

***PROGRAM SPECIFICATIONS***

*Program Title:*

**MD of Cardiology**

**Code**  
***CVCV***

**Suez Canal University**  
**Faculty of Medicine**

**Programme Specification**

A- Basic Information

1- Programme Title: MD cardiology/

2- Programme Type:   Single  Double  Multiple

3- Department (s): cardiovascular medicine, anatomy and physiology

4- Coordinator: Asst. Prof. Ahmed Tageldien Abdellah

5- External Evaluator(s): Prof Dr. Solyman Gharib.

6- Last date of program specifications approval: the bylaws of the MD program in Cardiology in the Faculty of Medicine, Suez Canal University were approved by the Supreme Council of Universities in 2016.

7-Last date of program specifications revision approval: 2019

8- Number of credit points for this degree: 180 CP

B- Professional Information

**1- Programme Aims**

The overall goals of the program are to

- 1) Acquire solid grounding in the making of the most proper decision of up-to-date management for all cardiology and vascular diseases.
- 2) Design a research article for estimating the relatively long term outcome of management and can be submitted to a regional or international scientific journal.
- 3) Properly choose the diagnostic and treatment modalities in proper priority and cost-effective manner and interpret their results in coordinate way to give the best chance for curing and/or improving the quality of life of cardiology patients.
- 4) Recognize the professional limitations and the necessity of continuous upgrading and updating through different modalities of Continuous Medical Education.
- 5) Demonstrate interpersonal and communication skills that enable them to establish and maintain professional relationships with patients, families, and other members of health care teams.

**2- Intended Learning Outcomes (ILOs)**

**a- Knowledge and Understanding:**

- a1 Recognize the principles of the basic (physiology and pharmacology) and clinical sciences necessary for effective consultation in cardiology.

- a2 Recognize the unique aspects of laboratory medicine practice as modified by patient age and other patient population characteristics, especially aspects of pediatric and geriatric practice.
- a3 Discuss the basis of cardiology investigations (Resting ECG, 24-hour electrocardiography, 24-hours blood pressure monitoring, Exercise stress test, Echocardiography (all its types), and nuclear cardiology).
- a4 Review pertinent laboratory investigations according to test-specific standards for method development and evaluation, such as those promulgated by the Clinical Laboratory Standards Institute (CLSI; formerly NCCLS), CAP, and similar organizations (CBC, Fasting and postprandial blood glucose level, Lipid profile, Cardiac biomarkers, Renal functions, Liver functions)
- a5 Demonstrate knowledge of the principles of clinical research design, implementation, and interpretation and various levels of evidence in medicine and their translation into evidence-based practice and apply the basics and ethics of scientific research.
- a6 Demonstrate advanced knowledge of biostatistics.
- a7 Provide the major goals of an effective quality assurance program
- a8 Identify the principles of evidence-based medicine and demonstrate proficiency in evaluating the presenting findings from appropriate peer-reviewed journals.
- a9 Recognize basic of ethics and medico legal aspects of professional practice, related to the specialty
- a10 Realize the effects of this professional practices on the environment and ways of the development and maintenance of the environment

### **b- Intellectual Skills**

- b1. Solve special problems in cardiology according to available inputs.
- b2. Analyze and evaluate the knowledge in cardiology to solve cardiovascular diseases.
- b3. Interpret the appropriate supportive investigations (ECG, Echo, cardiac catheterization and laboratory studies) relevant to a particular patient.
- b4. Interpret essential cardiac investigations (coronary intervention, cardiac CT and MRI)
- b5. Integrate the patient's symptomatology, historic data, abnormal physical signs, and investigation into a comprehensive differential diagnosis.
- b6. Use reliable and current information in diagnosis and treatment.
- b7. Manage all cardiology patients in a manner consistent with the most up-to-date information on diagnostic and therapeutic effectiveness.
- b8. Evaluate risks in the professional practices of cardiology.
- b9. Make evidence based conversation and discussion.

- b10. Demonstrate the ability to extract and apply evidence from scientific studies to patient care.
- b11. Appreciate the principles of bioethics as applied to medical care, and the residents must participate in decision-making involving ethical issues that arise in the diagnosis and management of their patients.
- b12. Perform scientific research and write scientific papers.
- b13. Maintain and improve his standards of knowledge and training by critical self-education.

### **c- Professional and practical skills**

- c.1 Perform all skills required in the course specifications.
- c.2 Perform and interpret Electrocardiogram and Echocardiogram
- c.3 Evaluate professional reports in (ECG, X- ray, Echocardiography and catheterization).
- c.4 Conduct both individual consultations and presentations at multidisciplinary conferences that are focused, clear, and concise.
- c.5 Maintain comprehensive, timely, and legible medical records.
- c.6 Demonstrate skills in obtaining informed consent, including effective communication to patients about procedures, alternative approaches, and possible complications of diagnostic and therapeutic activities.
- c.7 Plan for development of the professional practices and performance of others.
- c.8 Evaluate and improve tools in cardiology

### **General and Transferable Skills**

- d1. Communicate ideas and arguments effectively;
- d2. Use computers efficiently
- d3. Perform Evaluation for subordinates, peers & program)
- d4. Perform self-evaluation and be a lifelong learner
- d5. Use different resources to obtain knowledge and information.
- d6. Work effectively within team and lead a health care team effectively
- d7. Uphold scientific meetings and manage time effectively

### **3- Academic Standards**

#### **3a External References for Standards (Benchmarks)**

**The standards of the National Authority of Quality Assurance and Accreditation in Education (NAQAAE). Website: [www.naqaae.org](http://www.naqaae.org)**

### **4- Curriculum Structure and Contents**

**4a- Program duration:** The program lasts for an average of 3 to 7 academic years as specified in the internal bylaws for postgraduate studies based on credit points system in the Faculty of Medicine, Suez Canal University approved on February 7<sup>th</sup>, 2016.

**4b- Program structure:**

**MD Program Credit points (CP) structure:**

**Total needed credit points for getting MD degree 180 CP**

The program consists of **First part 30 CP, Thesis 50 CP, and Second part 100 CP**

1. **The first part of the program:** 30 CP, its duration (15 weeks) for one academic semester. The first part comprises the following:
  - a. A course in Research Methodology planned and held in the Community Medicine Department of the Faculty of Medicine, Suez Canal University. This part includes 8 CP.
  - b. Two electives each one has 2 CP. The students should select one elective which has not been selected in the Master Degree.
  - c. A course in pharmacology which includes 9 CP.
  - d. A course in applied physiology which includes 9 CP.
- 2- **MD thesis:** 50 CP, no scores for thesis. The candidate has the right to register his/her thesis protocol after 6 months from the degree registration. The first time for thesis defense after 2 years from the date of the faculty council approval on the thesis protocol and passing the first part exam.
- 3- **The second part of the program:** 100 CP, its duration (75 weeks ) for 5 consecutive academic semesters. The second part comprises the specialized advanced courses in Cardiology ending by written and practical exams.

**3bi- No. of credit Points:** the MD program is 180 credit Point system.

Every credit point include 25 working hour (30% = 7 hours for face to face learning activities, and 70% =18 hours for self-learning activities).

## **5- Programme Courses**

### **5.1- Level/Year of Program: First part of MD (30 CP)**

| Courses      |  |                         | Assessment   |               |                    |           |                            |
|--------------|--|-------------------------|--------------|---------------|--------------------|-----------|----------------------------|
| Code No.     | Course Title                           | No. of Credit points    | Written Exam |               |                    | Oral exam | Practical or clinical Exam |
|              |  |                         | No of Papers | Duration      | Marks              |           |                            |
| RBs          | Research methodology and Biostatistics | 8                       | 1            | 3 hours       | 160                |           |                            |
| E            | Two Elective courses                   | 2+2                     | 1+1          | 1 hour+1 hour | 40+40              |           |                            |
| CVCV51       | Pharmacology                           | 9                       | 1            | 3             | 135                | 45        |                            |
| CVCV52       | Applied Physiology                     | 9                       | 1            | 3             | 135                | 45        |                            |
| <b>Total</b> |  | <b>30 credit points</b> |              |               | <b>600 marks**</b> |           |                            |

Two elective courses each one has 2 CP. The students should select two elective which has not been selected before in the Master Degree.

- E01 Evidence Based medicine (Community Department)**  
**E02 Scientific Writing (Medical Education Department)**  
**E03 Quality in Medical Education (Medical Education Department)**  
**E04 Infection Control (Microbiology Department)**  
**E05 Critical Appraisal (Community Department)**  
**E06 Communication Skills (Medical Education Department)**

program (100 CP)

| Courses      |   |                                      | Assessment   |                               |                    |           |                            |                                   |
|--------------|---|--------------------------------------|--------------|-------------------------------|--------------------|-----------|----------------------------|-----------------------------------|
| Code No.     | Course Title                                    | No. of Credit points                 | Written Exam |                               |                    | Oral exam | Practical or clinical Exam | Continues assessment *(Portfolio) |
|              |   |                                      | No of papers | Duration                      | Marks              |           |                            |                                   |
| CVCV53       | Scientific and theoretical Course in Cardiology | 30                                   | 3            | 3 hours<br>3 hours<br>1.5 Hrs | 225+<br>225+<br>90 | 180       | 540                        | 540                               |
|              | Practical training in Advances of Cardiology    | 60                                   |              |                               |                    |           |                            |                                   |
|              | ***Scientific activities                        | 10 (not included in the total marks) |              |                               |                    |           |                            |                                   |
| <b>Total</b> |   | <b>100 credit points</b>             |              |                               | <b>1800marks</b>   |           |                            |                                   |

**\*Portfolio its scores distributed in the different parts of the portfolio and its total score included among total mark of second part**

**\*\*\*Scientific activities are not included in the total marks**

**5.3 Thesis:** 2 faculty senior supervisors from the staff members are nominated by the department council to prepare a proposal of the thesis protocol after the selection of a subject that is complementary to the research plans of the department. Data collection, methodologies, study question, time table, ethical considerations and budget are formulated by the candidate under guidance of his supervisors into a research project. The research protocol is then peer reviewed by two different staff members nominated by the Head of the department who share their ideas and comments with the supervisors to reach to the final form. The research protocol is discussed then openly in one of the department councils to be approved and diverted to the Faculty research committee where it is subjected to a critical appraisal to meet the research basic standards set by the committee. The final approvals of the research protocol are then issued by the committee of post graduate studies, the Faculty and University Council to be registered.

## **6- Programme Admission Requirements**

Msc in Cardiology with minimum good grade .

## **7- Student Assessment Methods**

- 7.1 Written (MEQ)** to assess the cognitive domain.
- 7.2 MCQs** to assess the cognitive domain
- 7.3 Oral Viva Cards** to assess higher cognitive and attitude domains.
- 7.4 Observations** to assess practical and presentation skills.
- 7.5 Portfolio** to assess the cognitive, psychomotor and the affective domains.

## **8- Weighting of Assessments**

| <b>Type of exam</b>  |             |
|--|-------------|
| <b>First part (30 credit points= 600 mark)</b>   |             |
| • Written exam   | 440         |
| • Oral and practical exam  | 160         |
| • <b><u>Total</u></b>  | <b>600</b>  |
| <b>Second part (100 credit points including 10 credit points not included in the total marks =1800 mark)</b> |             |
| • Oral exam  | 180         |
| • Practical exam   | 300         |
| • Written exam   | 780         |
| • Portfolio  | 540         |
| <b><u>Total</u></b>  | <b>1800</b> |

### **9- Regulations for Progression and Programme Completion**

#### **First part**

- **Passing level 60% of total marks of the exam and at least 50% passing level of the total written exam marks**

#### **Second part**

- **Passing level 60% of total marks of the exam**
- **Passing level 60% total of practical and oral exam**

#### **Thesis/Assay**

- **Passing discussion is required for MD degree**

### **10- Evaluation of Programme Intended Learning Outcomes**

| <b>Evaluator</b>                                      | <b>Tool</b>  | <b>Sample</b> |
|---|--|---------------|
| <b>1- Senior students</b>                             | <b>Questionnaires</b>  |               |
| <b>2- Alumni</b>                                      | <b>Questionnaires</b>  |               |
| <b>3- Stakeholders (Employers)</b>                    | <b>Interviews</b>  |               |
| <b>4-External Evaluator(s) (External Examiner(s))</b> | <b>Attending exam. (using checklist and/or rating scale)</b> |               |
| <b>5- Other</b>                                       |  |               |

#### **Annex 1**

**Attach Course Specifications**

**Head of Cardiology Department  
Prof. Mohammed Oraby.**