

INSTITUTE OF ADVANCED NURSING STUDIES

Post-registration Certificate Course in Cardiothoracic Surgical Nursing 2024/25

(02/09/2024 – 26/05/2025)

Organised by Institute of Advanced Nursing Studies and

Conducted by Hong Kong West Cluster

*The Nursing Council of Hong Kong has approved the Hospital Authority as a provider of
Continuing Nursing Education (CNE) since 1 December 2005*

PROGRAM INFORMATION

PROGRAM AIM(S)

1. To develop the competence of registered nurses in cardiac and thoracic surgical nursing in order to ensure a high standard of specialized care for patients in cardiothoracic surgical nursing
2. To develop nurses for taking up the expanded and extended roles in cardiothoracic surgical nursing
3. To prepare nurse for future development as cardiothoracic nurse specialist

PROGRAM INTENDED LEARNING OUTCOMES

Upon completion of the program, the participants should be able to:

1. Integrate and apply skills and knowledge in advanced health assessment to detect the problems and needs of cardiothoracic patients
2. Apply evidence-based knowledge to construct and evaluate holistic nursing care for cardiothoracic patients
3. Evaluate the therapeutic interventions and clinical outcomes for patients requiring complex cardiothoracic investigations and operations
4. Organize advanced patient care management for pre and post cardiothoracic patients with critical and unstable condition
5. Empower patients and care givers with the knowledge and skills to adapt health status change and promote overall health
6. Demonstrate the competency in managing advanced life saving and life supporting medical devices to achieve optimal patient outcomes
7. Establish therapeutic partnership with patients and multidisciplinary team to facilitate treatment process
8. Initiate and conduct an evidence-based quality improvement program of cardiothoracic surgical nursing

TARGET PARTICIPANTS

1. Nurses in RN rank
2. Priority will be given to those who are currently working in Cardiothoracic / Cardiac / Coronary Care Units (CCU) in HA hospitals / institutions.
3. Nurses who have previously enrolled in PRCC without successful completion may be given low priority
4. Participant who successfully completed the Fundamental Course in Cardiothoracic Surgical Nursing in 2022/23 will be eligible to apply for direct entry to Module II.

ENTRY REQUIREMENTS

1. Registered nurses with valid practicing certificate issued by the Nursing Council of Hong Kong.
2. Nurses having not less than 24 months post-registration experience.

EXIT REQUIREMENTS

Successfully enrolled participants are required to complete the following e-Learning course(s) **from eLC platform or classroom-based training course(s) on or before 23/05/2025 23:59.**

Please upload the soft copy of certificate / e-cert of the captioned course(s) to eLC+ platform **on or before 23/05/2025 23:59.**

| No. | Title of e-Learning course / classroom training course |
|-----|---|
| 1 | a classroom training programme on 'Electrocardiography (ECG)' with a duration of NOT less than 8 hours |
| 2 | American Heart Association Advanced Cardiovascular Life Support Provider Course (ACLS-P) (for participants working in Adult units), or American Heart Association Pediatric Advanced Life Support Provider Course (PALS-P) (for participants working in Paediatric units) organized by accredited American Heart Association (AHA) Training Centre |

CLASS SIZE

25

LANGUAGE MEDIUM

Both English and Cantonese will be used in class. All written assignments and assessments will be in English.

PROGRAM DURATION

02/09/2024 – 26/05/2025

PROGRAM DESIGN

This program consists of theoretical input (Module I & Module II) and clinical practicum.

A. Theoretical input

Module I – Fundamental Module

Online Training Module

The participants are required to complete all the following e-Learning courses in the **eLC+ platform** **on or before 29/09/2024 23:59**

| No. | Topic | Speaker |
|-----|---|--|
| 0 | Overview of Fundamental Module (to be completed prior to other topics) | Mr WONG Man Tat M(N), NSD, HAHO |
| 1 | Applied Anatomy and Physiology of Heart | Dr Wing Shun NG, Hon CONS(CTS), QEH |
| 2 | Applied Anatomy and Physiology of Respiratory System | Dr. Candice LAU CONS(Anaes), HKCH |
| 3 | Nursing Assessment of Cardiovascular System | Ms CHAU Mei Yi NC (MED/Cardiac Care), QMH, HKWC |
| 4 | Cardiac Monitoring | Ms. WONG Shuk Lee APN(CTSD), QMH |
| 5 | Ambulatory ECG & BP Monitoring, Exercise ECG Test | Dr Yui Ming LAM CONS(MED), QMH |
| 6 | Interpretation of CXR, Lung Function Test and CT Thorax | Dr Ki Kwong LI CON(CTS), QEH |
| 7 | Nurse's Role in Cardiac Investigations | Ms. CHOW So Man APN(CTS), QEH |
| 8 | Pathology & Pathophysiology of Myocardial Ischemia, Infarction, Conduction System | Dr. Frankie TAM CONS(MED), QMH |
| 9 | Practical Pharmacology in Cardiology | Ms. Selina LEUNG Clinical Pharmacist, QMH |
| 10 | Principle of Heart Surgery | Dr. Aliss Tsz Ching CHANG Resident (Cardio), SUR, PWH |
| 11 | Myasthenia Gravis & Thymus Disease | Dr. Peter S Y YU RS/ SURG/ PWH |
| 12 | Pleurodesis | Dr. Peter S Y YU RS/ SURG/ PWH |
| 13 | Video-assisted thoracic surgery (VATS) vs thoracotomy surgery vs robotic surgery: Mediastinoscopy, Airway Stenting, RFA Therapy, Lobectomy, Pneumonectomy, NUSS | Dr Ivan Chi Hin SIU Resident (Cardio), SUR, PWH |
| 14 | Invasive workshop for lung surgery: Bronchoscopy, EBUS, Tissue Biopsy and Fine Needle Aspiration | Dr Ki Kwong LI CON(CTS), QEH |
| 15 | Pre & Post-Operative Care of Common Thoracic Surgery (including Wound management, Management of chest drain & pigtail chest drain) | Ms. Shadow Nga Wai LO APN (SUR), PWH |

Module II – Specialty-specific Module

| Day | Date | Time | Activity | Venue / online |
|--------|------------|---------------|----------------------------|----------------|
| Day 1 | 30/09/2024 | 09:00 – 17:30 | Study Day | Zoom |
| Day 2 | 07/10/2024 | 09:00 – 17:30 | Study Day | Zoom |
| Day 3 | 14/10/2024 | 09:00 – 17:30 | Study Day | Zoom |
| Day 4 | 21/10/2024 | 09:00 – 17:30 | Study Day | Zoom |
| Day 5 | 28/10/2024 | 09:00 – 17:30 | Study Day | Zoom |
| Day 6 | 04/11/2024 | 09:00 – 17:30 | Study Day | Zoom |
| Day 7 | 11/11/2024 | 09:00 – 17:30 | Study Day | Zoom |
| Day 8 | 18/11/2024 | 09:00 – 17:30 | Study Day | Zoom |
| Day 9 | 25/11/2024 | 09:00 – 17:30 | Study Day | Zoom |
| Day 10 | 02/12/2024 | 09:00 – 17:30 | Study Day | Zoom |
| Day 11 | 09/12/2024 | 09:00 – 17:30 | Study Day | Zoom |
| Day 12 | 24/02/2025 | 09:00 – 17:30 | Group Project Presentation | QMH |
| Day 13 | 26/05/2025 | 09:00 – 13:15 | Exam + Evaluation | QMH |

B. Clinical Practicum: 8 Weeks

30/09/2024 – 11/05/2025

2 weeks at General Ward: CTS ward in PWH/QEH/QMH / PAM ward in HKCH

6 weeks at ICU: CICU in QEH / CTSD ICU in QMH / PICU in HKCH

no Clinical Practicum in the following weeks

Christmas 23/12/2024 – 29/12/2024

Lunar New Year 27/01/2025 – 02/02/2025

Good Friday and Holy Saturday 14/04/2025 – 20/04/2025

Other Public holidays: 7 days 2024: 01/10, 11/10

2025: 01/01, 04/04, 21/04, 01/05, 05/05

TRAINING CONTENT

A. **Applied Anatomy/Physiology and Pathophysiology**

1. Applied anatomy and physiology of heart
2. Applied anatomy and physiology of respiratory system
3. Pathology and pathophysiology of myocardial ischaemia, infarction, conduction system

B. **Investigation & Monitoring of Cardiac Conditions**

1. Cardiac monitoring
2. Hemodynamic monitoring
3. Invasive cardiac investigation: cardiac catheterization, coronary angiography and ventriculography, endomyocardial biopsy
4. Interpretation of blood gas & acid base balance
5. Interpretation of CXR, lung function test & CT thorax
6. Ambulatory ECG & BP monitoring, exercise ECG test
7. Nursing assessment of cardiovascular system
8. Nurse's role in Cardiac Investigations

C. Acute Cardiac Disorder, Etiology and Management

1. Heart failure & cardiogenic shock
2. Cardiac arrhythmias: tachycardia, bradycardia, conduction abnormality and others
3. Cardiac implantable electric device: ICD, biventricular pacing
4. Hypertension and crisis
5. Dissecting aorta and aneurysm of aorta, intramural haematoma
6. Cardiomyopathies, myocarditis, pericarditis, infective endocarditis, cardiac tamponade and pulmonary embolism
7. Nursing management in Acute Coronary Syndrome
8. Management of coronary artery disease: stable angina, acute coronary syndrome, acute myocardial infarction
9. Device Therapy: Cardiac Pacing

D. Open Heart Surgery

1. Principles of heart surgery
2. Cardio-pulmonary bypass
3. Heart surgery for valvular disease
4. Heart surgery for coronary heart disease therapy
5. Congenital heart disease in adult and surgical interventions
6. Cardiac transplantation and arrhythmia surgery: RFA
7. New trend of GA in cardiac/ lung surgery, and post-operative management
8. Pre & post-operative management of patient undergoing heart surgery

E. Thoracic Component

1. *Nursing management of patient with mechanical ventilation*
2. *Bronchoscopy, EBUS, tissue biopsy, and fine needle aspiration*
3. *Video-assisted thoracic surgery (VATS) vs thoracotomy*
4. *Mediastinoscopy, airway stenting, RFA therapy*
5. *Lobectomy, pneumonectomy*
6. *Myasthenia Gravis and Thymus Disease, NUSS*
7. *Lung cancer: diagnosis and management*
8. *Pleurodesis*
9. *Pre & post-operative care of common thoracic surgery*
10. *Wound management, management of chest drain and pigtail chest drain*

F. Acute Respiratory / Renal Disorder: Etiology & Management

1. Respiratory Failure and Mechanical ventilation
2. Renal physiology: acute renal failure and treatment, principles of dialysis and continuous renal replacement therapy (CRRT)
3. Nursing management of patient with dialytic therapy / CRRT

G. Therapeutic Measures

1. Left Ventricular Assist Device and ECMO
2. Nursing care of patient with ECMO
3. Nursing management of patient with IABP
4. Nurses' role in cardio-pulmonary resuscitation and defibrillation, drug for resuscitation
5. Role of transplant coordinator
6. Investigation and nursing management of heart transplantation
7. Pre-operative and post-operative nursing management of lung transplantation
8. Management of massive bleeding & Fluid therapy and electrolyte balance
9. Use of vasoactive drug
10. Practical pharmacology in cardiology
11. Nursing perspective in diet therapy for patient with cardiovascular disease
12. Nursing Management of patient with Left Ventricular Assist Device
13. Management of pulmonary hypertension & NO therapy

H. Post Cardiothoracic Surgery (CTS), ICU Care and Psychological support

1. Physiotherapy in heart surgery and lung surgery and cardiac pulmonary and rehabilitation
2. Coronary risk stratification, modification and secondary prevention
3. Psychological reaction and support of cardiac patient, stress management

I. Infection Control

1. Infection control in CTS/ICU

J. Special Topics

1. Physiology of pain and pain management after heart surgery
2. Pain management over nurse's aspect
3. Principle of patient education and empowerment
4. Development of nurse clinic
5. Transportation of critically ill patient
6. Neurological observation and ICP monitoring and care

K. Pediatric Cardiology Lectures

1. Cyanotic congenital heart disease
2. Acyanotic congenital heart disease
3. Interventional therapy in paediatric cardiology
4. Heart surgery for congenital heart disease
5. Surgery for complex congenital heart disease
6. Pre and post-operative nursing management of paediatric cardiac surgery
7. Paediatric cardiac emergency and CPR
8. Cardiac arrhythmias in paediatric patients
9. Fluid and electrolytes management in paediatric patients
10. Nursing management of infant with respiratory problems
11. Nursing management of children with congenital heart disease
12. Paediatric thoracic disease
13. Fetal Heart Development and Fetal Circulation
14. Transition care of patients with congenital heart disease and grown-up congenital heart disease
15. Acquired Heart Diseases in Children
16. Genetic of Congenital Heart Diseases
17. Assessment for neonatal cardiac patient by applying S.T.A.B.L.E. framework

TEACHING & LEARNING STRATEGIES

1. Lectures and demonstrations
2. Group discussion
3. Tutorials
4. Group projects (*including oral presentation*)
5. Case studies
6. Clinical teaching & supervised clinical practice
7. Simulation training
8. Self-directed learning

ASSESSMENT

| Components | Date / submission deadline | Weighting |
|--|--|-----------|
| A. Written Assessment | | |
| 1. Written Examination | 26/05/2025 | 60% |
| 2. Group Project | | 20% |
| i. Written Report | 14/02/2025 | (12%) |
| ii. Oral Presentation | 24/02/2025 | (8%) |
| 3. Patient Care Study | 2 weeks after clinical practicum completed | 20% |
| B. Continuing Clinical Assessment | On the last day of Clinical Practicum | 100% |

The participants are required to attain 50% or above in each component of the written assessment and the continuing clinical assessment.

AWARD OF CERTIFICATE

An electronic Certificate of Achievement will be awarded to those participants who have completed all parts of the program and passed all assessments.

CNE POINTS

This program is equivalent to 264.5 CNE points.

| | | |
|-------------------------|-------------|-------------------|
| Theoretical Input: | 88 hours | (88 CNE points) |
| Online Training Module: | 20.75 hours | (20.5 CNE points) |
| Clinical Practicum: | 8 weeks | (156 CNE points) |

PROGRAM DIRECTOR

Mr. WONG Man Tat
Tel: 2300 7736

Manager(N), IANS, HAHO
Email: wmt052@ha.org.hk

CO-PROGRAM DIRECTOR

Ms. Sylvia WAN
Tel: 2255 1518

NC(Cardiothoracic Surgery), CTSD, QMH, HKWC
Email: wanhys@ha.org.hk

Mr. WONG Kin Hei
Tel: 2255 5431

APN(CND), QMH
Email: wkh573@ha.org.hk

ENQUIRY

Mr. TANG Ching Eddie
Tel: 2255 3382

EA I (CND), QMH, HKWC
Email: tc315@ha.org.hk

TIMETABLE (TBC)