



Program Specification for M.D Degree in cardiothoracic surgery

Program type: Single.

Program code: CARS 934.

Department offering the program: Department of Cardiothoracic Surgery

Total credit points: 283 CP (163 CP M.S + 120 CP M.D)

Academic year: 2016/2017

Program Director: Prof. Dr Hesham Shawky.

I. Program aims

- a. This Program aims to refresh the candidate knowledge about cardiothoracic surgery and its recent advances and relate this knowledge to aid in their clinical practice.
- b. To familiarize the students with the different cardiac pathologies whether Congenital, valvular and ischemic heart diseases, as well as different thoracic pathologies, including lung, pleura, Mediastinal esophagus and diaphragm.
- c. To Participate in research projects , help to develop research protocols ,and advances of new techniques.

II. Intended learning outcomes of program (ILOs)

A. **Knowledge and Understanding:** By the end of the program the candidate should be able to:

1. Master the basic scientific knowledge related to pathophysiology and pathology of different Cardiothoracic disease, with detailed Surgical management of the advanced and complicated diseases in Cardiothoracic surgery.

2. Recognize appropriate knowledge about indication, contraindication, complications of different technical Cardiothoracic procedures.
3. Understand concepts of cardiopulmonary diagnostic / imaging tools.
4. Master the basics of cardiothoracic emergency, trauma and priority of mass causality / crisis management.
5. Aware of the areas of research in the fields of the updated Cardiothoracic Surgery and to possess excellent knowledge for research conduction.
6. Recognize the basics of teaching by different advanced modalities.

B. Intellectual Skills: By the end of the program the candidate should be able to:

1. Acquire proper scientific thinking.
2. Design an appropriate diagnostic plan for proper proposal of projects and researches.
3. Analyze symptoms & signs, correlate them to the basic knowledge he had acquired and construct a proper management plan for rare and complicated Cardiothoracic problems .
4. Acquire advanced experience in one of the main domains of Cardiothoracic surgery.(chosen by the candidate)

B. Professional and Practical Skills: By the end of the program the candidate should be able to:

1. Offer proper surgical management for complicated Cardiothoracic problems.
2. Acquire extra specialized skills in one of the main domains of cardiothoracic surgery. (chosen by the candidate)
3. Master different scientific methodologies and have critical reading abilities.
4. Write scientific article according to the basics of scientific research.

D. General and Transferable Skills: By the end of the program the candidate should be able to:

1. Communicate with the patients to gain their confidence.
2. Respond effectively to a patient's emotional and psychosocial concerns

3. Communicate with other health care providers.
4. Appreciate team work.
5. Achieve Computer skills necessary to make use of medical data bases and use the internet for communication.
6. Show leadership skills that enable him to organize work and lead the junior and paramedical staff.

III. Program admission requirements.

According to the Faculty of Medicine, Cairo University Bylaws for Post Graduate Programs (July 2009), applicants should have MBChB or equivalent degree, and Master degree in cardiothoracic surgery. All applicants for postgraduate studies should fulfill preliminary courses on the following subjects; Medical statistics – English language (Toefl or equivalent degree) – Computer skills (ICDL) or equivalent computer course offered by the medical education center (MEDC). Admission to the program is open during July. Training prior to registration may be accredited according to departmental and hospital evaluation.

1. Academic reference standers: The academic standers of anatomy program m is adopted and accredited by the departmental council
2. External References for Standards:

IV. Program structure and contents.

Program duration: Two years.

Program structure: Total Credit points 120

A) Compulsory courses

A total of 19 credits points (CP) are to be fulfilled as follow:

One academic year (30 weeks Starts October)

Cardiothoracic surgery Advanced course

- | | |
|-----------------------------|----------------------|
| 1. Coronary surgery | (CARS 934Ta) Five CP |
| 2. Valve surgery | (CARS 934Tb) Five CP |
| 3. Congenital heart surgery | (CARS 934Tc) Five CP |
| 4. Chest surgery | (CARS 934Td) Four CP |

B) Elective courses

**A total of 5 credits points are to be fulfilled as follows
Whereby two of following courses (2.5CP for each course) are required:**

1. Endoscopic & Robotic
Cardiothoracic Surgery (CARS 934 ENRO)
2. Endovascular therapy and hybrid techniques in
cardiovascular surgery (CARS 934 EVHS)
3. Gene therapy & stem cell therapy
In cardiothoracic surgery (CARS934 GtSC)

C) Scientific activities :

A total of 6 credit points will be fulfilled as follows

The students should participate in the scientific activities of the departments such as:

- Department scientific meetings
- National scientific meetings
- International scientific meetings
- Journal club presentation

Each activity is monitored and given credit points registered in a special section in the specialized-training logbook. The student should collect the required points before the final exam.

D) Specialized training program(CARS934C)

A total of 50 Credit points must be fulfilled as follows

according to curriculum of the Department of Cardiothoracic Surgery in a dedicated log book for the different activities including operating room maneuvers (operations whether as assistant or operator), clinical rounds, case presentation, topic discussions and research work. Students should spend 24 months in order to acquire the needed credit points. During this period the students will attend the cardiothoracic course(s) of the M.D. program and will participate in the scientific activities of the department.

- Attendance of Cardiothoracic ER
- Attendance of Cardiothoracic OR
- Attendance of Outpatient clinic

- Attendance of Inpatients round
- Attendance of Endoscopic OR
- Attendance of Endoscopic course
- Attendance of Laser course
- Scientific Topic presentation

E) M.D Thesis

A total of 40 credit points will be collected after fulfilling the M.D Thesis
 All M.D. degree students should prepare a thesis in one of the domains of cardiothoracic surgery. The timing of thesis protocol presentation for approval is at the start of the specialized training program. The department and the ethical committees must approve the protocol of the research. The Thesis should include a review part and a research part. The Thesis is supervised by one or more senior staff members from the Cardiothoracic Surgery Department and may include other specialties according to the nature of the research.

The thesis should be evaluated and approved by a committee of three professors including one of the supervisors and an external professor. Approving the thesis is mandatory to allow the student to sit for the final exam.

Table 1:

item	Credit points	ILOs.
<p><u>Compulsory Course</u> Candidates should fulfill all the following courses</p> <p>Coronary surgery (CARS 934 Ta)</p> <p>Valve Surgery: (CARS 934 Tb)</p>	<p>19 CP</p> <p>5 CP</p> <p>5 CP</p>	<p>- 3 a) b) c) d) e)</p>

<p>Congenital heart Surgery: (CARS 934 Tc)</p> <p>Chest Surgery: (CARS 934 Td)</p>	<p>5 CP</p> <p>4 CP</p>	
<p><u>Elective courses</u></p> <p>Candidate should choose two course of the elective courses</p> <ul style="list-style-type: none"> • Endoscopic & robotic surgery (CARS 934 ENRO) • Endovascular therapy and hybrid techniques in Cardiovascular surgery (CARS 934 PVS) • Gene therapy & stem cell (CARS 934 Gtsc) 	<p>5 Cp</p> <p>2.5CP</p> <p>2.5CP</p> <p>2.5CP</p>	

Scientific activities	6 CP	- 4 b)
M.D. thesis	40 CP	- 4 c)
Residency training program (CARS 934 C)	50 CP	- 3 a) b) c) d) e)

V. Regulations for progression and program completion

After collecting the required credit points for the respective courses, before submitting to the final examination students should finish the thesis and get approval, complete the specialized training program, and collect the required credit points. The candidate will receive his/her degree after passing this final examination. M.D degree should be obtained within a maximum of 6 years after registration date.

VI. Assessment

Supervision & Monitoring of the Training Program:

According to the Faculty of Medicine, Cairo University Bylaws for Residency Training Programs, professors carry continuous assessment during the program. A residency-training program logbook will be kept for each student to document all his /her clinical and operative procedures activities as well as his/her participation in different scientific activities. The head of the department should allow the students to undergo the final examination when they complete their training program and collect the credit points needed.

A: Attendance criteria:

This includes attending a minimum of 75% of the lectures and completing the necessary log book credentials as specified by the department policy.

B: Assessment Tools: Cardiothoracic surgery:

1. Two written exams on two different days (Three-hours each) including short essay questions, and MCQ in cardiothoracic surgery compulsory courses
2. Clinical case Commentary written exam (one & half hour).
3. Elective courses written exam(one & half hour for each course)
4. Oral exam (45 min duration) focused on imaging evaluation, operative and instruments discussion with three faculty examiners.
5. Clinical exam (45 min duration) focused on practical case problem solving with three faculty examiners.

Written exam will be hold over Four days:

Day one: Cardiothoracic surgery (3 hours)

Day two: Cardiothoracic surgery (3hours)

Day Three: Case commentary (1.5 hours)

Day Four: Elective courses (3 hours)

This will be followed by the clinical and oral examinations on separate days

C: WHEIGHING OF ASSESSMENT: Marks allocated to courses

Exam	Marks	oral exam	Clinical&operative exam	Total
Cardiothoracic first day written exam	200			
Cardiothoracic surgery second day written exam	200			
Commentary written exam	100			
Elective courses	125			

written exam	+125			
TOTAL	750	200	250	1250

Remarks

- It is mandatory to pass the two papers of the cardiothoracic surgery exam separately
- Passing mark in a written exam is $\geq 60\%$

VII. Evaluation of program intended learning outcomes:

Evaluator	Tool	Sample
1. Senior Students	<ul style="list-style-type: none"> • Questionnaire at the end of the program 	<ul style="list-style-type: none"> • All the postgraduate students
2. External Evaluators	<ul style="list-style-type: none"> • Review the program and courses • Attend the final exam. 	<ul style="list-style-type: none"> • Annual report

Date of approval by department council :

Program Director: Prof. Dr. Hesham Shawky.
 Professor and head of department
 Of Cardiothoracic surgery.
 Faculty of medicine, Cairo University.