COURSE SPECIFICATION

(Cardiovascular Medicine)

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	**Master degree of Cardiovascular medicine**
(2) Department offering the programme:	**Cardiovascular** Medicine Department
(3) Department responsible for teaching the course:	**Cardiovascular** Medicine Department
(4) Part of the programme:	Second Part (3 semesters)
(5) Date of approval by the Department`s council	**24-5-2016**
(6) Date of last approval of programme specification by Faculty council	9-8-2016
(7) Course title:	Cardiovascular Medicine
(8) Course code:	**CARD 514CM**
(9) Credit hours: (10) Total teaching hours:	17 credit hours (255h) + 13 Clinical credit hours (390h)

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows: (either to be written in items or as a paragraph)

1- To produce graduate able to acquire the competence and experience to effectively manage patients with different Cardiovascular Diseases.

2- To provide the candidate with Update in diagnostic and therapeutic protocols of Cardiovascular Diseases.

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(2) Intended Learning Outcomes (ILOs):

Intended learning outcomes (ILOs); Are four main categories: knowledge & understanding to be gained, intellectual qualities, professional/practical and transferable skills.

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1- Recognize clinical approach to cardinal Cardiovascular symptoms (dyspnea, cough, orthopnea, swelling LL, syncope, palpitation and chest pain)

A2- Explain indication, contraindications, techniques and complications of different diagnostic and therapeutic procedures

A3- Recognizes guidelines for diagnosis and treatment of different Cardiovascular diseases

A4-Recognize principles of CPR and cardiac emergencies management guidelines in CCU

A5- Explain advantages and limitations of different interventional cardiology techniques.

A6- Recognizes conventional and novel modes of Echocardiography, stress testing, Cardiac CT and MRI, Myocardial perfusion scanning, Coronary angiography and percutaneous coronary intervention, pacemaker and electrophysiological studies

A7-Identify ethical consideration in CCU

A8-Recognize different types, indication and side effects of drugs used in CCU

A9-identify guidelines in diagnosis and treatment of pulmonary hypertension and pulmonary embolism

A10- Explain guidelines in diagnosis and treatment of heart failure

A11- Explain guidelines in diagnosis and treatment of ischemic heart disease

A12- Recognizes chest, liver, endocrine, renal, hematological and neurological cardiac relationship

A13- Explain different types of arrhythmia and its clinical impact

A14-Recognize diagnosis and treatment of cardiac tumors

A15-Recognize recent treatment modalities in pulmonary hypertension

A16-Identify methods of diagnosis and treatment of congenital heart diseases

A17- Classify different cardiomyopathies

B- Intellectual skills

B1- Interpret cardiac symptoms and suspect the provisional diagnosis

B2- Select proper diagnostic modality in different cardiovascular conditions

B3 –Interpret ECG, Echocardiography properly

B4 -Choose proper non invasive and invasive procedures in different cardiovascular disorders

C- Professional/practical skills

C1- Take history properly (cardiovascular sheet)

C2- Perform general and local examination effectively

C3- Prepare and evaluate the patient effectively before any diagnostic or therapeutic procedure

C4- Perform Echocardiography and ECG interpretation effectively

C5- Deal with cardiovascular emergencies

D- Communication & Transferable skills

D1- Develop communication and presentation skills

D2- Demonstrate teamwork and interpersonal skills

D3- Competently use information technology

D4- Demonstrate competence in problem solving

D5- Develop personal and career development plan

D6- Develop an autonomous and effective approach of lifelong learning

D7- Develop professional, ethical and legal practice

(3) Course content:

Subjects	Lectures	Clinical	Total Teaching Hours
Cardiovascular Diseases course (17 credit hours) + 13 clinical			
Module (1): 9 credit hours (5 Lectures and 5 clinical)			
1- Clinical assessment of heart failure	**5**	**15**	**20**
2- Diagnosis and management of acute HF	**5**	**15**	**20**
3- Heart failure with reduced ejection fraction	**4**	**15**	**19**
4- Heart failure with normal EF	**4**	**15**	**19**
5- Refractory HF	**4**		**4**
6- Assisted circulation in management of HF	**2**		**2**
7-Surgical management of heart failure	**3**		**3**
8-Emerging therapies & strategies in treatment of HF	**3**	**10**	**13**
9-Care of patients with end-stage heart disease	**2**		**2**
10-Pericardial diseases	**4**	**10**	**14**
11-Traumatic heart disease	**2**		**2**
12-Pulmonary embolism	**4**	**15**	**19**
13-Pulmonary hypertension	**4**	**15**	**19**
14-Congenital heart disease	**5**		**5**
15-Valvular heart disease	**5**	**20**	**25**
16-Infective endocarditis	**4**		**4**
17-Cardiomyopathesis	**5**	**20**	**25**
18-Hypertrophic Cardiomyopathy	**4**		**4**
19-Myocarditis	**4**		**4**
20-Toxins and the heart	**2**		**2**
Total	**75**	**150**	**225**
Module (2): 10 credit hours (6 Lectures & 4 clinical)			
Genesis of cardiac arrhythmias: electrophysiological considerations	**5**		**5**
Diagnosis of cardiac arrhythmias	**6**	**15**	**21**
Therapy for cardiac arrhythmias	**6**		**6**

Subjects	Lectures	Clinical	Total Teaching Hours
Cardiac pacemakers and defibrillators	**6**	**15**	**21**
Specific arrhythmias: diagnosis & treatment	**6**	**15**	**21**
Cardiac arrest and sudden cardiac death	**6**	**15**	**21**
Hypotension and syncope	**6**	**15**	**21**
Sleep apnea and cardiovascular disease	**5**		**5**
Cardiovascular abnormalities in HIV-infected individuals	**2**		**2**
Endocrine disorders and CV disease	**6**		**6**
Homeostasis, thrombosis, fibrinolysis & CVD	**6**	**15**	**21**
Rheumatic fever	**5**	**15**	**20**
Rheumatic diseases and the CV System	**5**	**15**	**20**
The cancer patient and CV disease	**3**		**3**
Psychiatric and behavioral aspects of CVD	**3**		**3**
Neurological disorders and cardiovascular disease	**4**		**4**
Interface between renal disease and cardiovascular illness	**6**		**6**
Cardiovascular manifestations of autonomic disorders	**4**		**4**
	90	**120**	**210**
Module (3): 9 credit hours (6 Lectures & 4 clinical)			
Systemic hypertension: mechanisms, diagnosis & Managements	**6**	**20**	**26**
Diseases of the aorta	**5**		**5**
Peripheral arterial disease	**4**		**4**
Risk factors for atherothrombotic disease.	**5**		**5**
Lipoprotein disorders and CV disease	**5**	**10**	**15**
DM, the metabolic syndrome, and atherosclerotic CVD	**2**		**2**
Diabetes and heart disease	**5**		**5**
Nutrition and cardiovascular disease	**2**		**2**
Approach to the patient with chest pain	**6**	**20**	**26**
STEMI: pathophysiology , clinical features & management	**6**	**15**	**21**
Primary PCI in the management of AMI	**5**	**15**	**20**

Subjects	Lectures	Clinical	Total Teaching Hours
Unstable angina and Non-NSTEMI	**6**	**15**	**21**
Chronic coronary artery disease	**6**	**15**	**21**
Prevention and management of stroke	**3**		**3**
Primary and secondary prevention of CAD	**2**		**2**
Exercise-based, cardiac rehabilitation	**2**		**2**
Complementary & alternative approaches of CVD	**1**		**1**
Cardiovascular disease in the elderly	**3**		**3**
Cardiovascular disease in women	**3**		**3**
Pregnancy and heart disease	**3**		**3**
Exercise and sports cardiology	**2**		**2**
Medical management of the patient undergoing cardiac surgery	**2**		**2**
Anesthesia and non-cardiac surgery in patients with heart disease	**2**		**2**
The History & physical examination: An evidence-based approach	**2**	**10**	**12**
Clinical decision-making in cardiology	**2**		**2**
	90	**120**	**210**

(4) Teaching methods:

4.1: lectures, seminars, workshops

4.2: clinical sessions and work experience

4.3: Problem solving, case studies

4.4: directed and self directed learning activities

(5) Assessment methods:

Assessment schedule:

Assessment 1: Written exam after 30 months of MS registration

Assessment 2: Oral exam

Assessment 3: OSCE exam

Assessment 4: Logbook

Assessment 5: MCQ at the end of each semester

Percentage of each Assessment :

MCQ	60
Written exam:	240
OSCE Clinical exam:	100
Structured Oral exam:	100
Practical exam:	100
Total:	600

(6) References of the course:

- 6.1: Hand books: **Oxford handbook of cardiovascular medicine**
- 6.2: Text books
  - **Braunwald Heart Disease Text Book**
  - **Topol Manual of Cardiology**
  - **Hurst Heart diseases text book**

- 6.3: Journals: **Periodicals of American Journal of Cardiology**
  Periodicals of European Heart Journal
  Periodicals of American Heart Journal
- 6.4: Websites: **Update guidelines of IHD, HF, ACS, systemic hypertension, infective endocarditis, pulmonary embolism and hypertension, arrhythmias and aortic and pericardial disorders**
  www.ESC.com, www.ACC.com,

(7) Facilities and resources mandatory for course completion:

Teaching rooms: Patients wards, CCU, Echocardiography room.

Course coordinator:

Prof Dr Eman ElSafty, Professor of cardiovascular medicime

Dr. Moheb Magdy, Lecturer of cardiovascular medicine

Head of the department: Prof. AbdelRazek Maaty

Date: 8-6-2016