

## **Peer Revision**

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

# Program Specification of Medical Doctorate Degree of Radiodiagnosis

Sohag University

Faculty of medicine

## A. Basic Information

1. Program title MD in Radiodiagnosis.
2. Program type: single
3. Faculty: Faculty of Medicine
4. Department: Radiodiagnosis
5. Coordinator: Dr: Nahla Mohamed Hasan
6. Assistant coordinator: Dr. Mohamad Hasan Alam-Eldeen.
7. External evaluator: Dr. Mahmoud Abd-Alla Sharaf
8. Last date of program specifications approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018.

## 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 speciality and necessary to provide further training and practice in the field of radiodiagnosis through providing:

- 1- Recent scientific knowledge essential for the mastery of practice of radiodiagnosis according to the international standards.
- 2- Skills necessary for proper diagnosis and management of patients in the field of radiodiagnosis including diagnostic problem solving and decision making.
- 3- Ethical principles related to the practice in this specialty.
- 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 student:

1. Efficient in carrying out the basics and advances in methodologies of scientific research in Radiodiagnosis.
2. The continuous working to add new knowledge in the field of Radiodiagnosis.
3. Applying the analytical course and critical appraisal of the knowledge in his specialty and related fields.
4. Merging the Radiological 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 the specialty of radiology.
6. Determination of the professional problems in the specialty of Radiology and creating solutions for them.



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4. Merging the Radiological 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 the specialty of radiology.
6. Determination of the professional problems in the specialty of Radiology 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 and knowledge to others.

### **3. Intended learning outcomes (ILOs):**

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

By the end of the study of MD program in radiodiagnosis the Graduate should be able to :

- a1. Mention updated theories, fundamentals and recent knowledge in the field of Radiodiagnosis specialty and related fields.
- a2. Mention theories, modalities and recent knowledge in the field of Radiodiagnosis specialty.
- a3. List Principles of scientific research.
- a4. Describe the methodologies and tools of scientific research.
- a5. Define and mention the medicolegal and research ethics
- a6. Define the principles and fundamentals of ethics and legal aspects of professional practice in the field of Radiodiagnosis
- a7. Enumerate the principles and fundamentals of quality of professional practice in the field of Radiodiagnosis
- a8. Trace the impact of professional practice on the environment
- a9. Explain the methods of environmental development and maintenance
- a10. Mention the recent advance in data collection presentation and analysis in Radiodiagnosis specialty
- a11. Mention the recent advances in biostatistics and computer.
- a12. Enumerate the principles of evidence based medicine.

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

By the end of the study of master program in radiodiagnosis the Graduate should be able to :

- b1. Analyze and evaluate data and information in the field of Radiodiagnosis and using it for titration and conclusion.
- b2. Suggest, evaluate and criticize specialized problem-solutions based on the available data.
- b3. Conduct research studies that add to knowledge.
- b4. Formulate scientific papers in the area of Radiodiagnosis
- b5. Assess risk in professional practices in the field of Radiodiagnosis
- b6. Plan to improve performance in the field of Radiodiagnosis
- b7. Make professional decisions in different professional contexts.
- b8. Create and evaluate new methods for Radiodiagnosis
- b9. Integrate scientific discussion administration based on scientific evidences and proofs.
- b10. Criticize researches related to Radiodiagnosis
- b11. Collect and verify data from different sources

b12. Analyze and interpret the results of research using common statistical tests.

**c) Professional and practical skills**

By the end of the study of master program in radiodiagnosis the Graduate should be able to :

- c1. Mastery of the basic and modern professional skills in the area of Radiodiagnosis
- c2. Writing and evaluation of medical reports.
- c3. Evaluation and development of methods and tools existing in the area of Radiodiagnosis
- c4. Perform recent advanced technological methods to serve the professional practice.
- c5. Planning for the development of professional practice and development of the performance of others.
- c6. Orientation to develop new methods, tools and ways of professional practice

**d) General and transferable skills**

By the end of the study of master program in radiodiagnosis the Graduate should 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. Scientific meetings administration according to the available time

**4. Academic standards**

Sohag faculty of medicine adopted the general National Academic Reference Standards (NARS) provided by the national Authority for Quality Assurance and Accreditation of Education (N A Q A EE) for postgraduate program. This was approved by the faculty Council decree No . 6854, in its cession No . 177 , dated 18/5/2009 . Based on these NARS, Academic Reference Standards were suggested for this program . These ARS were revised by external evaluator and approved by the Faculty Council decree No. 7528. , it its cession NO. 191, dated on 15/3/2010. The adoption of NARS and the suggested ARS were approved by University council degree No 587, in its cession No.60. dated 26-12-2011.

**5. Curriculum Structure and Contents**

5.a- Program duration:

5.b- Program structure

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

Subject	hours /week		
	Lectures	Practical	Clinical
<u>First Part:</u>			
Minors :			
Bio Statistics & Computer	2	2	
Research Methodology	2	2	

Primary Medical Report	1	2	
B Physics and interventional radiology	6	---	
Second Part:			
Diagnostic radiology	7	12.5	

code	Item	No	%	
b.i	Total credit hours	Compulsory	90	100
		Elective	0	0
		Optional	0	0
b.iii	credit hours of basic sciences courses	6	6.67	
b.iv	credit hours of courses of social sciences and humanities	0	0	
b.v	credit hours of specialized courses:	53	58.89	
b.vi	credit hours of other course	8	8.9	
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	53	58.89	
	Level 3: Thesis	15	16.7	

**6. Program courses \* 5 courses are compulsory**

**a. Compulsory**

**Semester...1.....**

**First part:**

Subject	Total No of Credit hours	hours /week			Program ILOs
		Lecture s	Practical	Clinical	
<u>First Part:</u>					
Minors :					
Bio Statistics & Computer	3	2	2		a8,a9,a10,a11,a12,B1,b2,b5,b6,b11,b12 c4,c5,c6 d1,d2,d3,d4,d5,d6,d7
Research Methodology	.3	2	2		a3,a4,b3,b4,b10,b12 c4,c5,c6 d1,d2,d3,d4,d5,d6,d7
Primary Medical Report	2	1	2		a5,a6,c2,c4,c5,c6 d1,d2,d3,d4,d5,d6,d7
B Physics and interventional radiology	6	6	---		a1,a2,a7,a12 b1,b2,b3,b4,b5,b6,b7,b8,b9,b10,b11,b12 c1,c3,c4,c5,c6 d1,d2,d3,d4,d5,d6,d7

## Second part:

Subject	Total No of Credit hours	hours /week			Program ILOs
		Lecture s	Practical	Clinical	
<u>First Part:</u>					
Majors : diagnostic radiology	53	7	12.5	---	a1,a2,a7,a12 b1,b2,b3,b4,b5,b6,b7,b8,b9,b10,b11,b12 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 radiodiagnosis 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: (15 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: (50-60 Credit hours $\geq 24$ months= 4 semesters):

- Program related specialized science of radiodiagnosis 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	٦
Training courses	دورات تدريبية	12/ day
Conference attendance	حضور مؤتمرات علمية	١٢/day
	داخلي خارجة	18/day
Thesis discussion	حضور مناقشات رسائل	٦
Workshops	حضور ورش عمل	١٢/day
Journal club	ندوة الدوريات الحديثة	٦
Seminars	لقاء علمي موسع	٦
Morbidity and Mortality conference	ندوة تحليل المخاطر المرضية أو الوفاة	٦
Self education program	برنامج التعليم الذاتي	٦

- 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-OSCE/ 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
- Physics and interventional radiology: Written Exam (7hour) + structured oral Exam.

Part II:

- diagnostic radiology: Two Written Exams (3 hours for each) + OSCE + Structured oral Exam.

**10. Evaluation of program intended learning outcomes**

Evaluator	Tool	Sample
1- Senior students	Questionnaire	30
2- Alumni	Questionnaire	30
3- Stakeholders ( Employers)	Questionnaire	30
4-External Evaluator(s) (External Examiners)	Report	1
5- Other		

# Course Specification of Biostatistics and Computer use in MD degree in Radiodiagnosis

Sohag University

Faculty of Medicine

1. Program on which the course is given: MD degree in radiodiagnosis.
2. Major or minor element of program: Minor
3. Department offering the program: radiodiagnosis
4. Department offering the course: Community Medicine and public Health
5. Academic year / level: 1<sup>st</sup> part.
6. Date of specification approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018

## A. Basic Information

**Title:** Course Specification of biostatistics and computer use in MD degree in Radiodiagnosis

**Code:** COM 0528-300.

**Total hours**

Title	Lecture	Practical	Total	Credit
biostatistics and computer	30	30	60	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

### 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. Describe 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 should have the ability to:

- b1. Understand how to Collect and verify data from different sources
- b2. Analyze and interpret the results of research using common statistical tests.

#### c) Professional and Practical Skills:

By the end of the course the student should have the ability to:  
 c1. Perform recent advanced technological methods in collection, analysis and interpretation of data of patients and training junior staff

**d) General and Transferable Skills:**

By the end of the course the student should have the ability to:  
 d1. Use appropriate computer program packages.  
 d2. Use of different sources for information and knowledge about biostatistics

**3. Contents**

Topic	No. of hours	Lecture	Tutorial/ Practical
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	6	3	3
Student T test	6	3	3
Paired T test	6	3	3
-Correlation	4	2	2
-Regression	6	3	3
-ANOVA test	4	2	2
-Discrimination analysis	6	3	3
Factor analysis	4	2	2
- parametric and non parametric tests	6	3	3
<b>Total</b>	<b>60</b>	<b>30</b>	<b>30</b>
<b>Total Credit hours</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**

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	- Intellectual skills, Knowledge, General transferable skills
5.4Computer 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- Essential Books (Text Books)**

1-Maxy-Rosenau Public health and preventive medicine, 2008.,Robert Wallace, publisher McGraw-Hill Medical; 15 edition.

### **6.2- Recommended Books**

Dimensions of Community Based projects in Health Care, 2018. Arxer, Steven L., Murphy, John W.; 1st edition.

Parks Text Book of Preventive & Social Medicine. 2017., K. Park. BanarsidasBhanot Publishers; 23 edition.

Clinical Epidemiology: The Essentials, 2013, Robert F., Suzanne W. Fletcher, Grant S., publisher Lippincott Williams & Wilkins; 5 edition.

### **6.3- Periodicals, Web Sites, ...etc**

1-American Journal of Epidemiology

2-British Journal of Epidemiology and Community Health WWW. CDC and WHO sites

## 7. Facilities Required for Teaching and Learning:

- ADEQUATE INFRASTRUCTURES: including teaching places (teaching class, teaching halls,) comfortable desks, good source of aeration, bathrooms, good illumination and safety& security tools.
- TEACHING TOOLS: including screens, computers including CD (rw), data shows, projectors, flips chats, white boards, video players, digital video cameras, scanners, copier, colour and laser printers.
- COMPUTERS PROGRAM: for designing and evaluation MCQs

**Course Coordinator: Dr/Foad Metry Atya**

**Head of Department: Prof/ Ahmed Fathy Hammed**

**Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013, Revised:1/12/2018**

# Course Specification of Research Methodology in MD degree in Radiodiagnosis

Sohag University

Faculty of Medicine

1. Program on which the course is given: MD degree in radiodiagnosis.
2. Major or minor element of program: Minor
3. Department offering the program: radiodiagnosis
4. Department offering the course: Community Medicine and public Health
5. Academic year / level: 1<sup>st</sup> part.
6. Date of specification approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018

## A. Basic Information

**Title:** Course Specification of research methodology in MD degree in Radiodiagnosis  
**Code:** COM 0528-300.

**Total hours:**

Title	Lecture	Practical	Total	Credit
research methods	30	30	60	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 research methods.

### 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. 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. List 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 should have the ability to:

- b1. Conduct research studies, that add to knowledge.
- b2. Formulate scientific papers in the area of internal medicine
- b3. Interpret, criticize and make a scientific conclusion(s) from published research studies.

#### c) Professional and Practical Skills:

By the end of the course the student should have the ability to:

- c1. Master the basic and modern professional skills in conducting researches in the area of public health and community medicine.
- c2. Design new methods, tools, and ways of professional practice.

**d) General and Transferable Skills:**

By the end of the course the student should have the ability 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 )	8	4	4
Clinical trials, Quasi experimental study	6	3	3
Bias and errors	6	3	3
Setting a hypothesis	6	3	3
Recent advances in screening	6	3	3
- Evidence – based Medicine: Concept and examples	4	2	2
Applicability	4	2	2
Scientific writing: A protocol	4	2	2
A curriculum	4	2	2
Setting an objective	2	1	1
- Critical thinking	2	1	1
Formulation of papers	8	4	4
<b>Total hours</b>	<b>60</b>	<b>30</b>	<b>30</b>
<b>Total Credit hours</b>	<b>3</b>	<b>2</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	- Intellectual skills, Knowledge, General transferable skills
5.4Computer 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

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2-British Journal of Epidemiology and Community Health

3- WWW. CDC and WHO sites

## 7. Facilities Required for Teaching and Learning:

a. ADEQUATE INFRASTRUCTURES: including teaching places (teaching class, teaching halls,) comfortable desks, good source of aeration, bathrooms, good illumination and safety& security tools.

b. TEACHING TOOLS: including screens, computers including CD (rw), data shows, projectors, flips chats, white boards, video players, digital video cameras, scanners, copier, colour and laser printers.

c. COMPUTERS PROGRAM: for designing and evaluation MCQsCourse

**Course Coordinator: Dr/Foad Metry Atya**

**Head of Department: Prof/ Ahmed Fathy Hammed**

**Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013, Revised:1/12/2018**

# Course Specification of Primary Medical Reports in MD degree in Radiodiagnosis

Sohag University

Faculty of Medicine

1. Program on which the course is given: MD degree in radiodiagnosis.
2. Major or minor element of program: Minor
3. Department offering the program: Radiodiagnosis
4. Department offering the course: Forensic Medicine and Clinical Toxicology
5. Academic year / level: 1<sup>st</sup> part.
6. Date of specification approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018

## A. Basic Information

**Title:** Course Specification of primary medical reports in MD degree in Radiodiagnosis

**Code:** FOR 0528-300.

**Total hours**

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

## 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 primary medical reports and the different medicolegal aspects of medical practice.

### 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 information about pathology of wounds and organ injuries.
- a2. Describe the systemic effect of trauma. Burns and different body injuries.
- a3. Provide basic knowledge of different medicolegal aspects of medical practice ,example : firearm injuries.
- a4. Describe how to write a medicolegal report& How to write death certificate
- a5. Explain Obligation of physicians (towards patients, colleagues, community) and types of malpractice.
- a6. Describe medicolegal aspects of organ transplantation, intersex states, euthanasia, assisted reproduction techniques.
- a7. Define Consent, and professional secrecy.

#### b) Intellectual Skills:

By the end of the course the student should have the ability to:

- b1. Interpret different types of trauma , burns and different body injuries for proper diagnosis and management.
- b2. Mention the principles and fundamentals of ethics and legal aspects of professional practice in the field of diagnostic radiology.



### c) Professional and Practical Skills:

By the end of the course the student should have the ability to:

c.1- Identify and write standard medical report about a case of trauma , and write death certificates.

c2-Planning for the development of professional practice and development of the performance of others.

### d) General and Transferable Skills:

By the end of the course the student should have the ability to:

d1. Present medical reports in seminars effectively.

d2. Manage scientific meetings administration according to the available time.

d3. Scientific meetings administration according to the available time.

## 3. Contents

Topic	No. of hours	Lecture	Practical
The pathology of wounds, chest and abdominal injuries, self inflicted injury	1	1	
The systemic effect of trauma& Permanent infirmity	5	1	
Head and spinal injuries	6	2	4
The medicolegal aspects of firearm injuries	3	1	2
Burn and scold	3	1	2
How to write a medicolegal report& How to write death certificate	6	2	4
The medicolegal aspect of deaths associated with surgical procedures and toxicological sampling	6	2	4
Obligation of physicians (towards patients, colleagues, community)	3	1	2
Consent, and professional secrecy	3	1	2
Types of malpractice, and items of medical responsibility	6	2	4
Medicolegal aspects of organ transplantation, intersex states, euthanasia, assisted reproduction techniques	3	1	2
ethical considerations of medical research involving human subjects	6	2	4
<b>Total hours</b>	<b>45</b>	<b>15</b>	<b>30</b>
<b>Credit</b>	<b>2</b>	<b>1</b>	<b>2</b>

## 4. Teaching and Learning Methods

4.1- Lectures

4.2- Assignments

## 5. Student Assessment Methods

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual 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
5.6 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	%
Final Structured Oral Exam	50	%
Total	100	%

formative only assessments: attendance and absenteeism, assignment

## 6. List of References

### 6.1- Essential Books:

#### Essential books

Simpson's Forensic Medicine, 13th Edition, by Jason Payne-James, Richard Jones, Steven B Karch, John Manlove. published by Hodder & Stoughton Ltd (2011).

Goldfrank's Toxicologic Emergencies, (9th ed.) by Lewis S. Nelson, Robert S. Hoffman, Mary Ann Howland, Neal A Lewin, Lewis R. Goldfrank, Neal E. Flomenbaum. Published by McGraw-Hill (2011)

Emergency Toxicology, Peter Viccellio, (2nd ed.) Published by Lippincott Williams & Wilkins (1998)

#### Recommended books

Medical ethics. (1997) Robert M Veatch. 2nd edition. Jones & Bartlett publishers

#### Periodicals and websites.....etc.

Egyptian journals of forensic medicine and clinical toxicology

International journals of forensic medicine and clinical toxicology

[www.sciencedirect.com](http://www.sciencedirect.com)

<https://emedicine.medscape.com>

<https://www.ncbi.nlm.nih.gov/pmc/>

## 7. Facilities Required for Teaching and Learning:

- a. ADEQUATE INFRASTRUCTURES: including teaching places (teaching class, teaching halls,) comfortable desks, good source of aeration, bathrooms, good illumination and safety & security tools.
- b. TEACHING TOOLS: including screens, computers including CD (rw), data shows, projectors, flip charts, white boards, video players, digital video cameras, scanners, copier, colour and laser printers.
- c. COMPUTERS PROGRAM: for designing and evaluation MCQs

**Course Coordinator:** Dr/Soher Ali Mohammed

**Head of Department:** Dr/ Soheir Ali Mohamed

**Date:** 18/12/2011, **Revised:**1/9/2012, **Revised:**1/12/2013, **Revised:**1/12/2018

## Course Specification of Radiological physics & interventional Radiology in MD degree in radiodiagnosis

Sohag University

Faculty of Medicine

1. Program on which the course is given: MD degree in Radiodiagnosis.
2. Major or minor element of program: Minor
3. Department offering the program: Radiodiagnosis
4. Department offering the course: Radiodiagnosis
5. Academic year / level: 1<sup>st</sup> part.
6. Date of specification approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018

### A. Basic Information

**Title:** Course Specification of radiological physics and interventional radiology in MD degree in Radiodiagnosis

**Code:** RAD 0528-300.

**Total hours**

Title	Lecture	Practical	Total	Credit
Radiological physics and interventional Radiology	90	----	90	6

### 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 radiation physics and interventional radiology.

#### 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 The basic knowledge about physics of US,CT ,MRI, PET and SPECT .
- a2. Mention Recent advances in physics of US,CT,MRI ,PET and SPECT.
- a3. List Principles of different interventional procedures .
- a4. Describe the methodology of different interventional procedures like abscess drainage ,chemoembolization ,vascular stenting , PTC and etc.

##### b) Intellectual Skills:

By the end of the course the student should have the ability to:

- b1. Suggest, evaluate and criticize specialized problem-solutions based on physical background in the field of radiodiagnosis.
- b2. Doing different interventional procedures like abscess drainage ,vascular stenting and PTC..etc.
- b3. Plan to improve performance in the field of interventional radiology.

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

By the end of the course the student should have the ability to:

- c1. Mastery of the basic and advanced knowledge in radiological physics..

- c2. The use of different interventional procedures to serve the radiological practice.
- c3. Planning for the development of professional practice and development of the performance of others in the field of radiodiagnosis.

**d) General and Transferable Skills:**

By the end of the course the student should have the ability to:

- d1. Using information technology to serve the development of professional practice.
- d2. Teaching others and evaluating their performance.
- d3. The use of different sources for information and knowledge.
- d4. Working in a team and team's leadership.
- d5. Scientific meetings administration according to the available time.

**3. Contents**

<b>Topic</b>	<b>No. of hours</b>	<b>Lecture</b>	<b>Tutorial/ Practical</b>
1-Radiological physics The advanced physics of: -MRI.	2	2	
-CT.	2	2	
-Ultrasonography.	2	2	
-PET.	2	2	
-SPECT.	2	2	
2-Interventional Radiology -CT & MRI biopsy.	7	7	
-PTC & PTD.	7	7	
-Vascular stenting.	7	7	
-Abscess drainage.	6	6	
-Tumors ablation.	7	7	
-Vertebroplasty.	6	6	
-Khyphoplasty.	7	7	
-Management of low back pain.	6	6	
-Vascular embolization.	7	7	
-Gastric interventions.	7	7	
-Chemoembolization	7	7	
-IVC filters	6	6	
<b>Total</b>	<b>90</b>	<b>90</b>	
<b>Credit</b>	<b>6</b>	<b>6</b>	

**4. Teaching and Learning Methods**

- 4.1- Lectures
- 4.2- Practical sessions

## 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

### 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	

### 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

## 6. List of References

### 6.1-Essential Books (Text Books)

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

### 6.2- 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, 5th edition. Churchill Livingstone. New York, London and Tokyo.

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

- 1-American Journal of Epidemiology
- 2-British Journal of Epidemiology and Community Health
- 3- WWW. CDC and WHO sites

## 7. Facilities Required for Teaching and Learning:

1. ADEQUATE INFRASTRUCTURES: including teaching places (teaching class, teaching halls,) comfortable desks, good source of aeration, bathrooms, good illumination and safety & security tools.
2. TEACHING TOOLS: including screens, computers including CD (rw), data shows, projectors, flips charts, white boards, video players, digital video cameras, scanners, copier, colour and laser printers.
3. COMPUTERS PROGRAM: for designing and evaluation MCQs

**Course Coordinator: Dr/Mohamad Hasan Alm El-Deen**

**Head of Department: Prof. Dr. Nahla Mohamed Hasan**

**Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013, Revised:1/12/2018**

# Course Specification of Diagnostic Radiology in MD degree in Radiodiagnosis

Sohag University

Faculty of Medicine

1. Program on which the course is given: MD degree in radiodiagnosis.
2. Major or minor element of program: Major
3. Department offering the program: Radiodiagnosis
4. Department offering the course: Radiodiagnosis
5. Academic year / level: 2<sup>nd</sup> part.
6. Date of specification approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018

## A. Basic Information

**Title:** Course Specification of diagnostic radiology in MD degree in Radiodiagnosis

**Code:** RAD 0528-300.

**Total hours**

Title	Lecture	Practical	Total	Credit
diagnostic radiology	420	750	1170	53

## B. Professional Information

### 1. Overall Aims of Course

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

1. Recent scientific knowledge essential for the mastery of practice of radiodiagnosis according to the international standards.
2. Skills necessary for proper diagnosis and management of patients in the field of radiodiagnosis including diagnostic problem solving and decision making.
3. Ethical principles related to the practice in this specialty.
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. 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 the basics, normal anatomy and normal radiological signs of diagnostic radiology.
- a2. Mention different congenital anomalies in the body.
- a3. Describe the radiological findings, abnormalities and differential diagnosis for different body diseases.

a4. Learn different radiological interventional procedures.

**b) Intellectual Skills:**

By the end of the course the student should have the ability to:

- b1. Interpret data acquired through clinical data and imaging findings to reach for diagnosis or a differential diagnosis for each problem.
- b2. Select from different imaging modalities the ones that help reaching a final diagnosis for different problems..
- b.3 Formulate scientific papers in the area of diagnostic radiology
- b.4 Plan to improve performance in the field of diagnostic radiology.
- b.5 Manage Scientific discussion based on scientific evidences and proofs

**c) Professional and Practical Skills:**

By the end of the course the student should have the ability to:

- c1. Mastery of the basic and modern professional skills in the area of Radiodiagnosis.
- c2. Evaluate and develop methods and tools existing in the area of Radiodiagnosis.
- c3. The use of technological methods to serve the professional practice.

**d) General and Transferable Skills:**

By the end of the course the student should have the ability to:

- d1. Present reports in seminars effectively.
- d2. Teach others and evaluating their performance.
- d3. Manage scientific meetings administration according to the available time

**3. Course contents:**

Topic	No. of hours	Lecture	Practical
1- Cardiac system:			
1.1. Normal cardiac radiology.	2.5	1	1.5
1.2. Congenital heart diseases.	4	1	3
1.3. Rheumatic heart diseases.	2.5	1	1.5
1.4. Ischemic heart diseases.	2.5	1	1.5
1.5. Cardiomyopathy.	2.5	1	1.5
1.6. Cardiac tumors.	2.5	1	1.5
1.7. Pericardial diseases and pericardial tumors.	2.5	1	1.5
1.8. Cardiac & pericardial trauma.	2.5	1	1.5
1.9. CT coronary angiography.	2.5	1	1.5
1.10. Functional cardiac imaging.	2.5	1	1.5
2- Vascular system:			0
2.1. Arterial imaging.	4	1	3
2.2. Venous imaging.	2.5	1	1.5
2.3. Interventional procedures.	0		0
3- Respiratory system:	2.5	1	1.5



3.1. Normal chest radiology & variants.	2.5	1	1.5
3.2. Bronchitis and bronchial asthma.	2.5	1	1.5
3.3. Bronchiectasis.	2.5	1	1.5
3.4. Pulmonary infections.	2.5	1	1.5
3.5. Diffuse lung diseases.	2.5	1	1.5
3.6. Occupational lung diseases.	4	1	3
3.7. Emphysema.	4	1	3
3.8. Lung collapse and consolidation.	4	1	3
3.9. Lung tumors.	4	1	3
3.10. Pulmonary edema.	2.5	1	1.5
3.11. Pleural diseases.	2.5	1	1.5
3.12. Mediastinal masses.	2.5	1	1.5
3.13. Pediatric chest diseases.	2.5	1	1.5
3.14. Diaphragmatic lesions.	2.5	1	1.5
3.15. Chest wall disorders.	2.5	1	1.5
3.16. Chest trauma.	2.5	1	1.5
3.17. Virtual bronchoscopy.	4	1	3
3.18. Recent advances and functional imaging.	2.5	1	1.5
4- Gastrointestinal tract:	•		0
4.1. Normal oro and hypopharyngeal radiology.	4	1	3
4.2. Oro and hypopharyngeal diseases.	4	1	3
4.3. Normal oesophageal radiology.	2.5	1	1.5
4.4. Inflammatory oesophageal diseases.	4	1	3
4.5. Oesophageal tumors.	4	1	3
4.6. Oesophageal strictures.	4	1	3
4.7. Oesophageal motility disorders.	4	1	3
4.8. Miscellaneous oesophageal lesions.	4	1	3
4.9. Normal gastric radiology.	4	1	3
4.10. Gastritis & duodenitis.	4	1	3
4.11. Peptic ulcers.	4	1	3
4.12. Gastric & duodenal tumors.	4	1	3
4.13. Congenital gastric & duodenal disorders.	4	1	3

4.14. Miscellenous gastric & duodenal disorders.	4	1	3
4.15. Radiology of post operative stomach.	4	1	3
4.16. Imaging in acute abdomen.	4	1	3
4.17. Normal small intestinal radiology.	2.5	1	1.5
4.18. Normal colonic radiology.	2.5	1	1.5
4.19. Congenital anomalies of the intestine.	2.5	1	1.5
4.20. Inflammatory bowel diseases.	4	1	3
4.21. Obstructive bowel diseases.	3.5	2	1.5
4.22. Ischemic bowel diseases.	2.5	1	1.5
4.23. Small and large intestinal tumors.	2.5	1	1.5
4.24. Intestinal polyposis.	2.5	1	1.5
4.25. Miscellenous intestinal disorders.	2.5	1	1.5
4.26. Normal hepatic radiology.	4	1	3
4.27. Liver cirrhosis and portal hypertension	2.5	1	1.5
4.28. Hepatic tumors.	5	2	3
4.29. Diffuse liver diseases.	4	1	3
4.30. Infective liver diseases.	4	1	3
4.31. Liver trauma.	4	1	3
4.32. Miscellenous hepatic disorders.	4	1	3
4.33. Normal biliary radiology.	4	1	3
4.34. Congenital biliary anomalies.	2.5	1	1.5
4.35. Cholecystitis.	4	1	3
4.36. Cholelithesis.	2.5	1	1.5
4.37. Imaging of jaundice.	4	1	3
4.38. Interventional biliary procedures.	2.5	1	1.5
4.39. Miscellenous biliary disorders.	2.5	1	1.5
4.40. Normal pancreatic radiology.	2.5	1	1.5
4.41. Congenital pancreatic disorders.	2.5	1	1.5
4.42. Pancreatitis.	2.5	1	1.5
4.43. Pancreatic tumors.	5	2	3
4.44. Pancreatic cysts.	4	1	3

4.45. Pancreatic trauma.	2.5	1	1.5
4.46. Miscellenous pancreatic disorders.	2.5	1	1.5
4.47. Normal splenic radiology.	2.5	1	1.5
4.48. Congenital splenic disorders.	2.5	1	1.5
4.49. Splenic trauma.	4	1	3
4.50. Imaging of splenomegaly.	4	1	3
4.51. Splenic infections.	4	1	3
4.52. Splenomegaly & portal hypertension.	4	1	3
4.53. Miscellenous splenic disorders.	4	1	3
4.54. Peritonitis.	4	1	3
4.55. Peritoneal tumors.	4	1	3
4.56. Imaging in ascites.	2.5	1	1.5
4.57. Retroperitoneal disorders.	4	1	3
4.58. Abdominal and subphrenic abscesses.	2.5	1	1.5
4.59. Leaking abdominal aortic aneurysm.	2.5	1	1.5
4.60. Normal radiology of salivary glands.	2.5	1	1.5
4.61. Inflammatory salivary disorders.	2.5	1	1.5
4.62. Salivary glands tumors.	5	2	3
4.63. Miscellenous salivary glands disorders.	2.5	1	1.5
4.64. Normal adrenal radiology.	2.5	1	1.5
4.65. Adrenal masses.	2.5	1	1.5
4.66. Adrenal cysts.	2.5	1	1.5
4.67. CT gastrography and virtual gastroscopy..	2.5	1	1.5
4.68. CT enterography.	2.5	1	1.5
4.69. CT colonography & virtual colonoscopy.	2.5	1	1.5
4.70. MR enterocolysis.	2.5	1	1.5
4.71. Imaging in hepatic transplantation.	2.5	1	1.5
5- Urinary tract:	0		0
5.1. Normal UT radiology.	4	1	3
5.2. Urolithiasis.	4	1	3
5.3. Hydronephrosis & pyonephrosis.	4	1	3
5.4. UT tumors. 1	6.5	2	4.5

5.5. Pyelonephritis and cystitis.	4	1	3
5.6. UT infective lesions.	4	1	3
5.7. UT tumors. 2	6.5	2	4.5
5.8. Renal & UB trauma.	6.5	2	4.5
5.9. Renovascular hypertension.	4	1	3
5.10. Imaging in haematuria.	6.5	2	4.5
5.11. UB outflow obstruction.	4	1	3
5.12. Urethral strictures.	4	1	3
5.13. Urethral tumors.	4	1	3
5.14. Urethral trauma.	4	1	3
5.15. UT interventional procedures.	4	1	3
5.16. CT urography.	4	1	3
5.17. MRU.	4	1	3
5.18. CT cystography.	4	1	3
5.19. Imaging in renal transplantation.	5.5	1	4.5
6- Male genital system:	0		0
6.1. Normal radiology of male genital system.	4	1	3
6.2. Testicular trauma.	6.5	2	4.5
6.3. Testicular tumors.	4	1	3
6.4. Testicular infections.	4	1	3
6.5. Varicocele & torsion.	4	1	3
6.6. Hydrocele.	4	1	3
6.7. Imaging in male infertility.	4	1	3
6.8. Prostatic tumors.	4	1	3
6.9. Prostatic infections.	4	1	3
6.10. Miscellenous prostatic disorders.	4	1	3
6.11. Imaging in impotence.	2.5	1	1.5
7- Female genital system:	0		0
7.1. Normal radiology of female genital system.	2.5	1	1.5
7.2. Ovarian tumors and cysts.	4	1	3
7.3. Ovarian torsion.	2.5	1	1.5
7.4. Ovulatory disorders.	2.5	1	1.5
7.5. Abnormal uterine bleeding.	2.5	1	1.5
7.6. Uterine tumors.	2.5	1	1.5
7.7. Congenital uterine anomalies.	2.5	1	1.5
7.8. Miscellenous uterine disorders.	2.5	1	1.5
7.9. Pregnancy and its	2.5	1	1.5

complications.			
7.10. Imaging in female infertility.	2.5	1	1.5
7.11. Tubo-ovarian abscess.	5	2	3
7.12. Fetal anomalies.	5	2	3
7.13. Interventional procedures.	2.5	1	1.5
8- Musculoskeletal system:	0		0
8.1. Normal musculoskeletal radiology.	2.5	1	1.5
8.2. Osteomyelitis & spondylitis.	2.5	1	1.5
8.3. Arthritis.	2.5	1	1.5
8.4. Metabolic bone disorders.	2.5	1	1.5
8.5. Congenital bone and spinal disorders.	5	2	3
8.6. Endocrinal bone disorders.	2.5	1	1.5
8.7. Bone & spinal trauma.	2.5	1	1.5
8.8. Fractures and dislocations.	2.5	1	1.5
8.9. Bone tumors & tumors like disorders.	2.5	1	1.5
8.10. Bone infarctions.	2.5	1	1.5
8.11. Miscellaneous bone disorders.	2.5	1	1.5
8.12. Scoliosis and khyphosis.	2.5	1	1.5
8.13. Spinal cord tumors.	2.5	1	1.5
8.14. Spinal cord vascular disorders.	2.5	1	1.5
8.15. Spinal cord degenerative disorders.	2.5	1	1.5
8.16. Spinal cord inflammatory disorders.	2.5	1	1.5
9- Central nervous system:	·		0
9.1. Normal CNS radiology.	5	2	3
9.2. Imaging in trauma	3.5	2	1.5
9.3. CNS Infections.	5	2	3
9.4. CNS vascular disorders & stroke.	2.5	1	1.5
9.5. CNS congenital anomalies.	2.5	1	1.5
9.6. CNS tumors.	5	2	3
9.7. CNS degenerative disorders.	2.5	1	1.5
9.8. Miscellaneous CNS disorders.	2.5	1	1.5
9.10. Imaging in hydrocephalus.	2.5	1	1.5
9.11. Recent advances in functional imaging	2.5	1	1.5
10- Lymphatic disorders:	0		0
10.1. Imaging in lymphoma.	2.5	1	1.5

10.2. Imaging in lymphodema.	2.5	1	1.5
11- Paranasal sinuses:	0		0
11.1. Normal PNS radiology.	2.5	1	1.5
11.2. Sinusitis.	2.5	1	1.5
11.3. Mucoceles.	2.5	1	1.5
11.4. PNS tumors.	4	1	3
11.5. Polyposis.	2.5	1	1.5
11.6. PNS trauma.	4	1	3
11.7. Miscellenous PNS disorders.	2.5	1	1.5
11.8. Nasopharyngeal disorders.	2.5	1	1.5
12- Orbit:	0		0
12.1. Normal orbital radiology.	4	1	3
12.2. Imaging in proptosis.	4	1	3
12.3. Orbital trauma.	4	1	3
12.4. Orbital tumors.	5	2	3
12.5. Orbital vascular disorders.	2.5	1	1.5
12.6. Inflammatory orbital disorders.	4	1	3
12.7. Congenital orbital anomalies.	4	1	3
12.8. Miscellenous orbital disorders.	4	1	3
13- Ear:	0		0
13.1. Normal radiology of the ear.	2.5	1	1.5
13.2. Congenital anomalies of ear.	2.5	1	1.5
13.3. Imaging in trauma.	2.5	1	1.5
13.4. Imaging in tennitus	2.5	1	1.5
13.5. Imaging in hearing loss.	4	1	3
13.6. Otitis media and complications.	2.5	1	1.5
13.7. Ear tumors.	2.5	1	1.5
13.8. Miscellenous ear disorders.	2.5	1	1.5
14- Neck and larynx:	0		0
14.1. Normal neck and laryngeal radiology.	2.5	1	1.5
14.2. Imaging of neck swellings.	2.5	1	1.5
14.3. Laryngeal trauma.	2.5	1	1.5
14.4. Laryngeal tumors.	3.5	2	1.5
14.5. Cord lesions and paralysis.	2.5	1	1.5
15- Breast:	·		
15.1. Normal breast radiology.	2.5	1	1.5
15.2. Breast masses.	3.5	2	1.5
15.3. Imaging in breast discharge.	3.5	2	1.5

Total	1170	420	750
Credit	53	28	25

#### 4. Teaching and Learning Methods

##### 4.1- Lectures

4.2-clinical lessons.

4.3- Assignments for the students to empower and assess the general and transferable skills

4.4 Attendance workshops, conferences and thesis discussion

4.5 attendance in the outpatient clinic

#### 5. Student 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
5.5 Computer search assignment	-General transferable skills, intellectual skills

#### Assessments schedule:

Assessment 1.... log book (formative exam) Week: 80

Assessment 2.... Final OSCE .... Week: 96

Assessment 3.....Final written exam ..... 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%

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

#### 6. List of References

##### 6.1- Essential Books (Text Books):

Sutton (text book of diagnostic imaging and radiology)

Granger and Allison (text books of diagnostic radiology and imaging).

Fundamental of diagnostic radiology

##### 6.2- Recommended Books:

### **6.3- Periodicals, American journal of radiology**

Web Sites: <http://www.ncbi.nlm.nih.gov/pubmed/>  
<http://www.radiographics.org>  
<http://www.radiology.org>

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

- a. ADEQUATE INFRASTRUCTURES: including teaching places (teaching class, teaching halls,) comfortable desks, good source of aeration, bathrooms, good illumination and safety & security tools.
- b. TEACHING TOOLS: including screens, computers including CD (rw), data shows, projectors, flip charts, white boards, video players, digital video cameras, scanners, copier, colour and laser printers.
- c. COMPUTERS PROGRAM: for designing and evaluation MCQs.

**Course Coordinator: Dr/Mohamad Hasan Alm El-Deen**

**Head of Department: Prof. Dr. Nahla Mohamed Hasan**

**Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013, Revised:1/12/2018**