

# NATIONAL INSTITUTE OF CARDIOVASCULAR DISEASES

IN COLLABORATION WITH

**UNIVERSITY OF KARACHI**



# DIPLOMA IN CARDIOLOGY

PROSPECTUS

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# NATIONAL INSTITUTE OF CARDIOVASCULAR DISEASES (NICVD)

Established in 1963, the National Institute of Cardiovascular Diseases (NICVD) is Pakistan's premier tertiary care facility dedicated exclusively to cardiovascular health. Located in Karachi, NICVD holds the distinction of being the first specialized cardiac care institute in South Asia and serves as the flagship center for cardiology in the country. Recognized by the Pakistan Medical and Dental Council (PMDC), College of Physicians and Surgeons Pakistan (CPSP), University of Karachi, and Dow University of Health Sciences, NICVD functions as a Postgraduate Teaching Institute, offering advanced training programs for physicians, nurses, and allied health professionals.

NICVD provides comprehensive cardiac services including:

- Cardiac Emergency and Critical Care
- Interventional and Non-Interventional Cardiology
- Cardiac Surgery
- Pediatric Cardiology & Surgery
- Cardiac Rehabilitation and Prevention
- Diagnostic Imaging and Laboratory Services
- Preventive Cardiology
- Stroke Intervention

The Department of Medical Education at NICVD plays a pivotal role in advancing clinical training, academic development, and research capacity among healthcare professionals. It is responsible for:

- Designing and implementing structured postgraduate curricula in cardiology and allied disciplines
- Conducting faculty development programs, workshops, and CME activities
- Overseeing clinical rotations, assessments, and academic audits
- Facilitating interdisciplinary collaboration and integration of evidence-based practices into teaching
- Supporting research mentorship, publication guidance, and ethical review processes

The department aligns its educational strategies with national and international standards, fostering a culture of continuous improvement, reflective practice, and academic excellence. Its commitment to structured learning and professional growth makes it an essential partner in the delivery of the Postgraduate Diploma in Cardiology.

# UNIVERSITY OF KARACHI

The University of Karachi, established in 1951, is one of Pakistan's leading public research universities, renowned for its academic excellence, multidisciplinary scholarship, and commitment to societal advancement. Situated on a sprawling campus of over 1,200 acres in the metropolitan city of Karachi, the university serves as a dynamic center for higher education, hosting more than 41,000 students and offering a diverse range of programs across nine faculties, 53 departments, and 19 research institutes.

The university is recognized by the Higher Education Commission of Pakistan (HEC) and maintains affiliations with key professional bodies including the Pakistan Medical and Dental Council (PMDC) and the Pharmacy Council of Pakistan, ensuring that its academic offerings meet rigorous national and international standards.

The Postgraduate Diploma in Cardiology is embedded within the university's broader commitment to advancing medical education and clinical excellence. The program is designed to equip healthcare professionals with specialized knowledge in cardiovascular medicine, integrating theoretical instruction with hands-on clinical training. Through partnerships with leading hospitals and medical institutions, students gain exposure to contemporary cardiology practices, diagnostic modalities, and patient management strategies.

Faculty members include experienced clinicians, researchers, and educators who guide students through evidence-based learning, ethical medical practice, and research methodology. The program emphasizes critical thinking, interdisciplinary collaboration, and continuous professional development.



## **PROF. TAHIR SAGHIR**

MBBS, FCPS (CARD), FSCAI, FACC

**Director Clinical Research**

**Executive Director**

**Chairman Academic Faculty**

# **Message from the Executive Director**

## **Professor Tahir Saghir**

Executive Director, NICVD

It is with great pride and purpose that I welcome you to the Postgraduate Diploma in Cardiology at the National Institute of Cardiovascular Diseases (NICVD). As Pakistan's leading cardiac care institution, NICVD remains steadfast in its mission to provide state-of-the-art, compassionate, and entirely free cardiac treatment to patients across the country.

This diploma program represents a vital step in strengthening our national healthcare capacity. By equipping physicians with advanced clinical knowledge and practical skills in cardiology, we aim to extend quality cardiac care to underserved regions and peripheral hospitals. Our graduates are not only trained to manage common and emergency cardiac conditions but also to serve as ethical, evidence-based practitioners in their communities.

NICVD's Department of Medical Education plays a central role in shaping this academic journey. Through structured learning, supervised clinical rotations, and exposure to cutting-edge interventions, trainees are mentored by some of the most experienced cardiologists and cardiac surgeons in the region. Our educational philosophy emphasizes clinical excellence, research integrity, and service to humanity.

I am confident that this program will empower you to make a meaningful impact in the field of cardiovascular medicine. I encourage you to embrace this opportunity with dedication and a spirit of lifelong learning. Together, we can advance the frontiers of cardiac care and bring healing to countless lives.



## **DR. KANWAL FATIMA AAMIR**

M.B.B.S, M.C.P.S, F.C.P.S

**Associate Professor**

**Interventional Cardiologist**

**Director Medical Education**

# **Message from the Director Medical Education**

## **Dr. Kanwal Fatima Aamir**

Director, Department of Medical  
Education, NICVD

It is my privilege to welcome you to the Postgraduate Diploma in Cardiology at the National Institute of Cardiovascular Diseases (NICVD). This program has been meticulously designed to address the growing need for structured cardiology training across Pakistan, particularly in peripheral and underserved healthcare settings.

At NICVD, we believe that medical education must be competency-driven, ethically grounded, and clinically relevant. Our Department of Medical Education is committed to ensuring that every trainee receives a balanced blend of theoretical instruction, supervised clinical exposure, and research mentorship. The curriculum is aligned with national standards and international best practices, enabling participants to develop diagnostic acumen, procedural confidence, and a deep understanding of cardiovascular pathophysiology.

As Director, I take pride in the collaborative spirit that defines our teaching faculty. Our consultants, fellows, and academic staff are dedicated to nurturing the next generation of cardiologists through interactive learning, formative assessments, and continuous feedback. We encourage reflective practice, critical thinking, and a patient-centered approach to care.

I urge each trainee to engage fully with the opportunities this program offers — not only to enhance your clinical capabilities but also to contribute meaningfully to the communities you will serve. Together, we can elevate the standard of cardiac care and uphold the values of excellence, compassion, and integrity that NICVD stands for.



## **Dr. Ali Ammar**

MBB, FCPS, EDSI

**Interventional Cardiologist and  
Stroke Interventionist,  
Assistant Professor of Cardiology**

# **Message from the Program Incharge**

## **Dr. Ali Ammar**

Program Incharge, Diploma in  
Cardiology, NICVD

Cardiology is a dynamic and demanding specialty—requiring precision, resilience, and swift clinical decision-making. Despite its critical importance, there remains a significant gap in the availability of competent intermediate-level cardiologists across various regions of Pakistan. As the national flagship institution for cardiovascular care, NICVD has proudly trained hundreds of high-caliber cardiologists who continue to serve with excellence.

The Diploma in Cardiology is one of NICVD's distinguished postgraduate programs, designed to produce clinically proficient and academically sound intermediate cardiologists. This program adopts a rigorous academic structure, combining a yearly examination model with bimonthly modular assessments, ensuring continuous learning and comprehensive coverage of the curriculum. Each academic year is divided into six modules, integrating theoretical instruction with hands-on clinical rotations across diverse departments.

To enhance diagnostic acumen and clinical competence, candidates undergo 24 structured rotations annually, each accompanied by a monthly feedback mechanism. This system facilitates personalized faculty interaction, helping identify and address individual learning gaps.

The integrity of any academic program lies in its examination standards. In alignment with international benchmarks, the final assessment comprises Multiple Choice Questions (MCQs) and clinical evaluations through TOACS, supplemented by short and long case presentations. NICVD, in collaboration with the University of Karachi, is committed to conducting examinations in a timely manner, safeguarding the valuable time and progression of our candidates.

With a robust patient influx, multidisciplinary departmental exposure, and a team of highly qualified faculty, this program fosters an environment of interactive and immersive learning. We extend our best wishes to all candidates embarking on this journey and look forward to their contributions as future leaders in cardiology.

Wishing you a successful and impactful career in cardiovascular medicine.

# DIPLOMA IN CARDIOLOGY

## **INTRODUCTION**

Diploma in cardiology is a postgraduate course of two years in the cardiology. The training will be conducted in National Institute of Cardiovascular Diseases (NICVD). The Diploma of cardiology will be awarded by the University of Karachi after successful completion of course. The successful candidate will be eligible to write his specialty in as follows:

## **DURATION OF THE PROGRAMME**

The duration of Diploma in cardiology program will be two (2) years.

## **DISTRIBUTION OF THE STUDY PERIOD**

The two-year program in diploma in cardiology will be divided into two years. At the end of each year there will be examination. (Appendix – I)

## **PROGRAM INCHARGE**

Dr. Ali Ammar, Assistant Professor, NICVD, will act as Program Incharge.

## **PROGRAM COORDINATION TEAM:**

This will help in smooth running of program and will deal day to day issues and will consist of the NICVD.

**Dr. Haroon Ishaq**  
Academic Coordinator

**Dr. Ghulam Shabbir Shar**  
Administrative Coordinator

**Dr. Shazia Rasheed**  
Cardiac Imaging Coordinator

**Dr. Zubair Mumtaz**  
EP Coordinator

**Dr. Irum Tareen**  
Cardiac Surgery Coordinator

**Dr. Hussain Bux Korejo**  
Paeds Cardiology Coordinator

**Dr. Mir Fahad Hussain Talpur**  
Modular Coordinator

**Dr. Waqar Khan**  
Emergency Department Coordinator

**Dr. Aziz ur Rehman**  
Critical Care Coordinator

**Dr. Mukesh Kumar**  
QC Coordinator

## **PROGRAM ADVISORY BOARD:**

**Dr. Imran Hameed**

**Dr. Ahmed Salman Ghouri**

**Dr. Roohi Ilyas**

## **PROGRAM FACULTY:**

NICVD Cardiology, Interventional Cardiology, Surgical, Cardiac Emergency, Electrophysiology, Paeds Cardiology and Cardiac Imaging faculty will act as faculty of Diploma in cardiology program. (APPENDIX II)

# COURSE CODE DIP-CARD-KU 2026

## PROGRAM SPECIFICATION DIPLOMA IN CARDIOLOGY (DIC)

|  |  |   |                  |                     |
|--|--|---|------------------|---------------------|
| <b>COURSE TITLE</b>                          | <b>DIPLOMA IN CARDIOLOGY (DIC)</b>   |   |                  |                     |
| <b>COURSE DURATION</b>                       | Two years  |   |                  |                     |
| <b>TYPE OF STUDY</b>                         | Full-time course   |   |                  |                     |
| <b>STUDY SYSTEM</b>                          | Annual system with 2-monthly modular exam.   |   |                  |                     |
| <b>TOTAL CREDIT HOURS</b>                    | Total credit hours of the program: 72  |   |                  |                     |
| <b>DEGREE-AWARDING INSTITUTION</b>           | University of Karachi.   |   |                  |                     |
| <b>TEACHING INSTITUTION</b>                  | National Institute of Cardiovascular Diseases.   |   |                  |                     |
| <b>ADMISSION CRITERIA</b>                    | MBBS + One-year house job. Registered with PMDC  |   |                  |                     |
| <b>CREDIT HOURS &amp; STUDY HOURS DETAIL</b> | Credit hours distribution<br>Year-I (36 credit hours)<br>Year-II (36 credit hours)   |   |                  |                     |
| <b>Year/ Part</b>                            | <b>Course Code (Modules)</b>   | <b>Subject</b>                                      | <b>Weightage</b> | <b>Credit Hours</b> |
| <b>Year- 1</b>                               | DIC-APP-701  | Applied Anatomy and Pathophysiology of the Heart    | 11               | 04                  |
|  | DIC-CAD-702  | Coronary Artery Disease                             | 30               | 10                  |
|  | DIC-CDI-703  | Cardiac Diagnostics                                 | 15               | 06                  |
|  | DIC-ART-704  | Arrhythmias   | 14               | 05                  |
|  | DIC-VAL-705  | Valvular Disorders                                  | 19               | 07                  |
|  | DIC-PAP-706  | Pericardial and Aorta/peripheral vascular disease   | 11               | 04                  |
| <b>Total</b>                                 |  |   | <b>100</b>       | <b>36</b>           |
| <b>Year- 2</b>                               | DIC-CON-801  | Congenital Disorders                                | 19               | 07                  |
|  | DIC-HTN-802  | Hypertension  | 15               | 05                  |
|  | DIC-CHF-803  | Congestive heart failure & Cardiomyopathies         | 28               | 10                  |
|  | DIC-NCD-804  | Non-Cardiac Disease in Cardiac Patients             | 16               | 06                  |
|  | DIC-CVD-805  | Cardiovascular Disease and Disorder of other organs | 11               | 04                  |
|  | DIC-CD-806   | Cardiac Pharmacology                                | 11               | 04                  |
| <b>Total</b>                                 |  |   | <b>100</b>       | <b>36</b>           |
| <b>STUDY HOURS DISTRIBUTION PER YEAR</b>     | Study weeks per years = 46 weeks, Examination = 2 weeks.<br>Working days = 6 days/week.<br>8:00 am – 5:00 pm with weekly call duties as per rotational roster and institutional policies.<br>Sunday as per roster.   |   |                  |                     |
| <b>TEACHING HOURS</b>                        | <b>Academic sessions:</b> Lectures, mortality meeting, journal club, workshops, Academic rounds and other Academic activities.<br><b>Clinical teaching:</b> Supervised OPD, Emergencies, Ward, Echocardiography, ETT, Thallium SPECT, Cath Lab, ICU, CCU, Peds Cardiology, Cardiac Surgery, Electrophysiology. |   |                  |                     |
| <b>DISTRIBUTION</b>                          | Clinical learning on patients, tutorials / self-directed studies/research/ Seminar/conference.   |   |                  |                     |
| <b>PASSING CRITERIA</b>                      | <ul style="list-style-type: none"> <li>• Year-1 and Year-2 Marks added to CGPA</li> <li>• Exit Examination marked as Pass/Fail</li> <li>• Exit Examination passing marks are 60%</li> </ul>  |   |                  |                     |

\* Details of rotations and syllabus are in APPENDIX III and IV.

## **OBJECTIVES OF THE PROGRAM**

The Diploma in Cardiology program is designed to address the critical shortage of trained cardiologists at the district and primary cardiac care levels across Pakistan. This intermediate-level postgraduate program aims to develop competent professionals equipped to deliver high-quality cardiac care especially at district and primary care level.

## **CORE COMPETENCIES OF PROGRAM:**

By the end of the training, candidates will have acquired the following core competencies:

### **A. Clinical Expertise**

- Conduct comprehensive clinical evaluations of patients admitted to cardiology departments.
- Formulate and execute appropriate diagnostic strategies and interpret investigative findings accurately.
- Gain proficiency in modern diagnostic modalities, including both invasive and non-invasive procedures such as: Electrocardiography (ECG), Radiological imaging and interpretation, echocardiography with functional cardiac assessment, Exercise Tolerance Testing (ETT) and Holter monitoring under supervision.
- Develop familiarity with coronary angiography, cardiac catheterization, and pacemaker implantation (temporary and permanent), with the ability to independently interpret these procedures and integrate findings into clinical decision-making.
- Obtain brief exposure to radionuclide cardiac imaging and cardiac surgical services to enhance understanding of perioperative and postoperative cardiac care.
- Collaborate effectively with multidisciplinary teams to deliver comprehensive patient management.

### **B. Educational Leadership**

- Facilitate training and educational activities for medical and paramedical staff, sharing expertise in areas aligned with personal specialization and acquired skills.

### **C. Administrative Competence**

- Demonstrate the ability to oversee and manage operations within a cardiology care unit, ensuring quality and efficiency in service delivery.

### **D. Research Capability**

- Understand and apply scientific methodologies, including the principles of reliability, validity, and hypothesis testing.
- Engage in research initiatives within the field of adult cardiology.
- Conduct literature reviews and present research findings in a scientifically rigorous format suitable for publication.

### **E. Community Engagement**

- Provide guidance to the community on cardiovascular health promotion and disease prevention strategies.

## **ADMISSION PROCEDURE**

All admissions to the program shall be conducted in a vacancy-based, transparent, and strictly merit-driven manner from all over Pakistan, held biannually in December and June.

### **1. Eligibility & Selection Process**

- Selection will be based on an Entry Test followed by an Interview with the NICVD Faculty.
- The written Entry Test shall consist of 50 Best Choice Questions (BCQs) assessing basic knowledge in Medicine and the critical care aspects of Adult Cardiology.

### **2. Assessment & Final Decision**

- Candidates shortlisted from the written examination will be invited for an interview.
- The admission result declared by the NICVD shall be final and binding.

### **3. Enrolment & Reporting**

- Successful candidates will be formally enrolled with the University of Karachi.
- Admitted trainees shall report to their designated supervisor at NICVD to commence training.

## **FEE STRUCTURE**

- **Admission Fee:** PKR35,000/- (Non-refundable).
- **Enrollment Fee:** As determined by the University of Karachi
- **Examination Fee:** As determined by the University of Karachi

## **Candidate Disciplinary Rules:**

According to the relevant regulations of the NICVD and UoK.

## **EXAMINATIONS**

All enrolled candidates must successfully complete the following assessments:

### **A. Yearly Examinations**

- Conducted at the end of each academic year in the form of BCQs.
- Candidates who fail any subject may retake the examination after 3 months of result.
- The detailed structure of yearly examinations will be determined by the Examination Department.

### **B. Final Exit Exam:**

- Candidates become eligible for the Final Examination only after passing both Year I and Year II examinations with a minimum score of 60% in each.
- It will consist of 2 parts; TOACS and clinical examination.

## **I. TOACS (Task-Oriented Assessment of Clinical Skills)**

- **Static Stations (20 total):**

- 12 × ECG interpretation 12 stations
- 3 × X-ray interpretation
- 1 × Thallium scan interpretation
- 1 × Exercise Tolerance Test (ETT)
- 1 × Pacemaker-related assessment
- 1 × Modular assessment of 1st year
- 1 × Modular assessment of 2nd year

- **Live Stations (10 total):**

- 5 × Echocardiography
- 5 × Angiography

## **II. Clinical Examinations:**

- **Long Case (01):**

- Duration: 60 minutes
- 30 minutes for history-taking and clinical examination
- 30 minutes for discussion and case analysis

- **Short Cases (02):**

- Duration per case: 10 minutes
- 5 minutes for examination
- 5 minutes for discussion

For detailed rotation structure, refer to Appendix III.

# Appendix- I

## SCHEME OF THE PROGRAM

|                                      |   |   |              |           |           |                |         |         |         |          |         |              |         |                    |         |                 |         |                 |         |                   |         |
|--------------------------------------|---|---|--------------|-----------|-----------|----------------|---------|---------|---------|----------|---------|--------------|---------|--------------------|---------|-----------------|---------|-----------------|---------|-------------------|---------|
| <b>Education and Training</b>        | <b>Year - I</b>   | <ul style="list-style-type: none"> <li>• Introduction to the program</li> <li>• One month module research methodology and biostatistics, computer skills, communication and presentation skills and ethics. (online distant learning)</li> <li>• BLS &amp; ACLS workshops</li> </ul> <p><b>Course Work</b></p> <p><b>Clinical Rotations</b></p> <table> <tr> <td>General Ward</td> <td>6 Months</td> </tr> <tr> <td>Emergency</td> <td>2 Months</td> </tr> <tr> <td>CCU</td> <td>1 Month</td> </tr> <tr> <td>Echo</td> <td>2 Months</td> </tr> <tr> <td>ETT</td> <td>1 Month</td> </tr> </table> <p style="text-align: right;"><b>1-YEAR STUDY PERIOD</b></p> | General Ward | 6 Months  | Emergency | 2 Months       | CCU     | 1 Month | Echo    | 2 Months | ETT     | 1 Month      |         |                    |         |                 |         |                 |         |                   |         |
|                                      | General Ward  | 6 Months  |              |           |           |                |         |         |         |          |         |              |         |                    |         |                 |         |                 |         |                   |         |
| Emergency                            | 2 Months  |   |              |           |           |                |         |         |         |          |         |              |         |                    |         |                 |         |                 |         |                   |         |
| CCU                                  | 1 Month   |   |              |           |           |                |         |         |         |          |         |              |         |                    |         |                 |         |                 |         |                   |         |
| Echo                                 | 2 Months  |   |              |           |           |                |         |         |         |          |         |              |         |                    |         |                 |         |                 |         |                   |         |
| ETT                                  | 1 Month   |   |              |           |           |                |         |         |         |          |         |              |         |                    |         |                 |         |                 |         |                   |         |
| <b>Year - II</b>                     | <p><b>Course Work</b></p> <p><b>Clinical Rotations</b></p> <table> <tr> <td>General Ward</td> <td>3 Months</td> </tr> <tr> <td>Emergency</td> <td>2 Months</td> </tr> <tr> <td>Step down Unit</td> <td>1 Month</td> </tr> <tr> <td>CCU</td> <td>1 Month</td> </tr> <tr> <td>Echo</td> <td>1 Month</td> </tr> <tr> <td>PEADS CARDIO</td> <td>1 Month</td> </tr> <tr> <td>Nuclear Cardiology</td> <td>15 Days</td> </tr> <tr> <td>Cardiac Surgery</td> <td>15 Days</td> </tr> <tr> <td>Cath &amp; CT Angio</td> <td>1 Month</td> </tr> <tr> <td>Electrophysiology</td> <td>1 Month</td> </tr> </table> <p style="text-align: right;"><b>1-YEAR STUDY PERIOD</b></p> | General Ward  | 3 Months     | Emergency | 2 Months  | Step down Unit | 1 Month | CCU     | 1 Month | Echo     | 1 Month | PEADS CARDIO | 1 Month | Nuclear Cardiology | 15 Days | Cardiac Surgery | 15 Days | Cath & CT Angio | 1 Month | Electrophysiology | 1 Month |
| General Ward                         | 3 Months  |   |              |           |           |                |         |         |         |          |         |              |         |                    |         |                 |         |                 |         |                   |         |
| Emergency                            | 2 Months  |   |              |           |           |                |         |         |         |          |         |              |         |                    |         |                 |         |                 |         |                   |         |
| Step down Unit                       | 1 Month   |   |              |           |           |                |         |         |         |          |         |              |         |                    |         |                 |         |                 |         |                   |         |
| CCU                                  | 1 Month   |   |              |           |           |                |         |         |         |          |         |              |         |                    |         |                 |         |                 |         |                   |         |
| Echo                                 | 1 Month   |   |              |           |           |                |         |         |         |          |         |              |         |                    |         |                 |         |                 |         |                   |         |
| PEADS CARDIO                         | 1 Month   |   |              |           |           |                |         |         |         |          |         |              |         |                    |         |                 |         |                 |         |                   |         |
| Nuclear Cardiology                   | 15 Days   |   |              |           |           |                |         |         |         |          |         |              |         |                    |         |                 |         |                 |         |                   |         |
| Cardiac Surgery                      | 15 Days   |   |              |           |           |                |         |         |         |          |         |              |         |                    |         |                 |         |                 |         |                   |         |
| Cath & CT Angio                      | 1 Month   |   |              |           |           |                |         |         |         |          |         |              |         |                    |         |                 |         |                 |         |                   |         |
| Electrophysiology                    | 1 Month   |   |              |           |           |                |         |         |         |          |         |              |         |                    |         |                 |         |                 |         |                   |         |
| <b>Examinations</b>                  | <p>Examination at the end of each study year consist of 100 BCQ. Candidate will pass each course code year separately with 60% marks.</p> <p>Comprehension exit examination consisting of both Clinical (long and short cases) and TOACS components. Passing marks will be 60%.</p>   |   |              |           |           |                |         |         |         |          |         |              |         |                    |         |                 |         |                 |         |                   |         |
| <b>Internal Evaluation (monthly)</b> | <p>Monthly evaluation at the end of each rotation on 24/25<sup>th</sup> date. One chance will be given to failures &amp; retake will be on 30/31<sup>st</sup> date.</p> <p>In case of non-clearance rotation will be repeated at the end of 2 year training.</p>  |   |              |           |           |                |         |         |         |          |         |              |         |                    |         |                 |         |                 |         |                   |         |
| <b>Modular Test (Bimonthly)</b>      | <p>Each year have six modules.</p> <p>Every candidate has to appear in Bimonthly modular exam.</p> <p>Average of 1<sup>st</sup> year &amp; second year modular exam score will be added in TOACS stations of final exit exam. Each year average will be equal to one TOACS station.</p>   |   |              |           |           |                |         |         |         |          |         |              |         |                    |         |                 |         |                 |         |                   |         |

## Appendix- II

### ACADEMIC FACULTY OF DIPLOMA IN CARDIOLOGY:

| Faculty & Departments                      | S #                 | Name | Designation                        |                     |
|--|---------------------|------|------------------------------------|---------------------|
| <b>Faculty of Adult<br/>Cardiology</b>     | <b>West Ward</b>    | 1    | Professor Tahir Saghir <b>(ED)</b> | Professor           |
|  |                     | 2    | Dr. Khalid Naseeb                  | Associate Professor |
|  |                     | 3    | Dr. Bashir Ahmed                   | Associate Professor |
|  |                     | 4    | Dr. Muhammad Nauman Khan           | Associate Professor |
|  |                     | 5    | Dr. Ghulam Shabbir                 | Assistant Professor |
|  |                     | 6    | Dr. Ayaz Mir                       | Assistant Professor |
|  |                     | 7    | Dr. Hina Sohail                    | Assistant Professor |
|  |                     | 8    | Dr. Muhammad Asim Shaikh           | Senior Registrar    |
|  |                     | 9    | Dr. Aslam Latif                    | Senior Registrar    |
|  | <b>East Ward</b>    | 1    | Professor Abdul Hakeem             | Professor           |
|  |                     | 2    | Dr. Kanwal Fatima Aamir            | Associate Professor |
|  |                     | 3    | Dr. Kamran Ahmed Khan              | Associate Professor |
|  |                     | 4    | Dr. Jehangir Ali Shah              | Associate Professor |
|  |                     | 5    | Dr. Zafar Iqbal                    | Assistant Professor |
|  |                     | 6    | Dr. Haroon Ishaque                 | Assistant Professor |
|  |                     | 7    | Dr. Faiza Farooq                   | Assistant Professor |
|  |                     | 8    | Dr. Fayaz Ali                      | Senior Registrar    |
|  |                     | 9    | Dr. Mehboob Hussain                | Senior Registrar    |
| <b>Faculty of<br/>Adult<br/>Cardiology</b> | <b>North Ward</b>   | 1    | Professor Fawad Farooq             | Professor           |
|  |                     | 2    | Dr. Naveedullah Khan               | Associate Professor |
|  |                     | 3    | Dr. Naeem Mengal                   | Associate Professor |
|  |                     | 4    | Dr. Gulzar Ali                     | Associate Professor |
|  |                     | 5    | Dr. Mukesh Kumar                   | Assistant Professor |
|  |                     | 6    | Dr. Atif Sher Muhammad             | Assistant Professor |
|  |                     | 7    | Dr. Qamar Zaman Qaimkhani          | Senior Registrar    |
|  |                     | 8    | Dr. Mir Fahad Hussain Talpur       | Senior Registrar    |
|  | <b>South Ward</b>   | 1    | Professor Jawaid Akbar Sial        | Professor           |
|  |                     | 2    | Dr. Khalid Bhatti                  | Associate Professor |
|  |                     | 3    | Dr. Rajesh Kumar                   | Associate Professor |
|  |                     | 4    | Dr. Mahesh Kumar                   | Associate Professor |
|  |                     | 5    | Dr. Abdul Hakeem                   | Assistant Professor |
|  |                     | 6    | Dr. Syed Ali Ammar                 | Assistant Professor |
|  |                     | 7    | Dr. Asim Ali                       | Senior Registrar    |
|  |                     | 8    | Dr. Ahsan Ali Lakho                | Senior Registrar    |
|  | <b>Private Ward</b> | 1    | Dr. Amjad Ali                      | Senior Registrar    |
|  | <b>Cath Lab</b>     | 1    | Dr. Bilal Ahmed                    | Senior Registrar    |
|  | <b>CCU-II</b>       | 1    | Dr. Fawad Ali Siddiqui             | Senior Registrar    |

## Appendix- II

| Faculty & Departments                     |                  | S #                         | Name                          | Designation         |
|---|------------------|-----------------------------|-------------------------------|---------------------|
| <b>Faculty of Cardiac Imaging</b>         | <b>Unit - I</b>  | 1                           | Professor Sabha Bhatti        | Professor           |
|   |                  | 2                           | Dr. Sumyia Gurmani            | Assistant Professor |
|   |                  | 3                           | Dr. Muhammad Faizan Siddiqui  | Senior Registrar    |
|   |                  | 4                           | Dr. Wajid Hussain             | Senior Registrar    |
|   |                  | 5                           | Dr. Samir Rehman              | Senior Registrar    |
| <b>Faculty of Cardiac Imaging</b>         | <b>Unit - II</b> | 1                           | Dr. Parveen Akhter            | Associate Professor |
|   |                  | 2                           | Dr. Saba Hussain              | Assistant Professor |
|   |                  | 3                           | Dr. Maryam Naz                | Assistant Professor |
|   |                  | 4                           | Dr. Shazia Rasheed            | Assistant Professor |
|   |                  | 5                           | Dr. Khawaja Muhammad Aarij    | Senior Registrar    |
| <b>Faculty of Cardiac Surgery (Adult)</b> | <b>Unit - I</b>  | 1                           | Professor Suhayb Ahmed Khushk | Professor           |
|   |                  | 2                           | Dr. Ali Raza Mangi            | Associate Professor |
|   |                  | 3                           | Dr. Syed Taimoor Asif         | Associate Professor |
|   |                  | 4                           | Dr. Irum Tareen               | Assistant Professor |
|   |                  | 5                           | Dr. Hassan Mushtaq            | Senior Registrar    |
|   |                  | 6                           | Dr. M. Ishaq Khan             | Senior Registrar    |
|   |                  | 7                           | Dr. Haseeb Ur Rehman          | Senior Registrar    |
|   | <b>Unit - II</b> | 1                           | Professor M. Asad Bilal Awan  | Professor           |
|   |                  | 2                           | Dr. Asif Raza Rathore         | Assistant Professor |
|   |                  | 3                           | Dr. Syed Minhaj Hussain       | Assistant Professor |
|   |                  | 4                           | Dr. Khuzaima Tariq            | Assistant Professor |
|   |                  | 5                           | Dr. Osama Bin Sohail          | Senior Registrar    |
|   |                  | 6                           | Dr. Aminullah                 | Senior Registrar    |
|   |                  | 7                           | Dr. Ikram Hassan              | Senior Registrar    |
| <b>Faculty of Cardiac Anesthesia</b>      | 1                | Prof. Khuwaja Amin Muhammad | Professor                     |                     |
|   | 2                | Dr. Aftab Ahmed Khtari      | Associate Professor           |                     |
|   | 3                | Dr. Rabia Iqtdar            | Assistant Professor           |                     |
|   | 4                | Dr. Maaida Muzaffar         | Assistant Professor           |                     |
|   | 5                | Dr. Samia Mobin             | Senior Registrar              |                     |
|   | 6                | Dr. Sadia Noor              | Senior Registrar              |                     |
|   | 7                | Dr. Rahma Lodhi             | Senior Registrar              |                     |
| <b>Faculty of Cardiac Emergency</b>       | 1                | Professor Munawar Khursheed | Professor                     |                     |
|   | 2                | Dr. Waqar Khan              | Associate Professor           |                     |
|   | 3                | Dr. Nehrish Patel           | Senior Registrar              |                     |
|   | 4                | Dr. Raheela Khuwaja         | Senior Registrar              |                     |
|   | 5                | Dr. Madiha Fatima           | Senior Registrar              |                     |
|   | 6                | Dr. Sonia Bai Ahuja         | Senior Registrar              |                     |
|   | 7                | Dr. Ali Bin Naseer          | Senior Registrar              |                     |
|   | 8                | Dr. Sameer Abdul Khaiq      | Senior Registrar              |                     |

## Appendix- II

| Faculty & Departments                                | S # | Name                      | Designation         |
|--|-----|---------------------------|---------------------|
| <b>Faculty of Cardiac Surgery (Paeds)</b>            | 1   | Prof. Sohail Bangash      | Professor           |
|  | 2   | Dr. Saad Badar Zakai      | Associate Professor |
|  | 3   | Dr. Ammad Hussain         | Senior Registrar    |
|  | 4   | Dr. Waqar Ahmed Khan      | Senior Registrar    |
| <b>Faculty of Critical Care</b>                      | 1   | Dr. Muhammad Imran Ansari | Associate Professor |
|  | 2   | Dr. Aziz Ur Rehman        | Associate Professor |
|  | 3   | Dr. Lalarukh Taimoor      | Assistant Professor |
|  | 4   | Dr. Sohaib Arif           | Senior Registrar    |
|  | 5   | Dr. Aqeel                 | Senior Registrar    |
|  | 6   | Dr. Fahad Islam           | Senior Registrar    |
|  | 7   | Dr. Madiha Masroor        | Senior Registrar    |
| <b>Faculty of Clinical Cardiac Electrophysiology</b> | 1   | Dr. Faisal Qadir          | Associate Professor |
|  | 2   | Dr. Ghazala Irfan         | Associate Professor |
|  | 3   | Dr. Zubair Mumtaz         | Assistant Professor |
|  | 4   | Dr. Maqsood Alam          | Senior Registrar    |
|  | 5   | Dr. Muhammad Sarim Ansari | Senior Registrar    |
|  | 6   | Dr. Reema Qayoom          | Senior Registrar    |
|  | 7   | Dr. Muhammad Mohsin       | Assistant Professor |
| <b>Faculty of Infectious Diseases</b>                | 1   | Dr. Farheen Ali           | Associate Professor |
| <b>Faculty of Interventional Radiology</b>           | 1   | Dr. Irfan Amjad Lutfi     | Consultant          |
| <b>Faculty of Laboratory</b>                         | 1   | Dr. Muhammad Nadeem       | Consultant          |
|  | 2   | Dr. Humaira Ashraf        | Assistant Professor |
|  | 3   | Dr. Noreen Sherazi        | Assistant Professor |
|  | 4   | Dr. Faiza Rezwan          | Assistant Professor |
|  | 5   | Dr. Maliha Sunbal         | Assistant Professor |
|  | 6   | Dr. Tazeen Fatima         | Senior Registrar    |
|  | 7   | Dr. Noorul Ain            | Senior Registrar    |
| <b>Faculty of Nephrology</b>                         | 1   | Dr. Kunwar Naveed         | Visiting Faculty    |
| <b>Faculty of Paeds Cardiac ICU</b>                  | 1   | Dr. Rajab Ali Khokar      | Associate Professor |
|  | 2   | Dr. Aisha Khan            | Senior Registrar    |
| <b>Faculty of Paeds Cardiology</b>                   | 1   | Dr. Abdul Sattar Shaikh   | Associate Professor |
|  | 2   | Dr. Hussain Bux           | Associate Professor |
|  | 3   | Dr. Veena Kumari          | Assistant Professor |
|  | 4   | Dr. Aliya Kemal Ahsan     | Assistant Professor |
|  | 5   | Dr. Nida Rafique          | Senior Registrar    |
|  | 6   | Dr. Shakeel Ahmed         | Senior Registrar    |
|  | 7   | Dr. Aurangzeb             | Senior Registrar    |
| <b>Faculty of Preventive Cardiology</b>              | 1   | Dr. Khawar abbas          | Professor           |
|  | 2   | Dr. Rubina Rauf           | Assistant Professor |
|  | 3   | Dr. Hannah Sughra Asghar  | Assistant Professor |
| <b>Faculty of Rehabilitation</b>                     | 1   | Dr. Nabila Somroo         | Visiting Faculty    |

## Appendix - III

### DIPLOMA IN CARDIOLOGY TRAINING PROGRAM

| <b>SR.NO</b> | <b>POSTINGS</b>           | <b>2 YEARS (24 MONTHS)</b> |
|--------------|---------------------------|----------------------------|
| 1.           | GENERAL WARD              | 09 MONTHS                  |
| 2.           | CARDIAC EMERGENCY         | 04 MONTHS                  |
| 3.           | ECHOCARDIOGRAPHY          | 03 MONTHS                  |
| 4.           | CCU                       | 02 MONTHS                  |
| 5.           | CATH LAB & CT ANGIOGRAPHY | 01 MONTH                   |
| 6.           | PAEDS CARDIOLOGY          | 01 MONTH                   |
| 7.           | STEP DOWN UNIT            | 01 MONTH                   |
| 8.           | ELECTROPHYSIOLOGY         | 01 MONTH                   |
| 9.           | ETT                       | 01 MONTH                   |
| 10.          | NUCLEAR CARDIOLOGY        | 15 DAYS                    |
| 11.          | CARDIAC SURGERY           | 15 DAYS                    |

# Syllabus –Appendix-IV

## DIP-CARD 1ST YEAR TOS WITH CREDIT HOURS DISTRIBUTION

| SR.NO   | Topics   | WEIGHTAGE / BCQS | CREDIT HOURS |
|---|--|------------------|--------------|
| <b>APPLIED ANATOMY AND PATHOPHYSIOLOGY OF THE HEART</b> |  | <b>11</b>        | <b>04</b>    |
| <b>1</b>  | Embryology of the Heart  |                  |              |
| <b>2</b>  | Gross Anatomy of the Heart   |                  |              |
| <b>3</b>  | Venous and Arterial Anatomy of the Heart   |                  |              |
| <b>4</b>  | Cardiac Conduction System and Action Potential                                       |                  |              |
| <b>5</b>  | Cardiac Cycle  |                  |              |
| <b>CORONARY ARTERY DISEASE</b>                          |  | <b>30</b>        | <b>10</b>    |
| <b>6</b>  | Atherosclerosis  |                  |              |
| <b>7</b>  | Dyslipidemia   |                  |              |
| <b>8</b>  | Approach to the patient with chest pain  |                  |              |
| <b>9</b>  | Diagnosis and Management of Stable Angina  |                  |              |
| <b>10</b>   | Pathophysiology of ACS (UA, NSTEMI, STEMI)   |                  |              |
| <b>11</b>   | ACS Diagnosis and Management   |                  |              |
| <b>12</b>   | Acute STEMI Reperfusion Strategies   |                  |              |
| <b>13</b>   | Complications of Acute STEMI   |                  |              |
| <b>14</b>   | Inpatients follow up, Risk stratification and post discharge planning of acute STEMI |                  |              |
| <b>15</b>   | Long Term management of Post-PCI and Post-CABG patients                              |                  |              |
| <b>16</b>   | Primary and Secondary Prevention of Coronary Artery Disease                          |                  |              |
| <b>CARDIAC DIAGNOSTICS</b>                              |  | <b>15</b>        | <b>06</b>    |
| <b>17</b>   | Indications and interpretation for coronary angiogram                                |                  |              |
| <b>18</b>   | Indications for revascularization  |                  |              |
| <b>19</b>   | Cardiac CT ( Indications )   |                  |              |
| <b>20</b>   | Cardiac Consultation for the preoperative patients                                   |                  |              |
| <b>21</b>   | Nuclear Assessment for IHD (Indications and Interpretation)                          |                  |              |
| <b>22</b>   | Indications and interpretation of ETT  |                  |              |
| <b>23</b>   | Basics of Echocardiography (indications and interpretation)                          |                  |              |
| <b>24</b>   | Stress Echo (indications and interpretation)   |                  |              |
| <b>ARRHYTHMIAS</b>                                      |  | <b>14</b>        | <b>05</b>    |
| <b>25</b>   | Normal and Abnormal ECGs   |                  |              |
| <b>26</b>   | Syncope  |                  |              |
| <b>27</b>   | Bradyarrhythmias   |                  |              |
| <b>28</b>   | Pacemaker, ICD/CRT   |                  |              |
| <b>29</b>   | Atrial Fibrillation  |                  |              |
| <b>30</b>   | Ventricular Tachycardia  |                  |              |
| <b>31</b>   | Supraventricular Tachycardia   |                  |              |
| <b>32</b>   | Cardiac Arrest and Sudden Cardiac Death  |                  |              |

## Syllabus –Appendix-IV

| <b>VALVULAR DISORDERS</b>                                |   | <b>19</b>  | <b>07</b>              |
|--|---|------------|------------------------|
| <b>33</b>  | Hemodynamic changes in VHD                                |            |                        |
| <b>34</b>  | Mitral Valve Disease                                      |            |                        |
| <b>35</b>  | Aortic Valve Disease                                      |            |                        |
| <b>36</b>  | Pulmonary and Tricuspid Valve Disease                     |            |                        |
| <b>37</b>  | Acute Rheumatic Fever + Bacterial Endocarditis            |            |                        |
| <b>38</b>  | Antibiotics in bacterial Endocarditis and Rheumatic Fever |            |                        |
| <b>40</b>  | Management of patients with prosthetic Cardiac Valve      |            |                        |
| <b>41</b>  | Pregnancy and Valvular Disease                            |            |                        |
| <b>PERICARDIAL and AORTA/PERIPHERAL VASCULAR DISEASE</b> |   | <b>11</b>  | <b>04</b>              |
| <b>42</b>  | Anatomical Features of Pericardial Sac                    |            |                        |
| <b>43</b>  | Pericardial effusion and tamponade                        |            |                        |
| <b>44</b>  | Acute pericarditis  |            |                        |
| <b>45</b>  | Pericardial Constriction                                  |            |                        |
| <b>46</b>  | Peripheral Vascular Disease                               |            |                        |
| <b>47</b>  | Aortic Dissection, Aortic Aneurysm                        |            |                        |
| <b>TOTAL</b>   |   | <b>100</b> | <b>36 Credit Hours</b> |

### **DIPCARD 2ND YEAR TOS WITH CREDIT HOUR DISTRIBUTION**

| <b>S.No</b>  | <b>Topics</b>   | <b>WEIGHTAGE</b> | <b>CREDIT HOURS</b> |
|--|---|------------------|---------------------|
| <b>CONGENITAL DISORDERS</b>                            |   | <b>19</b>        | <b>07</b>           |
| <b>1</b>   | Hemodynamic changes in congenital Heart Disease       |                  |                     |
| <b>2</b>   | Cyanotic Congenital Heart Disease                     |                  |                     |
| <b>3</b>   | Acyanotic Congenital Heart Disease                    |                  |                     |
| <b>4</b>   | Guideline for management of Congenital Heart Disease  |                  |                     |
| <b>5</b>   | Interventional Procedures in Congenital Heart Disease |                  |                     |
| <b>6</b>   | Congenital Heart Disease and Pregnancy                |                  |                     |
| <b>7</b>   | RHC   |                  |                     |
| <b>HYPERTENSION</b>                                    |   | <b>15</b>        | <b>05</b>           |
| <b>8</b>   | Approach to newly diagnosed Hypertensive patient      |                  |                     |
| <b>9</b>   | Hypertensive Crisis                                   |                  |                     |
| <b>10</b>  | Secondary Hypertension                                |                  |                     |
| <b>11</b>  | Pregnancy and Hypertension                            |                  |                     |
| <b>12</b>  | Medical Management of Chronic Hypertension            |                  |                     |
| <b>13</b>  | Pulmonary Hypertension                                |                  |                     |
| <b>14</b>  | Pulmonary embolism                                    |                  |                     |
| <b>CONGESTIVE HEART FAILURE &amp; CARDIOMYOPATHIES</b> |   | <b>28</b>        | <b>10</b>           |
| <b>15</b>  | Pathophysiology of systolic Heart Failure             |                  |                     |

## Syllabus –Appendix-IV

|           |  |            |                        |
|-----------|--|------------|------------------------|
| <b>16</b> | Causes and diagnosis of Heart Failure  |            |                        |
| <b>17</b> | Management of acute systolic Heart Failure   |            |                        |
| <b>18</b> | Management of Chronic Heart Failure  |            |                        |
| <b>19</b> | Diastolic Heart Failure  |            |                        |
| <b>20</b> | Management of Shock  |            |                        |
| <b>21</b> | Myocarditis  |            |                        |
| <b>22</b> | Dilated Cardiomyopathy   |            |                        |
| <b>23</b> | Restrictive Cardiomyopathy   |            |                        |
| <b>24</b> | Hypertrophic Cardiomyopathy  |            |                        |
| <b>25</b> | Peripartum Cardiomyopathy  |            |                        |
|           | <b>NON CARDIAC DISEASE IN CARDIAC PATIENTS</b>   | <b>16</b>  | <b>06</b>              |
| <b>26</b> | Management of Acute Respiratory Failure  |            |                        |
| <b>27</b> | Pulmonary Asthma   |            |                        |
| <b>28</b> | Management of obstructive airway disease   |            |                        |
| <b>29</b> | Smoking cessation  |            |                        |
| <b>30</b> | Electrolytes Imbalance   |            |                        |
| <b>31</b> | Interpretation of ABGs   |            |                        |
| <b>32</b> | Management of Acute Renal Failure  |            |                        |
| <b>33</b> | Management of Cardiac patient with Chronic Renal Failure   |            |                        |
| <b>34</b> | Management of Patient with Acute Stroke  |            |                        |
| <b>35</b> | Early Management of Critically ill patients  |            |                        |
| <b>36</b> | Cardioversion and defibrillation   |            |                        |
|           | <b>CARDIAC PHARMACOLOGY</b>  | <b>11</b>  | <b>04</b>              |
| <b>37</b> | Cardiac Drugs used in Congenital Heart Disease, Antihypertensive Drugs, Beroprost, Prostacyclines, Oxygen Therapy.           |            |                        |
| <b>38</b> | Antiarrhythmic (Digitalis, Amiodarone, Lignocaine , Beta-blockers and Calcium Channel Blockers, Antithrombotic, Anti lipids) |            |                        |
|           | <b>CARDIOVASCULAR DISEASE AND DISORDERS IN OTHER ORGANS</b>  | <b>11</b>  | <b>04</b>              |
| <b>39</b> | Obesity and Metabolic Syndrome   |            |                        |
| <b>40</b> | Diabetes (Diagnosis and Management)  |            |                        |
| <b>41</b> | Anemia in Cardiac Patients   |            |                        |
| <b>42</b> | Thyroid disorders and CVS  |            |                        |
| <b>43</b> | Cor Pulmonale  |            |                        |
| <b>44</b> | IABP   |            |                        |
| <b>45</b> | Cardiac consultation for the pre-operative patients  |            |                        |
| <b>46</b> | Cardiac Tumors   |            |                        |
|           | <b>TOTAL</b>   | <b>100</b> | <b>36 Credit Hours</b> |



## CONTACT US:



**MAILING ADDRESS:**

MEDICAL EDUCATION DEPARTMENT, NATIONAL INSTITUTE OF CARDIOVASCULAR DISEASES, RAFIQUI (H.J.) SHAHEED ROAD, KARACHI.



**PHONE:**

+92 - 21 - 99201271 (05 LINES), **EXTENSION:** 329



**EMAIL:**

dme@nicvd.org



**WEBSITE:**

www.nicvd.org