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 2017/2018

4-Department(s) : Radiodiagnosis

5- Coordinator :Prof. Dr. Rawai Khalil Fawzy

6- External evaluator(s):   Prof. Dr. Haithmelsamaloty

7- Last date of program specification approval:8/1/2017

B-   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 touls 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-Understand detailed breast and axillary nodes anatomy in mammography and Ultrasonography and technical aspects for analogue and digital mammography

a2- Recall the recommended standard in assessment of benign and malignantbreast lesions.

a3 -- specify different pathological signs in mammography and ultrasound

a4- Know technical aspects of MRI both standard and functional MRI in breast imaging

a5-list BI-RADS classification with different breast imaging modalities

a6- Specifythe basic principles of breast intervention.

a7- know the quality standard of the practice

Etc. (please note that each course is represented by a single "a" ILO)

b- Intellectual skills:

b1- Distinguish between 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

Etc. (please note that each course is represented by a single "b" ILO)

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

Etc. (specify the techniques and procedures which are actually performed in practical sessions in details)

d- General and transferable skills:

d1- Develop skills in communication

d2- Develop skills for oral presentations (to fulfill seminar).

d3- Work in groups (whenever possible).

Etc. (general for all courses, make sure that they are not less than the maximum number of "d"s in any course)

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**==

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
1-knowledge	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- know 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

2-Intellectual skills	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
	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 diagnosticproblems in case of indeterminate lesion of dense breast
	B4-Evalute professional risks	B6-Evaluate professional risks
3-Professional and practical skills	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

4-General skills	D1- Communicate effectively using all methods	**d1-** Develop skills in communication
	D2- Use information technology to improve his/her professional practice	**d2-** Develop skills for oral presentations (to fulfill seminar).
	D3- Teach and evaluate others	**d2-** Develop skills for oral presentations (to fulfill seminar). **d3-** Work in groups (whenever possible).
	D4- Perform self appraisal& seek continuous learning	**d1-** Develop skills in communication **d2-** Develop skills for oral presentations (to fulfill seminar).
	D5- Use different sources of information to obtain data	**d2-** Develop skills for oral presentations (to fulfill seminar).
	D6- Work in teams as well as a member in larger teams	**d2-** Develop skills for oral presentations (to fulfill seminar). **d3-** Work in groups (whenever possible).
	D7- Manage scientific meetings and appropriately utilize time	**d2-** Develop skills for oral presentations (to fulfill seminar).

4- curriculum structure and contents

4.a program duration:*(academic years including thesis)*

4.b programstructure :

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 | **20** | Practical | **10** | Total | **30**

Compulsory | **24** | Elective | **6** | Optional | **0**

4.b.iii- No. of credit hours of basic science courses elective from other departments except for computer and statistics) No. | **6** | % | **20**

4.b.iv- No. of credit hours of courses of social sciences and humanities. No. | **0** | % | **0**

4.b.v- No. of credit hours of specialized courses No. | **24** | % | **80**

4.b.vi- No. of credit hours of other courses No. | | % |

4.b.vii-Practical/Field Training Yes | ✔ | No |

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

Student is required to pass at least 12 credit hours with CGPA not less than C+ before submitting a thesis proposal.

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	2	1	2
1718602	- Physics of imaging modalities	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

Code No.	Course Title	No. of credit hours	Lecture	Practical
1718606	Breast imaging IV (Interpretation of breast images)	**4**	**2**	**4**

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 (NH)

Code No.	Course Title	No. of credit hours	No. of hours /week	
			Lecture	Practical

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- 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+.

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	Interview	At least 50 %
2- Alumni	Interview	Representative sample
3- Stakeholders (Employers)	Interview	Representative sample
4- External Evaluator(S) or External Examiner (s)	Reports	Prof.Dr. Haithm El-Samaloty
5- Other		

Dates of Previous editions/revisions:

Editions/Revisions Number	Date
Edition no.1	2009
Edition no. 2	2011
Edition no.3	5/6/2014
Edition no.3, revision no.1	12/2014
Edition no.3, revision no.2	10/2016
Edition no.3, revision no.3	9/2017

Programcoordinator :
Name: *Prof. DrRawya Khalil*
Signature ………………. Date 6/9/2017

Department Head:

Name: Prof.Dr Tarek Aref   Signature: ……………….

Date of Department Council Approval: 6/9/2017

*Attach these Matrixes:**Matrices*
*Program Aims vs ILOs matrix
* Courses vs Program ILOs matrix

Courses vs Program ILOs matrix

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Courses title	a1	a2	a3	a4	a5	a6	a7	b1	b2	b3	b4	b5	b6	C1	C2	C3	C4	d1	d2	d3
Radiological anatomy, Technique and Quality control in mammography	*	*	*	*				*		*				*		*		*	*	*
Physics of imaging modalities	*	*	*	*				*	*									*	*	*
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 ILOs matrix

Program Aims	a1	a2	a3	a4	a5	a6	A7	b1	b2	b3	b4	B5	B6	C1	C2	C3	C4	d1	d2	d3
• 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 subspecialized 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	*	*						*	*	*	*					*		*	*	*

Medical Research Institute

ARS vs ILOs matrix

Diploma program (Diploma degree in breast imaging 1718600)																		
ARS																		
Program ILOS	A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	B5	C1	C2	C3	C4	D1	D2	D3
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							x					
D1	x			x						x									x
D2	x											x						x	
D3							x			x					x				

Teaching and Learning Methods Vs Courses Matrix

	1718601	1718603	1718604	1718605	1718606	1718607	1718609
Lecture	√	√	√	√	√	√	√
Practical/Clinical	√	√	√	√	√	√	
Brainstorming	√	√	√	√	√	√	√
Discussion Groups		√		√			
Case presentation	√		√		√		
Self-Directed Learning	√		√		√	√	√
e-learning	√		√			√	