured governance framework, provides education on physiological understanding, troubleshooting and appropriate clinical decision-making on clinical emergencies using bedside ultrasound tools as well as transforming physiology oriented care into clinical practice. CNPOCUS is governed by our Board of Directors and supported by an Advisory Steering Committee composed of globally recognized leaders in neonatology and neonatal POCUS. The CNPOCUS® Educational Committee oversees the entire POCUS training curriculum, ensuring periodic governance to monitor progress and uphold the quality of education and training.



Neopeds Academy®, a digital services provider and trademark of Hybridpro Events Inc.® (Canada), has been contracted by CNPOCUS® to host and digitally deliver CNPOCUS® course modules, remote educational and mentorship sessions, online MCQ-based skills assessment and Exit exams for registered CNPOCUS® members.



POCUSVISION®, our digital simulation services provider, delivers virtual POCUS simulation training for registered CNPOCUS® members through their online POCUS simulator.



Dr. Muzafar Gani Abdul Wahab

Co-Program Director & Associate Professor

Division of Neonatology, Department of Pediatrics
McMaster University, Hamilton ON, Canada

Dr. Gani is an Associate Professor of Pediatrics at McMaster University, Canada, with extensive training in Pediatrics and Neonatology from Madurai Medical College, Manipal University, and McMaster University. He is a passionate educator and innovator, utilizing advanced medical and digital technologies for teaching and clinical practice.

Dr. Gani has served as Program Director for both the Neonatal-Perinatal Medicine and Targeted Neonatal Echocardiography Fellowship Programs at McMaster, shaping future healthcare professionals. He is a founding co-chair of CNPOCUS® organization dedicated to educating global healthcare professionals in neonatal and pediatric critical care. With over 50 international educational sessions to his credit, including workshops and courses, Dr. Gani is a recognized leader committed to advancing infant and child healthcare worldwide.



Dr. Yasser Elsayed, Co-Chair

Co-Program Director & Professor

Section of Neonatology, Department of Pediatrics
University of Manitoba, Winnipeg MB, Canada

Dr. Yasser Elsayed is a Professor of Pediatrics and a Staff Neonatologist at the University of Manitoba. He is also an active researcher at the Children's Hospital Research Institute of Manitoba. Dr. Elsayed is recognized for founding and directing the Integrated Hemodynamics Program and the Point-of-Care Ultrasound (POCUS) initiative in Winnipeg. He serves as the Director of the Hemodynamics Program at the University of Manitoba and co-chairs the CNPOCUS® organization.

Over the past five years, he has led more than 50 workshops worldwide, sharing his expertise in hemodynamics and physiology-oriented clinical practices. A prolific author, accomplished teacher, and passionate presenter, Dr. Elsayed has gained recognition for his programs and techniques both nationally and internationally. In 2024, he was honored with the Emerging Leader in Neonatology Award by the Canadian Pediatric Society.



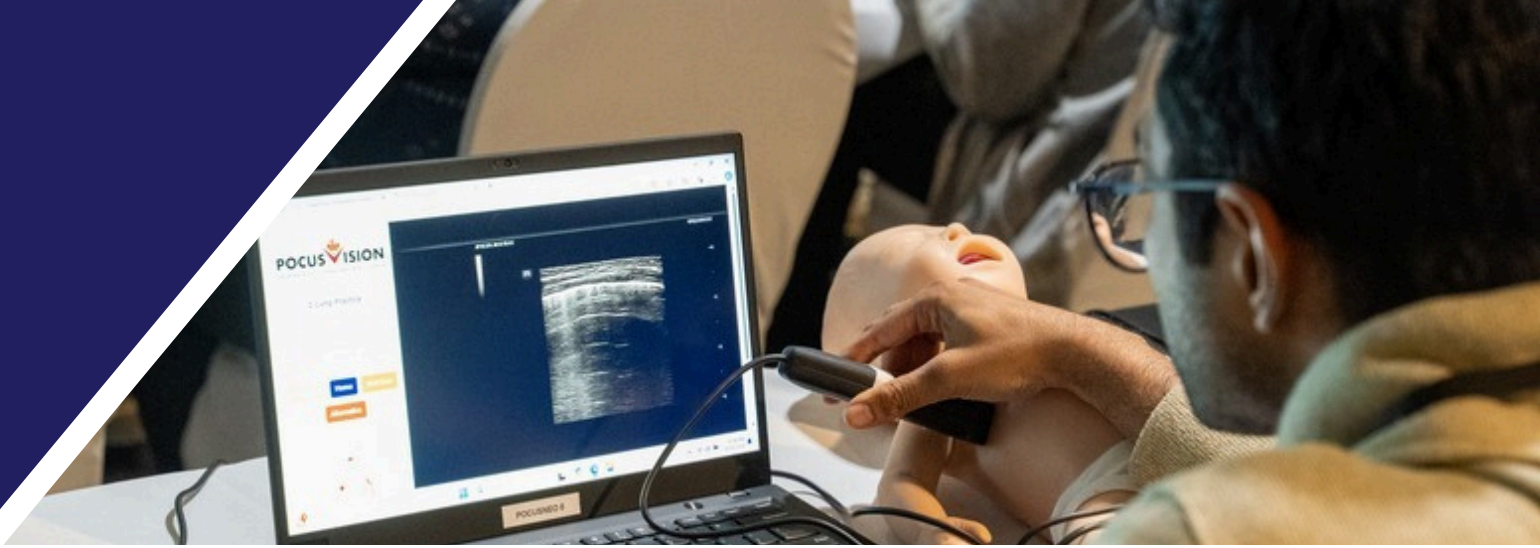
CURRICULUM STRUCTURE

Duration: 6 Months

Key Components of Training:

- Lung Ultrasound & Physiology Coaching
- Lung Ultrasound Tutorship
- Smart Educator - AI assisted Learning
- Lung Ultrasound Reporting
- Case-Based Teaching Sessions
- Mentor Moderated Live Teachings
- Individualized Guidance & Feedback
- Resources & Reading Materials
- Monthly Competency Assessments
- Access to AI Neonatal Lung US Simulator
- Diploma Certification with Transcript





DETAILED CURRICULUM



CLICK HERE

FOR MONTHWISE DETAILED CURRICULUM IN WEB APP

I. Eligibility and Prerequisites

All candidates must meet the following prerequisites:

- The program is offered in **English only**. Must have language proficiency in English.
- The program is open to any **neonatal care practitioner**, who is currently actively practising in Neonatology/Pediatrics.
- The applicant must have **access to an echo/ultrasound machine** in their unit.

II. Lung Ultrasound Coaching Modules

Once enrolled, you will have access to our **online educational portal**, where you can learn the basics of Lung POCUS.

The course modules are delivered online as **structured teaching modules** with **interactive videos, slides, and quizzes**. These modules will cover foundational knowledge and clinical applications in Neonatal Lung POCUS.



The following topics will be covered with these learning modules:

- LLM 1.1 The basic physics of ultrasound (Month 1) LLM 1.2 The language of ultrasound (Month 1) LLM 1.3 Precision of LUS interpretation (Month 1) LLM 1.4 Basic neonatal respiratory physiology of respiratory distress (Month 1) LLM 2.1 Scoring and reporting (Month 2) LLM 2.2 Pathophysiology and Phenotypes of TTN (Month 2) LLM 2.3 Pathophysiology and Phenotypes of RDS (Month 2) LLM 2.4 Surfactant guided by ultrasound (Month 2) LLM 3.1 Assessment and quantifying pneumothorax (Month 3) LLM 3.2 Phenotypes of BPD (Month 3) LLM 3.3 Pleural effusion Assessment and tapping (Month 3) LLM 4.1 Assessment of heterogeneous lung diseases (Month 4) LLM 4.2 Assessment of the diaphragm (Month 4) LLM 4.3 Applications of color and power Doppler (Month 4) LLM 5.1 Airway obstruction physiology (Month 5) LLM 5.2 Assessment of vocal cords and upper airway (Month 5) LLM 5.3 Assessment of the airway and ETT (Month 5) LLM 6.1 Assessment of LUS in heart diseases (Month 6) LLM 6.2 Cystic lung disease, CHD-related respiratory failure (Month 6) LLM 6.3 Respiratory physiology and weaning strategies - Exam-style cases (Month 6)

III. Core Lung Ultrasound Tutoring Sessions

These modules contain recorded videos of how to perform echocardiography:

- LUT 1.1 LUS Tutor: Ultrasound Machine Settings and Adjustments for LUS (Month 1)
- LUT 2.1 LUS Tutor: LUS scoring and reporting (Month 2)
- LUT 3.1. LUS Tutor: Lung recruitment strategies guided by ultrasound (Month 3)
- LUT 4.1 LUS Tutor: Ultrasound assessment of diaphragm (Month 4)
- LUT 5.1. LUS Tutor: Assessment of Upper Airway and ETT position (Month 5)
- LUT 6.1 LUS Tutor: Doppler applications in Lung Ultrasound (Month 6)

IV. Smart Educator on Lung Ultrasound

These modules contain recorded videos of how to interpret Lung Ultrasound:

- LSE 1.1 Smart educator: Basics of lung ultrasound (Month 1)
- LSE 2.1 Smart educator: Acute respiratory conditions (Normal, TTN, RDS (Month 2)
- LSE 3.1 Smart educator: Pneumothorax and BPD phenotypes (Month 3)
- LSE 4.1 Smart educator: Pleural effusion, heterogeneous lung disease (Month 4)
- LSE 4.2 Smart educator: Assessment of diaphragm and Doppler applications (Month 4)
- LSE 5.1 Smart educator: Upper Airway and ETT assessment (Month 5)
- LSE 6.1 Smart educator: Cystic lung disease, CHD-related lung pathology (Month 6)
- LSE 6.2 Smart educator: OSCE-style cases across all disease phenotypes (Month 6)

V. Lung Ultrasound & Reporting

These modules contain recorded videos of how to report Lung Ultrasound:

- LUR 1.1 LUS Reporting: Module 1, Reporting Structure (Month 1)
- LUR 2.1 LUS Reporting: Module 2, Surfactant guidance (Month 2)
- LUR 3.1 LUS Reporting: Module 3, Routine Assessment in CLD (Month 3)
- LUR 4.1 LUS Reporting: Module 4, Diaphragm (Month 4)
- LUR 5.1 LUS Reporting: Module 5, ETT, Upper Airway (Month 5)
- LUR 6.1 LUS Reporting: Module 6, Extubation Readiness (Month 6)



VI. Case-based Teaching

These modules contain case-based teaching on selected pathophysiology:

- LCB 1.1 Case-based teaching: Normal (Month 1)
- LCB 2.1 Case-based teaching: TTN (Month 2)
- LCB 2.2 Case-based teaching: RDS (Month 2)
- LCB 3.1 Case-based teaching: Pneumothorax (Month 3)
- LCB 3.2 Case-based teaching: Chronic Lung Disease (Month 3)
- LCB 3.3 Case-based teaching: Pleural Effusion (Month 3)
- LCB 4.1 Case-based teaching: Pneumonia (Month 4)
- LCB 4.2 Case-based teaching: Diaphragmatic paresis (Month 4)
- LCB 5.1 Case-based teaching: ETT Assessment (Month 5)
- LCB 5.2 Case-based teaching: Vocal Cord Palsy (Month 5)
- LCB 6.1 Case-based teaching: Cystic Lung Disease (Month 6)
- LCB 6.2 Case-based teaching: Lung in Heart Disease (Month 6)

VII. Mentorship Meetings with Teaching Sessions

These modules contain Mentor teaching (live) on selected pathophysiology every month:

- LMT 1.1 Mentor teaching: Orientation to Lung Ultrasound (Month 1)
- LMT 2.1 Mentor teaching: Normal, TTN, RDS (Month 2)
- LMT 2.2 Mentor teaching: LUS Scoring & Reporting (Month 2)
- LMT 3.1 Mentor teaching: Pleural Effusion & Pneumothorax (Month 4)
- LMT 4.1 Mentor teaching: Heterogenous Lung Diseases (Month 5)
- LMT 5.1 Mentor teaching: ETT, Vocal Cord & Diaphragm Assessment (Month 6)
- LMT 6.1 Course Review and Orientation on Final Exit Exam

VIII. Training with POCUSVISION® Simulator



These modules contain digital simulation training with variety of clinical cases:

- LPV 2.1 Digital simulator with real cases: Normal, TTN, RDS (Month 2)
- LPV 3.1 Digital simulator with real cases: CLD, Pneumothorax, Pleural Effusion (Month 3)
- LPV 4.1 Digital simulator with real cases: Pneumonia, Pulmonary Hemorrhage (Month 4)
- LPV 5.1 Digital simulator with real cases: Diaphragmatic Hernia (Month 5)

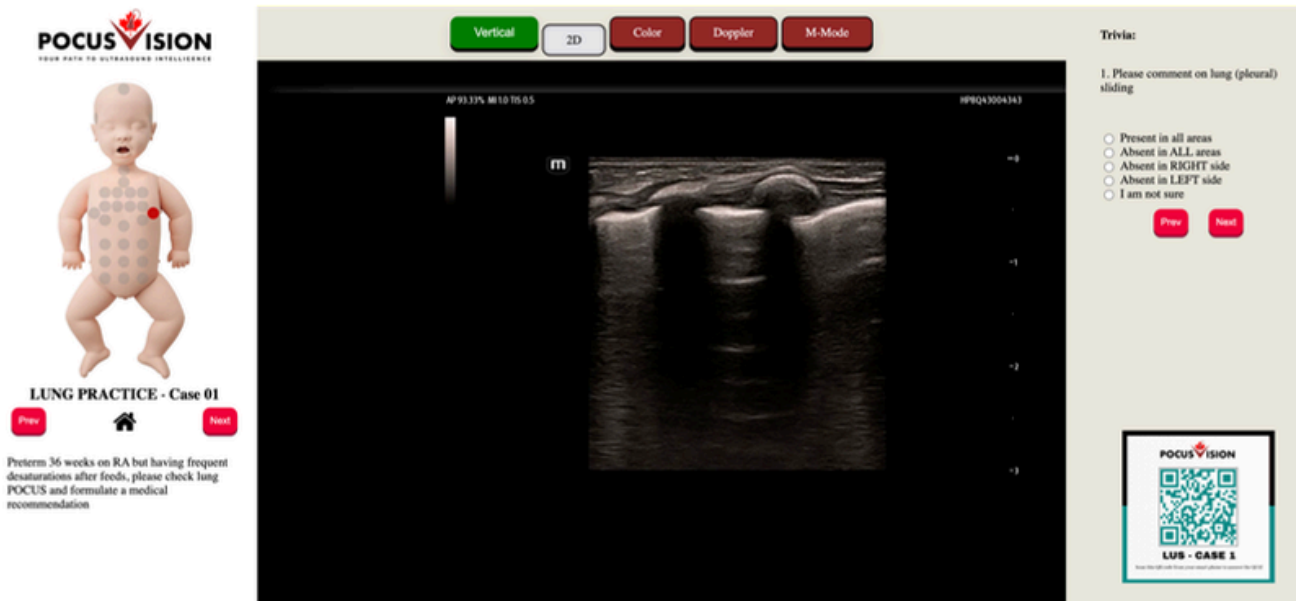


Figure 1: Screenshot from Lung POCUS practice on POCUSVISION®

IX. Resources and Reading Materials

These module contain complete resources, published articles and guideline on Lung Ultrasound:

- LRM 1.1 Reading materials: LUS Basics (Month 1)
- LRM 2.1 Reading materials: LUS scoring, TTN, RDS, Surfactant therapy (Month 2)
- LRM 3.1 Reading materials: Lung recruitment strategies (Month 3)
- LRM 3.2 Reading materials: Pleural effusion, Pneumothorax, BPD (Month 3)
- LRM 4.1 Reading materials: Diaphragm assessment (Month 4)
- LRM 5.1 Reading materials: Airway Assessment (Month 5)
- LRM 6.1 Reading materials: Doppler applications (Month 6)

X. Resources and Reading Materials

These module contain complete resources, published articles and guideline on Lung Ultrasound:



- LRM 1.1 Reading materials: LUS Basics (Month 1)
- LRM 2.1 Reading materials: LUS scoring, TTN, RDS, Surfactant therapy (Month 2)
- LRM 3.1 Reading materials: Lung recruitment strategies (Month 3)
- LRM 3.2 Reading materials: Pleural effusion, Pneumothorax, BPD (Month 3)
- LRM 4.1 Reading materials: Diaphragm assessment (Month 4)
- LRM 5.1 Reading materials: Airway Assessment (Month 5)
- LRM 6.1 Reading materials: Doppler applications (Month 6)

XI. Optional Hands-on POCUS Workshops

Recommended for optimizing supervised hands-on training:

- CNPOCUS® conducts periodic in-person POCUS workshops in Canada and selected centres globally. It is strongly recommended that the participant attend one of the workshops during their training period (registration cost for such workshops is pay-as-you-go and is not included in the training fee). If participants, as an institution or as a private group, would like to organize a workshop in their local country/institution, CNPOCUS® will arrange it. The local organizing team will bear the cost of such a private workshop. More information will be provided upon request.

Format: In-person workshop, with expert faculty guidance.

Location: Global Designated Centers supported by CNPOCUS®

Typical Lung Ultrasound Workshop Agenda:

Day 1: Basics of Neonatal Lung Ultrasound

- Machine setup, probe handling.
- Scanning modes, basic measurements
- Acquisition of core Lung Ultrasound Views
- LUS Image optimization techniques.
- Basics of Lung Ultrasound Interpretation
- Image/clip archiving, interpretation and reporting skills

Day 2: Clinical Applications and Advanced Practice

- Application of Lung Ultrasound in Clinical Practice
- Ultrasound-guided upper airway and ETT assessments
- LUS hands-on sessions with ultrasound machines and phantom models
- LUS hands-on practical with hi-fidelity simulators
- Review of simulated cases, Q&A, final discussions, feedback, and certification

XII. Practicing POCUS and Logbook

Participants will maintain a logbook of all scans performed and advised to document:



- Clinical indications.
- The Lung Ultrasound Views and clips acquired.
- Key findings and their implications.

Our faculty will review the logbook for:

- Completeness.
- Technical, interpretation and reporting proficiency.
- Progress over time.

Practice Steps:

- The participant must start saving all ultrasounds performed by them in the NICU at their local computer system without patient identifiers. The participant must submit the case history and US clips relevant to the case to the CNPOCUS® online case evaluation portal. The faculty mentor will provide feedback on technical acquisition, interpretation, and reporting skills and guidance to further improve their skills. A feedback document is provided through their registered email with a PDF attachment of all relevant details to be saved by the participant as a logbook. This is done through our sophisticated online portal provided by Jotform® and governed by the CNPOCUS® faculty team. The participant and their local institution are responsible for de-identifying the patient information before saving it to their local system or uploading it to the CNPOCUS® teaching portal for feedback and guidance. In this regard, the participant MUST adhere to their local institutional policies on patient privacy. CNPOCUS® will not be responsible legally for any breach of patient privacy for failure to protect by the participant

XIII. Exit Exam Eligibility

Participants will have access to mock exams during the last month of the program to get simulated practice for the final exam.

Final Exit Exam Eligibility

- The participants must submit a minimum of 15 scans to their mentors and get score of minimum 4 out of 5 in at least 15 case submissions. Candidates who did not submit the required minimum cases will not be allowed sit in the final exam. Candidates who were still not attaining the competency of 4/5 in technical and interpretive skills will be required to submit additional cases to demonstrate their competency attained. The CNPOCUS® faculty mentor's decision is final regarding the competency attained and eligibility to take the exit exam. Appeal process for unsuccessful candidates: An appeal request can be submitted to the CNPOCUS® educational committee if the candidate is in disagreement with the faculty mentor's evaluation and final assessment.

- CNPOCUS® Educational Steering Committee will evaluate case by case and issue their final decision by email to the candidate. This decision is final, and no further escalation is possible.

Final Exit Exam

- The Final exit exam will be conducted online for those who are eligible (Please refer to the eligibility requirement given above). The online assessment exam would include up to 100 multiple-choice questions, with single right-answer questions and equal weightage for all questions with no negative markings. Securing 75% is the cutoff for passing this final exit exam. Participants who pass the exam will receive the Diploma in Neonatal Lung POCUS from CNPOCUS®

XIV. Certification and Transcript

Final Diploma Certificate:

- Successful candidates will automatically receive their diploma certificate through their digital learning platform administered by CNPOCUS® and Neopeds Academy. All certificates will carry an embedded validation QR code, allowing online verification of the participant's details and the authenticity of issuance. Participants are requested to download and save it securely by themselves. The issuance of the lost certificate could be requested by the candidate to the CNPOCUS® team officially from their registered email ID. It will be sent out digitally within 1-2 weeks of a request by email.

Printed Diploma Certificate:

- Candidates who wish to receive a printed diploma certificate (printed and embossed with CNPOCUS® Emblem) could be prepared at their individual request and will be sent to their home address on record. Printing, administrative and courier charges must be paid by the requesting candidate.

Transcript of the full training program:

- The CNPOCUS® could prepare a full training transcript, which will be provided to you by email free of cost. Successful candidates must submit their diploma certificate by email to support@cnpocus.org to receive their transcript document. If a printed transcript is required, the candidate must pay a fee similar to the printed diploma certificate request given above upon request by email. Processing time: 2-3 weeks.



XV. Additional Instructions

- **The Program Length is strictly 6 months.** The participant is not permitted to request any extension for any personal or institutional reasons. CNPOCUS® and Neopeds Academy® are not responsible for candidates who are unable to achieve their competency within this stipulated training period. If a Candidate cannot complete the set number of cases within the set program duration or does not achieve the competency set by CNPOCUS® within the stipulated training period, will be labelled as unsuccessful and will be terminated at the program semester end date. The candidate would then be required to re-enrol in the upcoming program by paying the registration fee again as a fresh applicant. Pending availability, a placement cannot be guaranteed.

XVI. Opportunities for Maintenance of Skills

Maintenance of Certification

- Participants must keep practising POCUS at their respective institutions. CNPOCUS® offers a Virtual Skills Maintenance Program through POCUSVISION® for a yearly subscription fee to get access to our Online POCUS simulator, with challenging real-time cases with guidance on approach and precision management. Participants could participate in the Case Discussion Forum on the CNPOCUS® website to exchange their experiences and insights on challenging cases they faced in their practice and seek guidance from faculty relevant to their cases. Participants who excel in their maintenance of skills program will be eligible for consideration as future tutors for their local workshops as faculty members.



SAMPLE TRANSCRIPT

Provided to all trainees at the successful completion of their Diploma.

Participant Information

Name: [Participant Name]

Program: Diploma in Neonatal Lung Point-of-Care Ultrasound

Duration: 6 Months

Completion Date: [Completion Date]

Certificate ID: [Unique ID]

Academic Record

Core Modules:

1. Introduction to Point-of-Care Ultrasound (POCUS) - Completed
2. Neonatal Lung Ultrasound Basics - Completed
3. Lung Ultrasound Scoring - Completed
4. Assessment of Lung Conditions - Completed
5. Evaluation of Upper Airway and ETT Position - Completed
6. Advanced Diagnostic Applications - Completed

Practical Training:

The participant successfully completed the 2-day hands-on workshop [Dates of Workshop], including:

1. Basics of Neonatal Lung Ultrasound:
 - Machine setup, probe handling, and core lung ultrasound views.
2. Advanced Clinical Applications:
 - Functional assessment, ventilation monitoring, and pleural fluid evaluation.

Case Submissions:

The participant submitted 20+ cases [Actual number of cases submitted] as part of the program, graded on:

- Image Acquisition
- Interpretation Skills
- Reporting Skills

Performance: Achieved Grade 4 out of 5 in at least 15 cases.



Logbook:

The participant maintained a detailed logbook of ultrasound scans, demonstrating:

- Documentation of clinical indications, findings, and lung ultrasound views.
- Progressive improvement and competency.

Remote Mentorship:

Completed regular mentorship sessions with experienced faculty, which included:

- Feedback on submitted cases.
- Guidance for technical skill improvement.
- Image acquisition and reporting enhancement.

Monthly Remote Sessions:

The participant attended six virtual sessions on:

1. Advanced case interpretation and troubleshooting.
2. Clinical correlation and decision-making.
3. Peer case discussions with expert feedback.
4. Preparation for the final exam.

Final Exam:

The participant passed the final exit exam, including:

1. Theoretical Examination - Scored [Score%]
2. Practical Case-based Online Examination - Graded Competent
3. Case-Based Virtual Simulation Assessment - Graded Competent

Outcome: Certification granted.

Certification Awarded

The participant has been awarded the Diploma in Neonatal Lung POCUS on [Completion Date], recognizing expertise in bedside basic neonatal lung ultrasound.

Authorized Signatures

Program Director
CNPOCUS®



PROGRAM FEE STRUCTURE

Registration Fee: USD 3999

(All fees in US Dollars only)

- **This fee includes:** Registration, Course Module Access, Case Submission and Review Portal Access, Faculty Mentorships, Examination Portal Access and Certification and Transcript.
- **Payment Terms:** Training fee for all participants must be paid at least 3 months before the planned start date of the training program

Payment Options

- **CREDIT CARD:** Through Stripe Gateway. The candidate must bear the cost of credit card and bank fees which is up to 6% in addition.
- **WIRE TRANSFER:** By bank to bank wire transfer. The candidate must include the banking charges charged to the sender's account

Payment details will be provided upon the successful acceptance of your application into the program.

[**CLICK HERE**](#)
[**TO APPLY**](#)





GET IN TOUCH

Please feel free to reach out to us if you need any additional information or clarifications.

CONTACT US



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