



## إعتماد توصيف مقررات برنامج الدكتوراه فى جراحة القلب والصدر

نقر نحن الموقعون على هذا أدناه أن توصيف وثيقة البرنامج التعليمى لدرجة الدكتوراه فى

جراحة القلب والصدر والمقررات الدراسية المكونة له قد تم وضعها بمعرفة الأقسام المعنية

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٦.	جراحة القلب والصدر	د./ خالد محمد عبد العال		أ.د./ عصام أحمد مختار	

عميد الكلية



وكيل الكلية للدراسات العليا



## Peer Revision

Reviewers	University	Date of Revision
- Prof. Dawlat Salem	Cairo	10/12/2011
- Prof. Ahmad K. Mansur	Mansura	28/11/2011

# Program Specification of Medical Doctorate Degree of Cardiothoracic Surgery

Sohag University

Faculty of Medicine

## A. Basic Information

1. Program Title: MD degree in cardiothoracic surgery
2. Program Type: Single
3. Faculty: Faculty of Medicine
4. Department: cardiothoracic surgery
5. Coordinator: Prof. Dr/ Esam Mokhtar
6. Assistant coordinator: Dr. Khaled M. Abdel
7. External Evaluator: Prof. Dr/ Ali Abdel Wahab
8. Last date of program specifications approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013.

## B. Professional Information

### 1. Program Aims:

The aim of this program is to provide the postgraduate with the advanced medical knowledge and skills essential for the mastery of practice of cardiothoracic surgery necessary to provide further training and practice in the field of cardiothoracic surgery through providing:

1. Recent scientific knowledge essential for the mastery of practice of cardiothoracic surgery according to the international standards.
2. Skills necessary for proper diagnosis and management of patients including diagnostic, problem solving and decision making and operative skills.
3. Provision of sound ethical principles related to medical practice.
4. Active participation in community needs assessment and problems identification.
5. Maintenance of learning abilities necessary for continuous medical education.
6. Upgrading research interest and abilities.

### 2. Attributes of the post graduate:

By the end of the program the graduate should:

1. Efficient in carrying out the basics and methodologies of scientific research in Cardiothoracic Surgery.
2. The continuous working to add new knowledge in his field.
3. Applying the analytical course and critical appraisal of the knowledge in his specialty and related fields.

4. Merging the specialized knowledge with the other related knowledge with conclusion and developing the relationships in between them.
5. Showing a deep awareness with the ongoing problems, theories, and advanced sciences in his specialty.
6. Determination of the professional problems and creating solutions for them.
7. Efficient in carrying out the professional skills in his specialty.
8. Using advanced suitable technologies which serves his practice.
9. Efficient communication and leadership of team work in his specialty.
10. Decision making through the available information.
11. Using the available resources efficiently and working to find new resources.
12. Awareness with his role in the development of the society and preserve environment.
13. Behaving in a way which reflects his credibility, accountability, and responsibility.
14. Keeping continuous self development and transfer his experiences

### **3. Program Intended Learning Outcomes (ILOs)**

#### **a) Knowledge and Understanding:**

By the end of the program, the student is expected to gain the knowledge and understanding of:

- a1. Mention recent advances in the normal structure and function of the cardio-respiratory system on the macro and micro levels.
- a2. Mention recent advances in the normal growth and development of the cardio-respiratory system.
- a3. List the recent advances in the abnormal structure, function, growth and development of cardio-respiratory system
- a4. Mention recent advances in the natural history of cardiothoracic diseases.
- a5. List recent advances in the causation of cardio-respiratory diseases and their pathogenesis.
- a6. List the clinical picture and differential diagnosis of cardiothoracic surgery illness.
- a7. Enumerate recent advances in the common diagnostic and laboratory techniques necessary to establish diagnosis of cardio-respiratory illnesses.
- a8. Describe recent advances in the various therapeutic methods/alternatives used for cardio-respiratory diseases.
- a9. Mention the principles and fundamentals of ethics and legal aspects of professional practice in the field of cardiothoracic surgery.
- a10. Illustrate Principles, methodologies, tools and ethics of scientific research
- a11. List the principles and fundamentals of quality assurance of professional practice in the field of cardiothoracic surgery.
- a12. Mention effect of professional practice on the environment and the methods of environmental development and maintenance.
- a13. Enumerate the recent advances in biostatistics and computer.
- a14. Mention basics and legal aspects of writing primary medical reports.

**b) Intellectual Skills**

By the end of the study of doctoral program in cardiothoracic surgery the Graduate should be able to:

- b1. Interpret data acquired through history taking to reach a provisional diagnosis for cardio-respiratory problems.
- b2. Select from different diagnostic alternatives the ones that help reaching a final diagnosis for cardio-respiratory problems.
- b3. Conduct research studies that add to knowledge.
- b4. Formulate scientific papers in the area of cardiothoracic surgery
- b5. Assess risk in professional practices in the field of cardiothoracic surgery
- b6. Plan to improve performance in the field of cardiothoracic surgery
- b7. Identify cardio-respiratory problems and find solutions.
- b8. Have the ability to innovate nontraditional solutions to cardio-respiratory problems.
- b9. Manage Scientific discussion based on scientific evidences and proofs.
- b10. Criticize researches related to cardiothoracic surgery

**c) Professional and Practical Skills**

By the end of the program, the student is expected to be capable of:

- c1. Mastering the basic and modern professional skills in the area of cardiothoracic surgery.
- c2. Writing and evaluation of medical reports.
- c3. Evaluation and development of methods and tools existing in the area of cardiothoracic surgery
- c4. The use of technological methods to serve the professional practice.
- c5. Planning for the development of professional practice and development of the performance of others.
- c6. Have the ability to develop new methods, tools and ways of professional practice.

**d) General and Transferable Skills**

By the end of the program, the student is expected to be able to:

- d1. Doing the different types of effective communication.
- d2. Using information technology to serve the development of professional practice
- d3. Teaching others and evaluating their performance.
- d4. Self-assessment and identification of personal learning needs.
- d5. The use of different sources for information and knowledge.
- d6. Working in a team and team's leadership.
- d7. Manage scientific meetings administration according to the available time.

**4. Academic Standards**

Sohag Faculty of Medicine adopted the general National Academic Reference Standard (NARS) provided by the national authority for quality assurance and accreditation of education (NAQAAE) for postgraduate programs. This was approved by the Faculty Council decree NO. 6854, in its session NO. 177 Dated: 18/5/2009. Based on these NARS; Academic Reference Standards (ARS) were suggested for this program. These ARS were revised by external evaluator, approved by the Faculty Council decree NO. 7528, in its session NO. 191, dated: 15/3/2010. The adoption of NARS and the

suggested ARS were approved by University council degree No 587, in its session No.60. dated 26-12-2011.

## 5. Curriculum Structure and Contents

5.a- Program duration : 7 semesters (3.5 years).

5.b- Program structure:

5.b.i- No. of hours per week:

Subject	hours /week		
	Lectures	Practical/ surgical	Clinical
<b>First Part:</b>			
<u>Minors:</u>			
▪ Bio Statistics & Computer	1	2	
▪ Research Methodology	1	2	---
▪ Primary medical reports	1	1	
▪ Surgical pathology	3		
▪ Surgical anatomy	3		
<b>Second Part:</b>			
• Cardiothoracic surgery curriculum	7	6.25	6.25

code	Item	No	%	
b.i	Total credit hours	Compulsory	90	100
		Elective		
		Optional		
b.iii	credit hours of basic sciences courses	6	6.6	
b.iv	credit hours of courses of social sciences and humanities			
b.v	credit hours of specialized courses:	53	58.89	
b.vi	credit hours of other course			
b.vii	Practical/Field Training	8	8.9	
b.viii	Program Levels (in credit-hours system):			
	Level 1: 1 <sup>st</sup> part	15	16.7	
	Level 2: 2 <sup>nd</sup> Part	52	57.8	
	Level 3: Thesis	15	16.7	

6. Program Courses \* 6 courses are compulsory

### 6.1- Level of Program

Semester...1.....

First part:

a- Compulsory:

Course Title	Total No. of hours	No. of hours /week			Program ILOs Covered (By No.)
		Lect.	Practical/ surgical	clinical	
Research Methodology	3	1	2	-	a10,a12, b3,b4,b8,b10, C1,c6,d5,d6
Bio Statistics & Compute	3	1	2		a13,b1,c4 ,d2,d5
Primary medical reports	2	1	1		a14,b5,b9,c2,d1,d3
Surgical pathology	3	3			a4,a5,a6,b3,b4,b9,b10,c1 c6,d1,d3,d4,d5,d7
Surgical anatomy	3	3			a1,a2,a3,a4,a10,b3,b4,b9, b10,c1,c6,d1,d3,d4,d5,d7
Cardiothoracic surgery	19.5	7	6.25	6.25	a1,a6,a7,a8,a9,a11,b1,b2,b3,b4,b6,b7 ,b8,b9,b10,c1,c3,c4,c5,c6,d1,d2, d3,d4,d5,d6,d7

## 7. Program Admission Requirements

### I- General Requirements.

- Candidate should have either MBBCh degree from any Egyptian Faculty of Medicine or Equivalent Degree from Medical Schools abroad approved by the ministry of high Education.
- Candidate should know how to speak & write English well
- Candidate should have computer skills.
- Follow postgraduate bylaw Regulatory rules of Sohag Faculty of Medicine approved by the ministerial decree No. (44), dated 6/1/2010.

### II- Specific Requirements

- Master degree in cardiothoracic surgery with at least "Good Rank".

## 8. Regulations for Progression and Program Completion

Duration of program is 90 credit hours ( $\geq 7$  semesters  $\geq 3.5$  years), starting from registration till acceptance of the thesis; divided to:

### First Part: (14 Credit hours $\geq 6$ months $\geq 1$ semester):

- Program-related basic science, Research Methodology, Ethics & medical reports, Biostatistics and computer.
- At least six months after registration should pass before the student can ask for examination in the 1<sup>st</sup> part.
- Two sets of exams: 1st in October — 2nd in April after fulfillment of the credit hours.
- At least 60% of the written exam and 60% of the total oral and practical/clinical is needed to pass in each course.

- For the student to pass the first part exam, a score of at least 60% (Level D) in each course is needed.
- Those who fail in one course need to re-exam it only.
- GPA of  $\geq 1.3$  is needed to pass this level (semester).

**Second Part: (61 Credit hours  $\geq 24$  months= 4 semesters):**

- Program related specialized science of Obstetrics & Gynecology courses. At least 24 months after passing the 1<sup>st</sup> part should pass before the student can ask for examination in the 2<sup>nd</sup> part.
- Fulfillment of the requirements in each course as described in the template and registered in the log book (8 Credit hours; with obtaining  $\geq 75\%$  of its mark) is a prerequisite for candidates to be assessed and undertake part 1 and part 2 examinations; the credit hours of the logbook are calculated as following:
  - Each Cr. Hr.= 60 working Hrs.
  - Logbook= 8 Cr. Hr. X 60 working Hrs = 480 Working Hrs.
  - Collection of working Hrs. is as following:

Activity		Hrs
Grand rounds	اجتماع علمي موسع	6
Training courses	دورات تدريبية	12/ day
Conference attendance	حضور مؤتمرات علمية	12/day
	داخلي خارجة	18/day
Thesis discussion	حضور مناقشات رسائل	6
Workshops	حضور ورش عمل	12/day
Journal club	ندوة الدوريات الحديثة	6
Seminars	لقاء علمي موسع	6
Morbidity and Mortality conference	ندوة تحليل المخاطر المرضية أوالوفاة	6
Self education program	برنامج التعليم الذاتي	6

- Two sets of exams: 1st in October - 2nd in April.
- At least 60% of the written exam is needed to be admitted to the oral and practical exams.
- 4 times of oral and practical exams are allowed before the student has to re-attend the written exam.

**Third Part (Thesis) (15 Credit hours =24-48 months=4-8 semester):**

- Documentation of the subject should not be delayed for  $> 1.5$  years after registration.
- Could start after registration and should be completed, defended and accepted after passing the 2nd part final examination, after passing of at least 24 months after documentation of the subject of the thesis and after publishing of at least one paper from the thesis in a specialized peer-reviewed journal.

- Accepting the thesis is enough to pass this part.

### 9. Methods of student assessments:

Method of assessment	weight	The assessed ILOs
1-Research assignment		- General transferable skills, intellectual skills
2-Written Exams: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	50%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills
3- OSPE	50%	-Practical skills, intellectual skills, general transferable skills
4-Structured Oral Exams		- Knowledge, Intellectual skills, General transferable skills

### Assessment schedule:

#### Part I:

- Biostatistics & Computer: Written Exam (2 hours) + Structured oral Exam+ OSPE
- Research Methodology: Written Exam (2 hours) + structured oral Exam+ OSPE
- Primary medical reports: Written Exam (2 hour) + Structured oral Exam+ OSPE
- Surgical anatomy: Written Exam (3 hours) + structured oral Exam.
- Surgical pathology: Written Exam (3 hours) + structured oral Exam.

#### Part II:

- Cardiothoracic surgery: Two Written Exams (3 hours for each) + one written exam containing commentary (1.5 hours) + OSCE + Structured oral Exam + Operative Exam

### 10. Evaluation of the program:

Evaluator	Tool	Sample
1- Senior students	Questionnaire	2
2- Alumni	Questionnaire	1
3- Stakeholders ( Employers)	Questionnaire	1
4-External Evaluator(s) External Examiner(s)	Report	1
5- Other		

## Course Specifications of Applied Biostatistics for MD Degree in Cardiothoracic Surgery

Sohag University

Faculty medicine

1. Program on which the course is given: MD degree in Cardiothoracic surgery
2. Major or minor element: minor
3. Department offering the program: Cardiothoracic surgery
4. Department offering the course: Community Medicine and public Health Dep.
5. Academic year/level: 1st part
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

### A. Basic Information

Title: Course Specifications of Applied Biostatistics for (MD degree in cardiothoracic surgery)

Code: COM 0502-300

Lecture	Practical	Total	Credit
30	30	60	3

### B. Professional Information

#### 1. Overall Aims of Course

To use precisely medical biostatistics and computer programs

#### 2. Intended Learning Outcomes of Courses (ILOs)

##### a) **Knowledge and understanding:**

By the end of the course, the student is expected to be able to:

- a1. Mention different programs of analysis of data and statistical packages
- a2. Define the recent advances of sources of data and methods of collection.
- a3. Summarize data, construct tables and graphs
- a4. Calculate measures of central tendency and measures of dispersion
- a5. Describe the normal curves and its uses
- a6. Illustrate selected tests of significance and the inferences obtained from such tests
- a7. Illustrate selected tests of significance for parametric and non parametric inferences
- a8. Identify factor analysis and discrimination analysis

##### b) **Intellectual Skills**

By the end of the course, the student is expected to be allowed to:

- b1. Understand how to collect and verify data from different sources
- b2. Interpret data to diagnose prevalent problems in cardiothoracic surgery

##### c) **Professional and Practical Skills:**

By the end of the course, the student is expected to practice the following:

- c1. Perform recent advanced technological methods in collection, analysis and interpretation of data and in management of prevalent cardiothoracic surgery problems

**d) General and Transferable Skills:**

By the end of the course, the student is expected to be able to:

- d1. Use appropriate computer program packages.  
d2. Use of different sources for information and knowledge about biostatistics.

**3. Contents**

<b>Topic</b>	<b>No. of hours</b>	<b>Lecture</b>	<b>Tutorial/ Practical</b>
Recent advances in collection, analysis and interpretation of data	6	3	3
-Details of Tests of significance: Proportion test	6	3	3
Chi-square test	4	2	2
Student T test	6	3	3
Paired T test	6	3	3
-Correlation	6	3	3
-Regression	4	2	2
-ANOVA test	6	3	3
-Discrimination analysis	6	3	3
Factor analysis	6	3	3
- parametric and non parametric tests	4	2	2
<b>Total</b>	<b>60</b>	<b>30</b>	<b>30</b>
<b>Credit</b>	<b>3</b>	<b>2</b>	<b>1</b>

**4. Teaching and Learning Methods**

- 4.1- Lectures  
4.2- Practical sessions  
4.3- Computer search assignments  
4.4- Computer application

**5. Student Assessment Methods**

<b>Method of assessment</b>	<b>The assessed ILOs</b>
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.4 Computer search assignment	-General transferable skills, intellectual skills

## Assessment Schedule

Assessment 1.....	Final written exam	Week: 24
Assessment 2.....	Final Structured Oral Exam	Week: 24
Assessment 3	Attendance and absenteeism throughout the course	
Assessment 4	Computer search assignment performance throughout the course	

## Weighting of Assessments

Final-term written examination	50	%
Final Structured Oral Exam	50	%
Total	100	%

**Formative only assessments: attendance and absenteeism and Computer search assignments performance.**

## 6. List of References

### 6.1- Course Notes

Department notes, lectures and handouts

### 6.2- Essential Books (Text Books)

1-Maxy-Rosenau Public health and preventive medicine, Prentice – Hall International Inc.

### 6.3- Recommended Books

1- Dimensions of Community Health, Boston Burr Ridge Dubuque.

2- Short Textbook of preventive and social Medicine. Prentice-Hall International Inc.

3- Epidemiology in medical practice, 5<sup>th</sup> edition. Churchill Livingstone. New York, London and Tokyo.

### 6.4- Periodicals, Web Sites, ... etc

1-American Journal of Epidemiology

2-British Journal of Epidemiology and Community Health

1- WWW. CDC and WHO sites

## 7. Facilities Required for Teaching and Learning:

1. Adequate infra structures: including: teaching places (teaching classes, teaching halls, teaching labs), comfortable desks, good source of aeration, good illumination, safety and security methods.
2. Teaching tools: including screens, computers, data show, projectors, flip charts, white boards, video players, digital video cameras, scanner, copiers, color and laser printers.

**Course Coordinator:** Dr/Ahmed Fathy Hammed

**Head of Department:** Prof/Eman Abd El-Baset Mohammed

**Date:** 18/12/2011, **Revised:**1/9/2012, **Revised:**1/12/2013

# Course Specifications of Research Methods for MD degree in Cardiothoracic Surgery

Sohag University

Faculty Medicine

1. Program on which the course is given: MD degree in cardiothoracic surgery
2. Major or minor element: minor
3. Department offering the program: cardiothoracic surgery dept.
4. Department offering the course: Community Medicine and public Health Dep.
5. Academic year/level: 1<sup>st</sup> part
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

## A. Basic Information

**Title:** Course Specifications of Research methods for health services for (MD degree in cardiothoracic surgery)

**Code:** COM 0502-300

Lecture	Practical	Total	Credit
30	30	60	3

## B. Professional Information

### 1. Overall Aims of Course

1. To influence the students to adopt an analytical thinking for evidence based medicine
2. To use precisely the research methodology in researches

### 2. Intended Learning Outcomes of Courses (ILOs)

#### a) Knowledge and understanding:

By the end of the course, the student is expected to be able to:

- a1. Define the recent advances of screening tests pertinent to selected diseases and the at-risk approach in the application of screening tests.
- a2. Explain the usefulness of screening tests, and calculate sensitivity, specificity, and predictive values.
- a3. Describe the study design, uses, and limitations.
- a4. Mention the recent advances of principles, methodologies, tools and ethics of scientific research.
- a5. Explain the strategies and design of researches.
- a6. Describe bias and confounding.
- a7. Describe sampling techniques and list advantages of sampling
- a8. Identify principles of evidence based medicine.

#### b) Intellectual Skills

By the end of the course, the student is expected to be able to:

- b1. Conduct research studies that add to knowledge.
- b2. Formulate scientific papers in the area of cardiothoracic surgery
- b3. Innovate and create researches to find solutions to prevalent problems in cardiothoracic surgery
- b4. Criticize researches related to cardiothoracic surgery

**c) Professional and Practical Skills:**

By the end of the course, the student is expected to be able to:

- c1. List the basic and modern professional skills in conducting researches in the area of cardiothoracic surgery
- c2. Design new methods, tools and ways of conducting researches.

**d) General and Transferable Skills:**

By the end of the course, the student is expected to be able to:

- d1. Use of different sources for information and knowledge to serve research.
- d2. Work coherently and successfully as a part of a team and team's leadership in conducting researches and field studies.

**3. Contents**

Topic	No. of hours	Lecture	Tutorial/Practical
Details of epidemiological studies (case control, cohort and cross sectional )	7	3.5	3.5
Clinical trials, Quasi experimental study	7	3.5	3.5
Bias and errors	7	3.5	3.5
Setting a hypothesis	7	3.5	3.5
Recent advances in screening	7	3.5	3.5
- Evidence – based Medicine: Concept and examples Applicability Scientific writing: A protocol A curriculum	11	5.5	5.5
Setting an objective - Critical thinking	7	3.5	3.5
Formulation of papers	7	3.5	3.5
<b>Total</b>	<b>60</b>	<b>30</b>	<b>30</b>
<b>Credit hours</b>	<b>3</b>	<b>1</b>	<b>2</b>

**4. Teaching and Learning Methods**

- 4.1- Lectures.
- 4.2- Computer search assignments

## 5. Student Assessment Methods

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.4 Computer search assignment	-General transferable skills, intellectual skills

### Assessment Schedule

Assessment 1	Final written exam	Week: 24
Assessment 2	Final Structured Oral Exam	Week: 24
Assessment 3	Attendance and absenteeism throughout the course	
Assessment 4	Computer search assignment performance throughout the course	

### Weighting of Assessments

Final-term written examination	50	%
Final Structured Oral Exam	50	%
Total	100	%

**Any formative only assessments** Attendance and absenteeism throughout the course  
Computer search assignment performance throughout the course

## 6. List of References

### 6.1- Course Notes

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### 6.2- Essential Books (Text Books)

1-Maxy-Rosenau Public health and preventive medicine, Prentice – Hall International Inc.

### 6.3- Recommended Books

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### 6.4- Periodicals, Web Sites, ... etc

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1. Adequate infra structures: including: teaching places (teaching classes, teaching halls), comfortable desks, good source of aeration, good illumination, safety and security methods.
2. Teaching tools: including screens, computers, data show projectors, flip charts, white boards, video players, digital video cameras scanner, copiers, color and laser printers.

**Course Coordinator:** Dr/Ahmed Fathy Hammed

**Head of Department:** Prof/Eman Abd El-Baset Mohammed

**Date:** 18/12/2011, **Revised:**1/9/2012, **Revised:**1/12/2013

## Course Specifications of Primary Medical reports for MD degree in Cardiothoracic Surgery

Sohag University

Faculty Medicine

1. Programme on which the course is given: MD degree in cardiothoracic surgery
2. Major or minor element: minor
3. Department offering the program: cardiothoracic surgery department
4. Department offering the course: Forensic Medicine and Clinical Toxicology dept.
5. Academic year/level: 2st part
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

### A. Basic Information

Title: Course Specifications of primary medical reports for (MD degree in cardiothoracic surgery)

Code: FOR 0502-300

Title	Lecture	Practical	Total	Credit
Primary medical report	15	30	45	2

### B. Professional Information

#### 1. Overall Aims of Course

By the end of the course the student should be able to have the professional knowledge about the writing medical report.

#### 2. Intended Learning Outcomes of Course (ILOs):

##### a) Knowledge and Understanding:

By the end of the course, the student should be able to:

- a1. Mention basics and legal aspects of writing primary medical reports.

##### b) Intellectual skills:

By the end of the course, the student should be able to:

- b1. Manage Scientific discussion based on scientific evidences and proofs.
- b2. Assess risk in professional practices in the field of cardiothoracic surgery

##### c) Professional and practical skills:

By the end of the course, the student should be able to:

- c1. Write and evaluate medical reports.

##### d) General transferable skills:

By the end of the course, the student should be able to:

- d1. Teach others and evaluate their performance in writing primary medical reports.

### 3. Content:

Topic	No. of hours	Lecture	Practical
The pathology of wounds, chest and abdominal injuries, self inflicted injury	4	1.5	2.5
The systemic effect of trauma& Permanent infirmity	3.5	1	2.5
Head and spinal injuries	4	1.5	2.5
The medicolegal aspects of firearm injuries	3.5	1	2.5
Burn and scold	4	1.5	2.5
How to write a medicolegal report& How to write death certificate	3.5	1	2.5
The medicolegal aspect of deaths associated with surgical procedures and toxicological sampling	4	1.5	2.5
Obligation of physicians (towards patients, colleagues, community)	3.5	1	2.5
Consent, and professional secrecy	4	1.5	2.5
Types of malpractice, and items of medical responsibility	3.5	1	2.5
Medicolegal aspects of organ transplantation, intersex states, euthanasia, assisted reproduction techniques	4	1.5	2.5
ethical considerations of medical research involving human subjects	3.5	1	2.5
<b>Total hours</b>	<b>45</b>	<b>15</b>	<b>30</b>
<b>Credit</b>	<b>2</b>	<b>1</b>	<b>1</b>

### 4. Teaching and Learning Methods

4.1- Lectures.

4.3- Assignments

### 5. Student Assessment Methods

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.4 Computer search assignment	-General transferable skills, intellectual skills

### **Assessment Schedule**

1. **Assessment 1:** One written exam by the end of the course Week 24
2. **Assessment 3:** Final Structured Oral Exam by the end of the course Week 24

### **Weighting of Assessments**

Final-term written examination	50%
Structured Oral Exam	50%
Total	100%

Formative only assessment: simple research assignment, attendance and absenteeism.

### **6. List of References**

6.1- Course notes : Lectures notes prepared by the staff members of the department

6.2-Essential Books:

- Simpson's Forensic Medicine by Knight, B
- Medical ethics. by Jones & Barlett

6.3- Periodicals and websites:

- Forensic Science International,
- Egyptian Journals of Forensic Medicine and Clinical Toxicology,
- International Journals of Forensic Medicine and Clinical Toxicology
- Web sites : [www.sciencedirect.com](http://www.sciencedirect.com)

### **7. Facilities Required for Teaching and Learning**

1. Adequate infra structures: including: teaching places(teaching classes, teaching halls, teaching museum, illustrative images), comfortable disks, good source of aeration, good illumination, safety and security methods.
2. Teaching tools: including screens, computers, data show, projectors, flip charts, white boards, video players, digital video cameras, scanner, copiers, color and laser printers.

**Course Coordinator:** Dr/ Soheir Ali Mohamed

**Head of Department:** Dr/ Maha Abdelhameed Helal

**Date:** 18/12/2011, **Revised:**1/9/2012, **Revised:**1/12/2013

## Course Specifications of Human Anatomy & Embryology for MD degree in Cardiothoracic Surgery

**Sohag University**

**Faculty of Medicine**

1. Program on which the course is given: MD degree in cardiothoracic surgery
2. Major or minor element: minor
3. Department offering the program: cardiothoracic surgery department
4. Department offering the course: Human Anatomy & Embryology
5. Academic year/level: 1st part
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

### **A. Basic Information**

Title: Course Specifications of Human Anatomy & Embryology for (MD degree in cardiothoracic surgery)

Code: ANA 0502-300

Hours:

Title	Lecture	Practical	Total	Credit
anatomy	45		45	3

### **B. Professional Information**

#### **1. Overall Aims of Course**

By the end of the course the student should be able to have the professional knowledge about the anatomy of the chest and heart

#### **2. Intended Learning Outcomes of Course (ILOs):**

##### **a) Knowledge and understanding:**

By the end of the course, the student should be able to:

- a1. According to the intended goals of the faculty: the student is to be armed with professional knowledge about the Human Anatomy & Embryology of the chest and heart as well as their embryological bases.
- a2. Mention recent advances in the normal growth and development of the cardio-respiratory system

##### **b) Intellectual skills:**

By the end of the course, the student should be able to:

- b1. Conduct research studies that add to knowledge in the anatomical field.
- b2. Formulate scientific papers in the anatomy of the cardio-respiratory system.
- b3. Manage Scientific discussion based on scientific evidences and proofs in the anatomical aspects of cardio-respiratory system.
- b4. Criticize researches related to the anatomical issues related to plastic surgery

##### **c) Professional and practical skills:**

By the end of the course, the student should be able to:

- c1. List the basic and modern professional clinical and surgical skills in the area of cardiothoracic surgery.

c2. Train to develop new methods, tools and ways of professional practice in anatomical field.

**d) General and Transferable Skills:**

By the end of the course, the student should be able to:

- d1. Teach others and evaluate their performance.
- d2. Assess himself and identify his personal learning needs.
- d3. Use of different sources for information and knowledge in anatomy field.
- d4. Manage scientific meetings according to the available time.

**3. Course Contents:**

Topic	Total hours	lectures	practical
Anatomy ,embryology and congenital anomalies of the the heart	8	8	
Anatomy and embryology of the lungs	8	8	
Anatomy of the mediastinum and great vessels	7	7	
Anatomy and embryology of the esophagus and trachea and related congenital anomalies	7	7	
Anatomy and embryology of the diaphragm	7	7	
Anatomy of the chest wall and related congenital anomalies	8	8	
<b>Total</b>	<b>45</b>	<b>45</b>	
<b>Credit</b>	<b>3</b>	<b>3</b>	

**4. Teaching and Learning Methods**

- 4.1- Lectures.
- 4.2- Practical lessons.
- 4.3- Assignments for the students to empower and assess the general and transferable skills

**5. Student Assessment Methods**

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.4 assignment	-General transferable skills, intellectual skills

### **Assessment Schedule**

1. **Assessment 1:** One written exam by the end of the course Week 24
2. **Assessment 3:** Final Structured Oral Exam by the end of the course Week 24

### **Weighting of Assessments**

Final-term written examination	50%
Structured Oral Exam	50%
Total	100%

Formative only assessment: simple research assignment, attendance and absenteeism.

### **6- List of References**

- 6.1- Course Notes: Notes of the department and practical note
- 6.2- Essential Books (Text Books): Gray's Anatomy
- 6.3- Recommended Books: A colored Atlas of Human anatomy and Embryology.

### **7. Facilities Required for Teaching and Learning**

- a) Adequate infra structures: including: teaching places(teaching classes, teaching halls, teaching labs), comfortable desks, good source of aeration, good illumination, safety and security methods.
- b) Teaching tools: including screens, computers, data show, projectors, flip charts, white boards, video players, digital video cameras, scanner, copiers, color and laser printers.

**Course Coordinator:** Dr. Salwa M. Ewaas.

**Head of Department:** Dr. Mohamed A. Eldsoky.

**Date:** 18/12/2011, **Revised:**1/9/2012, **Revised:**1/12/2013

# Course Specifications of Pathology for MD degree in Cardiothoracic Surgery

Sohag University

Faculty of Medicine

1. Program on which the course is given: MD degree in cardiothoracic surgery
2. Major or minor element of program: Minor
3. Department offering the program: Cardiothoracic surgery
4. Department offering the course: Pathology dept.
5. Academic year/level: 1st part
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

## A. Basic Information

**Title:** Course Specifications of pathology for (MD degree in cardiothoracic surgery)

**Code:** PAT0502-300

Title	lecture	practical	Total	Credit
pathology	45	-	45	3

## B. Professional Information

### 1. Overall Aims of Course

By the end of the course the post graduate students should be able to have the professional knowledge of the pathology of medical diseases.

### 2. Intended Learning Outcomes of Course (ILOs):

According to the intended goals of the faculty

#### a) **Knowledge and Understanding:**

By the end of the course, the student should be able to:

- a1. Mention recent advances in the natural history of the common and rare pathological problems related to cardiothoracic surgery.
- a2. List recent advances in the pathogenesis of diseases related to cardiothoracic surgery.
- a3. Describe correlation of gross pathology with the clinical basis of diseases related to cardiothoracic surgery.

#### b) **Intellectual Skills:**

By the end of the course, the student should be able to:

- b3. Conduct research studies that add to knowledge in the pathological field.
- b4. Formulate scientific papers in gross and microscopic picture of different diseases in cardiothoracic surgery.
- b5. Manage Scientific discussion based on scientific evidences and proofs in the pathological aspects of cardiothoracic surgery.
- b6. Criticize researches related to the pathological issues related to cardiothoracic surgery

**c) Professional and Practical Skills:**

By the end of the course, the student should be able to:

c1. Master the basic and modern professional clinical and surgical skills in the area of cardiothoracic surgery.

c2. Train to develop new methods, tools and ways of professional practice in pathological field.

**d) General and Transferable Skills:**

d1. Present reports in seminars effectively.

d2. Teach others and evaluate their performance.

d3. Assess himself and identify his personal learning needs.

d4. Use of different sources for information and knowledge in pathology field.

d5. Manage scientific meetings according to the available time.

**3. Course Contents:**

<b>Topic</b>	<b>Total</b>	<b>Lecture</b>	<b>practical</b>
<b>1- General Pathology:</b>	<b>6</b>	<b>6</b>	
1.1. Inflammation & repair.	1	1	
1.2. Cell response to injury disturbances of circulation.	1	1	
1.3. Infectious diseases.	2	2	
1.4. General pathology of tumors.	2	2	
<b>2- Heart &amp; blood vessels:</b>	<b>18</b>	<b>18</b>	
2.1. Congenital heart diseases.	3	3	
2.2. Rheumatic heart diseases.	3	3	
2.3. Pericarditis & pericardial effusion.	3	3	
2.4. Aneurysm & dissections.	3	3	
2.5. Tumors of the heart & blood vessels.	3	3	
2.6. Artificial valves, cardiac transplantation & their complications.	3	3	
<b>3- Lung &amp; mediastinum:</b>	<b>15</b>	<b>15</b>	
3.1. Bronchiectasis & lung abscess.	3	3	
3.2. Pneumothorax & pyopneumothorax empyema.	3	3	
3.3. Lung collapse.	3	3	
3.4. Tumors of the lung & pleura.	3	3	
3.5. Tumors of the chest wall & mediastinum	3	3	
<b>4- GIT.</b>	<b>6</b>	<b>6</b>	
4.1. Reflux esophagitis.	2	2	
4.2. Esophageal tumors.	2	2	
4.3. Diaphragmatic hernias & subphrenic abscess.	2	2	
<b>Total</b>	<b>45</b>	<b>45</b>	-
<b>Credit</b>	<b>3</b>	<b>3</b>	

#### 4. Teaching and Learning Methods

- 4.1. Lectures.
- 4.2. Gross and histopathology (Jars & slides).

#### 5. Student Assessment Methods

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.4 Computer search assignment	-General transferable skills, intellectual skills

#### Assessment Schedule

- Assessment 1.... Final written exam.... Week: 24
- Assessment 2....Final Structured Oral Exam Week: 24

#### Weighting of Assessments

- Final Written Examination 50 %
- Structured Oral Exam 50 %

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Total 100%

Formative only assessment: simple research assignment, attendance and absenteeism.

#### 6. List of References

- 6.1- Course Notes: Principles of General and Special Pathology;  
Gamal Nada.
- 6.2- Essential Books (Text Books):
  - Muir's text book of pathology.
  - Robbins pathologic basis of diseases.
- 6.3- Recommended Books:
  - Rosi & Ackerman text book of pathology.
  - Sternberg text book of pathology.
- 6.4- Periodicals, American journal of pathology  
Pathology  
Human pathology  
Web Sites: <http://www.ncbi.nlm.nih.gov/pubmed/>

**7. Facilities Required for Teaching and Learning:**

1. Adequate infra structures: including: teaching places (teaching classes, teaching halls, teaching labs), comfortable desks, good source of aeration, good illumination, and safety and security methods.
2. Teaching tools: including screens, computers, data show, projectors, flip charts, white boards, video players, digital video cameras, scanner, copiers, color and laser printers.

**Course Coordinator:** Dr/ Fatma El Zhraa Salah El Deen

**Head of Department:** Dr/ Eman Muhammad Salah El Deen

**Date:** 18/12/2011, **Revised:**1/9/2012, **Revised:**1/12/2013

# Course Specifications of Cardiothoracic Surgery MD degree in Cardiothoracic Surgery

Sohag University

Faculty of Medicine

1. Program on which the course is given: MD degree in cardiothoracic surgery
2. Major or minor element: major
3. Department offering the program: Cardiothoracic Surgery dept.
4. Department responsible for the course: Cardiothoracic Surgery dept.
5. Academic year/level: 2nd part
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

## A. Basic information:

Title: Course Specifications of cardiothoracic surgery (2nd part) for MD degree in cardiothoracic surgery

Code: CAR 0502-300

Title	Lecture	Clinical	Surgical	Total
cardiothoracic	420	380	380	1180
surgery	28	12.5	12.5	53

## B. Professional Information:

### 1. Course Aims:

Upon successful completion of this course, the graduates should be able to professionally and independently analyze, interpret, diagnose and manage cardiothoracic cases both medically and surgically and apply the obtained data independently in diagnosing abnormalities in the chest and heart.

### 2. Intended Learning Outcomes of Courses (ILOs)

#### a) Knowledge and understanding:

By the end of the course, the student should be able to:

- a1. Mention the recent advances in the normal structure and function of the cardio-pulmonary system on micro level.
- a2. Describe correlation of histopathology with the clinical basis of diseases related to cardiothoracic surgery.
- a3. List the clinical picture and differential diagnosis of the diseases related to cardiothoracic surgery.
- a4. Enumerate recent advances in the common diagnostic and laboratory techniques necessary to establish diagnosis of the diseases related to cardiothoracic surgery.
- a5. Describe recent advances in the various therapeutic methods/alternatives used for the diseases related to cardiothoracic surgery.
- a6. Mention the principles and fundamentals of quality assurance of professional practice in the field of cardiothoracic surgery.

**b) Intellectual skills:**

By the end of the course, the student should be able to:

- b1. Interpret data acquired through history taking to reach a provisional diagnosis for cardiothoracic surgery problems.
- b2. Select from different diagnostic alternatives the ones that help reaching a final diagnosis for cardiothoracic surgery related problems.
- b3. Conduct research studies that add to knowledge.
- b4. Formulate scientific papers in the recent trends in managing different conditions in cardiothoracic surgery.
- b5. Assess risk in professional practices in the field of cardiothoracic surgery.
- b6. Plan to improve performance in the field of cardiothoracic surgery.
- b7. Identify cardiothoracic problems and find solutions.
- b8. Have the ability to innovate nontraditional solutions to cardiothoracic problems.
- b9. Manage Scientific discussion based on scientific evidences and proofs.
- b10. Criticize researches related to cardiothoracic surgery.

**c) Professional and practical skills:**

By the end of the course, the student should be able to:

- c1. List the basic and modern professional clinical and surgical skills in the area of cardiothoracic surgery.
- c2. Evaluate and develop methods and tools existing in the area of cardiothoracic surgery.
- c3. Use technological methods to serve the professional practice.
- c4. Plan for the development of professional practice and development of the performance of others.
- c5. Train to develop new methods, tools and ways of professional practice of cardiothoracic surgery.

**d) General transferrable skills:**

By the end of the course, the student should be able to:

- d1. present reports in seminars effectively.
- d2. Use appropriate computer program packages.
- d3. Teach others and evaluate their performance.
- d4. Assess himself and identify his personal learning needs.
- d5. Use of different sources for information and knowledge.
- d6. Work coherently and successfully as a part of a team and team's leadership.
- d7. Manage scientific meetings according to the available time.

### 3. Course Contents:

<b>Title</b>	<b>No. Of hours</b>	<b>lectures</b>	<b>Surgical</b>	<b>clinical</b>
<u>Thoracic Surgery:</u> Anatomy of thorax	52	20	16	16
Imaging of thorax	20	20	-	-
Preoperative assessment	20	20	-	-
Preoperative care	30	30	-	-
Endoscopic diagnosis of thoracic diseases	42	10	16	16
Endoscopic therapies for the airways	46	10	18	18
Thoracic trauma	30	10	10	10
Tracheal lesions	24	6	9	9
Benign lung diseases (congenital, benign lesions, infections etc)	26	6	10	10
Lung cancer	28	8	10	10
Chest wall (defects, tumors, TOS)	27	7	10	10
Pleural diseases (pneumothorax, empyema, tumors)	44	12	16	16
Diaphragm	28	10	9	9
Esophagus.	32	12	10	10
Mediastinum	27	7	10	10
<u>Adult Cardiac Surgery:</u> Surgical anatomy of the heart	30	12	9	9
Physiology of the myocardium and coronary circulation	32	12	10	10
Cardiac imaging (angiography, CT, MRI, nuclear cardiology, and diagnostic echocardiography)	32	12	10	10
Preoperative and intra operative care of cardiac surgical patient	27	7	10	10
Surgery of the aorta	32	12	10	10
Surgical management of valvular heart diseases	32	12	10	10
Surgical management of cardiac arrhythmias	32	12	10	10
Surgical treatment of coronary artery diseases and its complications	32	12	10	10
Surgical management of heart failure	32	12	10	10
<u>Congenital Cardiac Surgery:</u> Cardiac embryology	32	12	10	10
Pediatric anesthesia	32	12	10	10
Congenital tracheal diseases	32	12	10	10

Patent ductus arteriosus	32	12	10	10
Coarctation of the aorta	32	12	10	10
Atrial septal defect	32	12	10	10
Surgical treatment of pulmonary veins anomalies	26	6	10	10
Surgical treatment of pulmonary veins anomalies	22	6	8	8
Ventricular septal defect	22	6	8	8
Tetralogy of fallot	22	6	8	8
Pulmonary atresia	22	6	8	8
Truncus arteriosus	28	10	9	9
Transposition of great arteries	22	6	8	8
Hypoplastic left heart syndrome	22	6	8	8
Adult congenital cardiac surgery	30	10	10	10
<b>Total</b>	<b>1180</b>	<b>420</b>	<b>380</b>	<b>380</b>
<b>Credit</b>	<b>53</b>	<b>28</b>	<b>12.5</b>	<b>12.5</b>

#### 4. Teaching & Learning Methods:

1. Lectures.
2. Clinical cases.
3. Surgical lessons.
4. Attending and participating in scientific conferences, workshops, and group discussion to acquire the general transferable skills needed.

#### 5. Candidate Assessment Methods

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2- Log book	- General transferable skills
5.3-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.4-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.5-OSCE	-Practical skills, intellectual skills General transferable skills
5.6 Computer search assignment	-General transferable skills, intellectual skills

#### Assessments schedule:

Assessment 1 .... log book (formative exam)	Week: 80
Assessment 2 .... Final written exam ....	Week: 96
Assessment 3 .....Final OSCE .....	Week: 96
Assessment 4 ... Final Structured Oral Exam	Week: 96

## Weighting of Assessments

• Final Written Examination. Separate exam.  
Passing in the written exam is a condition to attend the following exams:

- Structured Oral Exam. 50 %
- OSCE 50 %

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Total	100%
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Formative only assessment: simple research assignment, log book, attendance and absenteeism.

## 6. List of references:

1. Lecture notes prepared by the staff member in the department.
2. Essential books:
  - a) Gibbon Cardiothoracic Surgery
3. Recommended books:
  - a) Mastery of Cardiothoracic Surgery.
  - b) Glenn Cardiothoracic Surgery
  - c) Shields thoracic surgery
4. Periodicals, websites, etc.:
  - a) American journal of cardiothoracic surgery.
  - b) European journal of cardiothoracic surgery.
  - c) [www.ctsnet.org](http://www.ctsnet.org)

## 7. Facilities Required for Teaching and Learning

1. Adequate infra structures: including: teaching places (teaching classes, teaching halls), comfortable disks, good source of aeration, good illumination, safety and security methods.
2. Teaching tools: including operative theaters, surgical models screens, computers, data show, projectors, flip charts, white boards, video players, digital video cameras, scanner, copiers, color and laser printers.

**Course Coordinator:** Prof. Esam Ahmed Mokhtar

**Head of Department:** Prof. Esam Ahmed Mokhtar

**Date:** 18/12/2011, **Revised:**1/9/2012, **Revised:**1/12/2013