

## Program SPECIFICATION FOR Diploma Degree in breast imaging

Code: 1718600

University: Alexandria

Faculty: Medical Research Institute

### Program Specification

#### A- Basic information

1- Program title : Diploma in breast imaging

2- Program type:      single            Double            multiple     

3- academic year 2023/2024

4-Department(s) : Radiodiagnosis

5- Coordinator : Prof. Dr. Rawai Khalil Fawzy

6- External evaluator(s):    Prof. Dr. Haithm elsamaloty

7- Last date of program specification approval: 5/6/2014

#### A- Professional Information

##### 1- Program aims:

- Applications of each diagnostic breast imaging modality and specify radiological features concerning breast diseases.
- To train radiologists in the standard breast imaging techniques
- To provide the radiologists theoretical and practical knowledge in the most recent diagnostic tools in breast diseases.
- To create a new generation of radiologists sub specialized in breast imaging in a response to the real need of the for well-trained radiologists in the field of breast imaging in screening and diagnosis of breast diseases

##### 2- Intended learning outcomes ( ILOS )

###### a- knowledge and understanding:

- a1- Discuss the detailed breast and axillary nodes anatomy in mammography and Ultrasonography and technical aspects for analogue and digital mammography
- a2- Identify the recommended standard in assessment of benign and malignant breast lesions.
- a3 - List different pathological signs in mammography and ultrasound
- a4- Identify the technical aspects of MRI both standard and functional MRI in breast imaging
- a5- list BI-RADS classification with different breast imaging modalities
- a6- Discuss the basic principles of breast intervention.
- a7- Identify the quality standard of the practice

**b- Intellectual skills:**

- b1-** Distinguish the role of different imaging modalities in imaging of breast.
- b2-** Distinguish the different type of benign and malignant microcalcifications
- b3-** Translate BI-RADS classification of different breast lesions and differentiate imaging findings of benign versus malignant breast lesions
- b4-** Explain MRI features in different breast lesions, translate dynamic curve and its applications and interpret functional imaging techniques
- b5** Solve diagnostic problems in case of indeterminate lesion of dense breast
- b6-** Interpret imaging finding and differentiate benign and malignant lesions

**c- professional and practical skills:**

- c1-** Acquire the terminology of different breast imaging features.
- c2-** Apply international rules for breast screening
- C3-** Practice of digital mammographic techniques
- c4-** Predict provisional image diagnostic value of each sign

**d- General and transferable skills:**

- d1-** Develop skills in communication
- d2-** Develop skills for oral presentations.
- d3-** Work in groups.

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**3- Academic standards**

**3a External references for standards (Benchmarks)**

Generic Academic Reference Standards if the National Authority for Quality Assurance and Accreditation of Education (NAQAAE)

**Date of Academic Reference standards (ARS) approval by Institute Council:  
12/2/2014 and re-adopted at 15/1/2023**

**Last date of Academic Reference standards (ARS) approval by Institute Council: 15/1/2023**

**3b Comparison of provision to selected external references  
(here add your table of comparison between NAQAAE and ARS)**

Generic academic reference standard of NAQAAE	Academic reference standard in diploma in breast imaging
A1- Basic facts , theories, of the specialty and related subjects/ fields	a1-List of the different techniques for Breast imaging a2-Recognise the basic knowledge of breast anatomy and normal plain mammographic findings a3-Recognise the recent and advanced techniques for MRI breast a4-Recall different benign and malignant breast disorders a5-Recognise techniques for breast biopsy a6-Recognise fundamentals of ethical legal practice
A2- Fundamentals of ethical & legal practice	a6-Recognise fundamentals of ethical legal practice
A3-Quality standards of the practice	a7- Identify the quality standard of the practice
A4- Effect of the specialty practice on the environment including rules for environmental conservation	a4-Recall different benign and malignant breast disorders
B1- Determine , analyze & prioritize problems	b1-Investigate cases of bleeding nipple b2-Investigate cases of breast lump b3-Investigate cases of asymmetric breast density b4-Analyze the basic imaging fields in cases of bleeding per nipple, breast lump and asymmetric breast density to reach a decision and final BI-RADS category

B2- Solve common problems effectively	B5-Solve diagnostic problems in case of indeterminate lesion of dense breast
B3- Critically appraise researches and articles	b4-Analyze the basic imaging fields in cases of bleeding per nipple, breast lump and asymmetric breast density b5- Solve diagnostic problems in case of indeterminate lesion of dense breast
B4-Evalute professional risks	B6-Evaluate professional risks
C1- Practice basic professional skills ( clinical/practical & procedural skills) competently	c1-Perform different mammograph techniques , ultrasound and MRI of the breast c3-Perform biopsy
C2- Write reports related to the profession (Patient records, self-appraisal/ audit reports etc..)	c2-Writing professional reports c4-Direct for further investigation

D1- Communicate effectively using all methods	<b>d1-</b> Develop skills in communication
D2- Use information technology to improve his/her professional practice	<b>d2-</b> Develop skills for oral presentations (to fulfill seminar).
D3- Teach and evaluate others	<b>d2-</b> Develop skills for oral presentations (to fulfill seminar). <b>d3-</b> Work in groups (whenever possible).
D4- Perform self appraisal& seek continuous learning	<b>d1-</b> Develop skills in communication <b>d2-</b> Develop skills for oral presentations (to fulfill seminar).

D5- Use different sources of information to obtain data	<b>d2-</b> Develop skills for oral presentations (to fulfill seminar).
D6- Work in teams as well as a member in larger teams	<b>d2-</b> Develop skills for oral presentations (to fulfill seminar). <b>d3-</b> Work in groups (whenever possible).
D7- Manage scientific meetings and appropriately utilize time	<b>d2-</b> Develop skills for oral presentations (to fulfill seminar)

**4- curriculum structure and contents**

**4.a program duration: (1.5 year )**

**4.b program structure :**

**4.b.i- No. of hours per week in each year/semester:**

Semester	Core Courses	Elective Courses
	No. of hours	No. of hours
First semester	12	-
Second semester	12	-
Third semester	-	6

**4.b.ii- No. of credit hours** Lectures  Practical  Total

Compulsory  Elective  Optional

**4.b.v- No. of credit hours of specialized courses** No.  %

**4.b.vii- Practical/Field Training** Yes  No

**4.b.viii- Program levels (in credit-hours system)**

N/A

**5- Program Courses****5.1- Compulsory (24 hours)**

Code No.	Course Title	No. of credit hours	No. of hours /week	
			Lecture	Practical
1718601	Radiological anatomy, Technique and Quality control in mammography	3	2	2
1714620	Surgery of breast lesions.	2	2	-
1719620	Oncological treatment of breast cancer	2	2	-
1710620	Histoimmunopathology	2	2	-
1718603	Breast imaging I (Benign lesions)	4	2	4
1718604	Breast imaging II (Malignant lesions)	4	2	4
1718605	Breast imaging III (Screening program for breast cancer)	2	1	2
1718606	Breast imaging IV (Interpretation of breast images)	4	2	4
1718602	Physics of imaging modalities	2	-	2

**5.2- Elective I (6 hours)**

Code No.	Course Title	No. of credit hours	No. of hours /week	
			Lecture	Practical
1718607	Breast imaging V ( Breast MRI)	3	2	2
1718608	Breast imaging VI (New imaging modalities of breast)	3	2	2

1718609	Breast imaging VII (Interventional techniques)	3	2	2
1718610	Breast Imaging VIII (Case presentations)	3	1	4

### 5.3- Elective II (none)

### 5.4- Optional – (none)

## 6- Program admission requirements

- Candidates allowed for registration are post-graduate medical students have finished specialization in Radiodiagnosis including:- Diploma , Master, MD, and Egyptian Membership in Radiodiagnosis.
- Number of credit hours required for the degree 30 Cr .

## 7- Teaching and Learning Methods

### Regulations for progression and program completion

- For the progression and completion of the program to obtain the degree of **diploma in breast imaging** the student must
  - 1- Complete **30** credit hours with CGPA of at least C+ through courses.

## 8- Evaluation of Students enrolled in the program.

Tool evaluation	Intended learning outcomes being assessed
Written	ILOs a &b
Practical	ILOs c
Oral	ILOs a ,b &d
Semester Work	ILOs b & d

## Evaluation of program

Evaluator	Tool	Sample
1- Senior students	<b>questionnaire</b>	more than 50 %
2- Alumni	<b>questionnaire</b>	Representative sample
3- Stakeholders (Employers)	meeting	Representative sample
4- External Evaluator(S) or External Examiner (s)	Reports	Prof.Dr. Haithm El- Samaloty
5- Other		

### Program coordinator :

Name: **Prof. Dr Rawya Khalil**

Signature **Rawya Khalil**

Date 20/12/2022

### Department Head:

Name: Prof. Dr. Khaled Matrawy

Signature: 28/12/2022

**Date of Department Council Approval: 28/12/2022**



**Program Aims vs Graduate Attribute matrix**

Generic Graduate Attributes of NAQAAE	Graduate Attributes of breast diploma	Program Aims
	By the end of this program, graduate should be able to	
Apply specialized knowledge related to professional skills in the field of specification.	gaining the knowledge for identification of each diseases	Applications of each diagnostic breast imaging modality and specify radiological features concerning breast diseases.
Identify professional problems in the field of specification and propose solutions to them.	pitfalls and challenges in diagnosis of breast diseases	To train radiologists in the standard breast imaging techniques
Master professional skills in the field of specification.	excellency in technology of different imaging modalities	To provide the radiologists theoretical and practical knowledge in the most recent diagnostic tools in breast diseases
Use appropriate technology means in his/her professional practice of the field of specification.	mastering of US mammogram and MRI in breast diseases	To create a new generation of radiologists sub specialized in breast imaging in a response to the real need of the for well-trained radiologists in the field of breast imaging in screening and diagnosis of breast diseases
Communicate and lead work teams in a systematic, professional manner.	value of MDT	
Take professional decisions in case of available information.	updates of the BIRADS lexicon and disease management	

Use available resources efficiently.	different substitutes when dealing with unavailable technique	•
Relate his/her studies to community development and environmental preservation.	reduction of breast cancer incidence and decrease morbidity and mortality	
Act in a manner that reflects a commitment to integrity, credibility, professionalism, and accountability.	integrated in the field of breast imaging with other surgery oncology and pathology colleagues	

**Course Vs Program ILO's Matrix**

Courses title	a 1	a2	a3	a4	a 5	a 6	a 7	b1	b 2	b 3	b 4	b 5	b 6	C 1	C 2	C 3	C 4	d 1	d 2	d3
Radiological anatomy, Technique and Quality control in mammography	*	*	*	*	*			*		*				*		*		*	*	*
Surgery of breast lesions.	*	*	*	*														*	*	*
Oncological treatment of breast cancer	*	*	*	*				*	*		*			*		*		*	*	*
Histoimmunopathology	*	*	*	*			*	*	*	*				*				*	*	*
Breast imaging I (Benign lesions)	*		*	*				*		*	*	*	*		*	*		*	*	*
Breast imaging II (Malignant lesions)	*			*		*												*	*	*
Breast imaging III (Screening program for breast cancer)	*			*		*		*						*	*			*	*	*
Breast imaging IV (Interpretation of breast images)	*		*					*		*	*					*	*	*	*	*
Breast imaging V ( Breast MRI)	*							*		*	*					*		*	*	*
Breast imaging VI (New imaging modalities of breast)		*			*					*						*		*	*	*
Breast imaging VII (Interventional techniques)	*		*			*		*		*			*					*	*	*
Breast Imaging VIII (Case presentations)	*		*		*					*								*	*	*

**Program Aims vs ILO's Matrix**

<i>Program Aims</i>	a1	a 2	a 3	a 4	a 5	a 6	A 7	b 1	b 2	b 3	b 4	B 5	B 6	C 1	C 2	C 3	C 4	d 1	d 2	d 3
• Applications of each diagnostic breast imaging modality and specify radiological features concerning breast diseases.	*	*	*	*			*	*	*	*		*		*	*		*	*		
• To train radiologists in the standard breast imaging techniques	*							*										*	*	
• To provide the radiologists theoretical and practical knowledge in the most recent diagnostic tools in breast diseases.	*				*	*		*	*	*	*	*	*	*	*			*	*	*
• To create a new generation of radiologists sub specialized in breast imaging in a response to the real need of the for well-trained radiologists in the field of breast imaging in screening and diagnosis of breast diseases	*	*						*	*	*	*					*		*	*	*

**ARS vs ILOs matrix**

Diploma program (Diploma degree in breast imaging 1718600)																			
		ARS																	
Prog ram ILOs	A 1	A 2	A 3	A 4	A 5	A 6	A 7	B 1	B 2	B 3	B 4	B 5	C 1	C 2	C 3	C 4	D 1	D 2	D 3
A1	x						x												x
A2		x		x															
A3				x							x								
A4			x							x									
A5						x	x												
A6														x					
B1	x									x									
B2			x								x						x		
B3															x				
B4	x						x												x
B5						x				x									
C1			x																
C2															x				
C3		x					x			x									
C4														x					
D1	x				x					x									x
D2	x											x						x	

