PROGRAM SPECIFICATIONS

Program Title:

Master of Cardiology

Code
CVCV

Suez Canal University
Faculty of Medicine

Programme Specification

A- Basic Information

1- Programme Title: Master degree of Cardiology

2- Programme Type: Single ☑ Double ☐ Multiple ☐

3- Department (s): cardiovascular medicine, anatomy and physiology
4- Coordinator: Head of Cardiology Department

5- External Evaluator(s): Prof Dr. Tarek Abdel-Monem
6- Last date of program specifications approval**:** the bylaws of the master 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: 2017

B- Professional Information

1- Programme Aims

The overall goals of the program are to:

1. Demonstrate and apply knowledge of accepted standards of clinical medicine in their respective specialty area, remain current with new developments in medicine, and participate in life-long learning activities, including research.

2. Demonstrate the ability to effectively treat patients, provide medical care that incorporates the patient empathy, awareness of behavioral issues, the incorporation of preventive medicine, and health promotion.

3. Demonstrate interpersonal and communication skills that enable them to establish and maintain professional relationships with patients, families, and other members of health care teams.

4. Demonstrate the ability to critically evaluate their methods of clinical practice, integrate evidence-based medicine into patient care, show an understanding of research methods, and improve patient care practices.

5. Demonstrate an understanding of health care delivery systems, provide effective and qualitative patient care within the system, and practice cost-effective medicine.

2- Intended Learning Outcomes (ILOs)

By the end of the program, participants should be able to:

a- Knowledge and Understanding:

a1 Describe knowledge of basic sciences relevant to cardiovascular medicine (Structure and function of the cardiovascular system, mechanisms of hemostasis, kidney functions and the physiological relation between the heart and the kidneys, pulmonary system structure and functions and its relation to the heart, drugs commonly used for cardiovascular disorders)

a2 Discuss pathophysiological basis of cardiovascular diseases.

a3 Describe definitions and epidemiological aspects of each cardiovascular disorder.

a4 State methods of prevention of cardiovascular diseases as coronary artery disease, rheumatic fever, infective endocarditis etc.

a5 Recognize basic cardiology investigations including the following: (Resting ECG, 24-hour electrocardiography, 24-hours blood pressure monitoring, exercise stress test, chest X-ray, echocardiography)

a6 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.

a7 Demonstrate the principles of clinical research design, implementation, and interpretation. Understand the various levels of evidence in medicine and their translation into evidence-based practice.

a8 Demonstrate the principles and basis of quality in the professional practices of cardiology.

a9 Recognize the basics and ethics of scientific research and medicolegal aspects of professional work.

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. Critically assess the scientific literature and apply evidence from scientific studies to patient care.

b2. Use reliable and current information in diagnosis and treatment.

b3. Solve patients' problems in a manner consistent with the most up-to-date information on diagnostic and therapeutic effectiveness.

b4. Apply the principles of evidence-based medicine in practice.

b5. Interpret results of echocardiography and cardiac catheterization.

b6. Analyze and evaluate the knowledge in clinical cardiology to solve cardiovascular diseases.

b7. Solve special problems in cardiology according to available inputs.

b8. Interpret the appropriate supportive investigations (ECG, X-ray, Echo, cardiac catheterization and laboratory studies) relevant to a particular patient.

b9. Integrate the patient's symptoms, history, abnormal physical signs, and investigation into a comprehensive differential diagnosis.

b10. Apply the concept of emergency management of acute cardiac disorders.

b11. Perform scientific research/ thesis about a scientific problem.

b12. Write scientific papers.

b13. Evaluate risks in the professional practices of cardiology.

b14. Plan for development of performance in the field of cardiology.

b15. Take professional decisions in different situations.

c- **Professional and Practical Skills**

c.1 Demonstrate skills in obtaining informed consent, including effective communication to patients about procedures, alternative approaches, and possible complications of diagnostic and therapeutic activities.

c.2 Perform all skills required in the course specifications.

c.3 Evaluate professional reports in (ECG, X- ray, Echocardiography and catheterization).

c.4 Maintain comprehensive, timely, and legible medical records.

c.5 Evaluate and improve tools in his/her specialty.

c.6 Plan for development of the professional practices and performance of others.

c.7 Choose effective modes of communication (listening, nonverbal, explanatory, questioning) and mechanisms of communication (face-to-face, telephone, e-mail, written), as appropriate.

c.8 Demonstrate respect for patients and families and advocate for the primacy of patient's welfare and autonomy.

c.9 Interact with others without discriminating on the basis of religious, ethnic, sexual, or educational differences.

d-General and Transferable Skills

d.1 Communicate effectively with peers and group facilitators.

d.2 Work effectively with others as a member or leader of a health care team.

d.3 Use information technology to serve in the development of professional practice

d.4 Perform self-evaluation and peer evaluation and specify his own educational needs

d.5 Use different resources to obtain knowledge and information.

d.6 Accept constructive criticism and feedback on their work

d.7 Manage time effectively

d.8 Adopt the principles of self and lifelong learning

d.9 Conduct both individual consultations and presentations at multidisciplinary conferences that are focused, clear, and concise.

3- Academic Standards

External References for Standards (Benchmarks)

Generic Academic Reference Standards (ARS) for post graduate programs

4- Curriculum Structure and Contents

4a- Program duration: the program lasts for a minimum of 2 academic years and maximum 5 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 7th, 2016.

4b- Program structure:

Master Program Credit points (CP) structure:

- **Total needed credit points for getting master degree 120 CP**

- The program consists of **First part 30 CP, Thesis 30 CP, and Second part 60 CP**

1. ***The first part of the program:*** 30 CP, its duration (15 weeks) for one academic semester. It includes

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 4 CP.
b. A course in Research ethics planned and held in the Forensic and Toxicology Department of the Faculty of Medicine, Suez Canal University. This part includes 2 CP.
c. A course in Basic Cardiology planned and held in the Cardiology Department of the Faculty of Medicine, Suez Canal University. This part includes 7 CP.
d. A course in General Medicine planned and held in the Department of General Medicine of the Faculty of Medicine, Suez Canal University. This part includes 7 CP.
e. A course in Physiology planned and held in the Physiology Department of the Faculty of Medicine, Suez Canal University. This part includes 2 CP.
f. A course in Biochemistry planned and held in the Biochemistry Department of the Faculty of Medicine, Suez Canal University. This part includes 2 CP.
g. A course in Pathology planned and held in the Pathology Department of the Faculty of Medicine, Suez Canal University. This part includes 2 CP.

h. A course in Pharmacology planned and held in the Pharmacology Department of the Faculty of Medicine, Suez Canal University. This part includes 2 CP.
i. One elective course, the students should select one elective among six courses. This part includes 2 CP.

2. ***Master thesis:*** 30 CP, not included in the total marks for master degree, the candidate has the right to register the thesis protocol after 6 months from the degree registration. The thesis defense is allowed after 6 months 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:*** 60 CP, its duration (45 weeks) for 3 consecutive academic semesters. The second part comprises the specialized courses in Cardiology, planned and held in the Cardiology Department. This part lasts for 1.5 years ending by written and practical exams.

4c. No. of credit Points: The master degree program is 120 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 master degree (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		
RB	Research methodology and Biostatistics	4	1	2 hours	80		
RE	Research Ethics	2	1	1 hour	40		
CVCV01	Basic Cardiology	7	1	2 hours	105	35	
CVCV02	Internal Medicine	7	1	2 hours	65	15	60
CVCV03	Physiology	2	1	1 hour	30	10	
CVCV04	Biochemistry	2	1	1 hour	30	10	
CVCV05	Pathology	2	1	1 hour	30	10	
CVCV06	Pharmacology	2	1	1 hour	30	10	
E*	Elective Subject	2	1	1 hour	40		
Total		30 credit points			600 marks**		

***Student should select one course of the following as an elective course:**

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)

****every credit point equal 20 marks**

5.2- Level/Year of Program: Second part of Master degree program (60 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			
CVCV07	Scientific and theoretical Course in Cardiology	15	2	3 hours for each paper	165 for each paper	110	330	330
	Practical training in Advances of Cardiology	40						
	***Scientific activities	5 (not included in the total marks)						
Total		60 credit points			1100**marks			

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

****every credit point equal 20 marks**

*****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 stuff 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

Bachelor's degree in Medicine and Surgery with minimum good grade.
Minimum good grade in the subject of General Medicine.

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

Type of exam

First part (30 credit points= 600 mark)

- Written exam 450
- Oral and practical exam 150
- **Total** **600**

Second part (60 credit points including 5 credit points not included in the total marks =1100 mark)

- Oral exam 110
- Practical exam 330
- Written exam 330
- Portfolio 330

Total **1100**

9- Regulations for Progression and Programme Completion

First part
Passing level 60% of total marks of the exam
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% is prerequisite for MSC degree

Thesis/Assay
Passing thesis defense is perquisite for getting MSc. Degree.

10- Evaluation of Programme Intended Learning Outcomes

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

Annex 1
Attach Course Specifications

Head of Cardiology department: Prof. Mohammed Oraby