PROGRAMME SPECIFICATION

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) **Programme Title & Code**	**PhD Degree of Human Anatomy and Embryology**
(2) **Final award/degree**	**PhD.**
(3) **Department**	**Anatomy and Embryology**
(4) **Coordinator**	**Prof. Adel El Hawary**
(5) **External evaluator**	**Prof. Ashraf Saber Bayomy**
(6) **Date of approval by the Department`s council**	**18/5/2016**
(7) **Date of last approval of program specification by Faculty council**	**9-8-2016**

(B) Professional information

(1) Program Aims:

The broad aims of the Program are to:

1. Prepare the candidate properly as an anatomist and researcher to fulfill professional needs and a career in the university.
2. Prepare the candidate to acquire a detailed knowledge of the human anatomy and embryology and related fields of medicine to be prepared for lifelong learning.
3. Allow for proficiency in the application of the fundamentals and basics of the scientific research methodologies and the use of its various tools.
4. Allow for development of the candidate academically and professionally to be capable of continuous learning.
5. Be aware of the current problems and recent visions in anatomical sciences.
6. Develop the capacity of candidates to contribute to knowledge in the anatomical sciences.

(2) Intended Learning Outcomes (ILOs):

A- Knowledge and Understanding:

On successful completion of the PhD program, the candidate should be able to:

K 1 Describe the developmental stages of the various organs and systems in the body as well as the development of body cavities.
K 2 Recognize the functions of the fetal membranes and identify their anomalies.

K 3 Define the formation and differences among types of twins.

K 4 Define all the medical terminology used in the field of embryology.

K 5 Recognize the causes and various forms of congenital anomalies

K 6 Discuss clinical conditions related to maldevelopment

K 7 Recognize the basic concepts of the radiological sciences and the clinical application of various radiological tools.

K 8 Define the anatomical structures and anatomical variations in radiological films in particular CT and MRI.

K 9 Recognize the basis of medical genetics.

K 10 Recognize the medicolegal aspects in practice of human anatomy

K 11 Identify the surface landmarks of different structures of the body and the concepts of living anatomy.

K 12 Recognize the anatomy of particular regions of the body.

K 13 Discuss the relations between the different structures (arteries, veins, nerves and viscera).

K 14 Describe the anatomy and distribution of blood vessels

K 15 Recognize the distribution of various nerves and the effect of their lesions.

K 16 Identify the structure and function of musculoskeletal system.

K 17 Describe general and particular bony features.

K 18 Recognize the clinical problems of the selected region based on anatomical and embryological knowledge.

K 19 Recognize ethics in the life sciences and the integrity and misconduct in life sciences research, including issues of data collection, publication, authorship and peer review

B- Intellectual Skills

On successful completion of the PhD program, the candidate will be able to**:**

I 1 Integrate anatomical facts with embryological basis

I 2 Correlate his/her knowledge in embryology with the clinical findings caused by errors in development

I 3 Evaluate risk factors that can cause congenital malformations and acquire decision making skills

I 4 Integrate basic knowledge in anatomy and radiology to solve medical problems.

I 5 Evaluate risk factors in practicing radiology such as exposure to radiation.

I 6 Interpret symptoms and signs of autosomal and sex linked diseases.

I 7 Integrate the anatomical facts with various clinical problems.

C- Practical Skills:

On successful completion of the PhD program, the candidate should be able to**:**

P 1 Dissect efficiently selected regions of the human body.

P 2 Assemble the different internal structures in cadavers during teaching.

P 3 Plan for developing his/her performance in anatomical teaching.

D- Communication & Transferable skills

On successful completion of the master program, the candidate should be able to**:**

T 1 Use information and communication technology efficiently in the field of anatomy and its applied aspects and in teaching and research.

T 2 Support the learning of others when involved in a team work.

T 3 Demonstrate self awareness and motivation and ability to identify his own needs.

T 4 Be prepared for self lifelong learning.

T 5 Manage time and manipulate information effectively.

T 6 Work effectively in a group in collecting data or during preparation of seminars.

T 7 Setup rules and parameters for self evaluation and evaluating others performance.

(3) Academic Standards:

3.a- program ILOs

3.b. External reference points/benchmarks are selected to confirm the appropriateness of the objectives, ILOs and structure of assessment of the program:

http://www.gvsu.edu/gsga
http://oeas.ucf.edu/BenchmarkingComparativeResources
http://ebenchmarking.com/

3.c- Comparison of the specification to the selected external reference/ benchmark:

All programme aims of the Benchmark are covered by the current programme

(4) Curriculum Structure and Contents:

4.a- Duration of the programme (the minimum): 36 months

4.b- programme structure:

- 4.b.1: Parts of the programme:

1. First part

2. Second part

3. Thesis

- 4.b.2: Number of credit hours: 60 credit hours

Candidates should fulfill a total of **60 credit hours**

First part: 5 hours **Second part: 25** hours **Thesis: 15** hours

Log Book and activities: 15 hours (13 hours: practical, 2 hours activity including conferences, workshops, journal clubs and seminars).

●4.b.3: Teaching hours/week:

First part: Lectures: 5 Total: 5

Second part: Lectures: 15 Lab: 26 Total: 41

(5) Programme Courses:

First part:

a- Compulsory courses:

Course Title	Course Code	NO. of hours per week					Total teaching hours	Programme ILOs covered (REFERRING TO MATRIX)
		Theoretical		Laboratory /practical	Field	Total CREDIT Hours		
		Lectures	seminars					
Special Embryology	ANA 01 BE	2	-	-	-	2	30	All points cover the ILOs
Radiological Anatomy	ANA 601 RA ANA 629	1	-	-	-	1	15	
Genetics	ANA 601 BG	2	-	-	-	2	30	
TOTAL		5	-	-	-	5	75	

b- Elective courses:

Course Title	Course Code	NO. of hours per week					Total teaching hours	Programme ILOs covered (REFERRING TO MATRIX)
		Theoretical		Laboratory /practical	Field	Total		
		Lectures	seminars					
No Elective Courses								

Second part:

a- Compulsory courses (thesis will be included in this table):

Course Title	Course Code	NO. of hours per week				Total teaching hours	Programme ILOs covered (REFERRING TO MATRIX)
		Theoretical		Laboratory /practical	Total CREDIT Hours		
		Lectures	seminars				
Human Anatomy and Embryology:	ANA 601	15	-	8	23	465	All points cover the ILOs
Total					23		
Thesis	15						

b- Elective courses:

Course Title	Course Code	NO. of hours per week				Total teaching hours	Programme ILOs covered (REFERRING TO MATRIX)
		Theoretical		Laboratory /practical	Total Hours CREDIT		
		Lectures	seminars				
Elective Course in Applied Anatomy	ANA 601 EAA	10	-	5	15	225	All points cover the ILOs
TOTAL					15		

(6) Ph.D: Program-Aims ILOs Matrix

Program Aims	Program ILOs: Knowledge and Understanding "K"																		
	K1	K 2	K 3	K 4	K 5	K 6	K7	K 8	K9	K10	K11	K12	K13	K14	K15	K16	K17	K18	K19
Aim no. 1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	x
Aim no. 2	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	x
Aim no. 3							X	X	X	X								X	x
Aim no. 4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	x
Aim no. 5										X	X	X	X	X	X	X	X	X	x
Aim no. 6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	x

Program Aims	Program ILOs: Intellectual Skills "I"									
	I1	I 2	I 3	I 4	I 5	I 6	I7	I 8	I9	I10
Aim no. 1	X	X	X	X	X	X	X	X	X	X
Aim no. 2	X	X	X	X			X	X	X	X
Aim no. 3	X	X	X	X	X	X	X	X	X	X

Aim no. 4	X	X	X	X	X	X	X	X	X	X
Aim no. 5	X	X	X	X			X	X	X	X
Aim no. 6	X	X	X	X			X	X	X	X

Program Aims	Program ILOs: Practical Skills "P"			Program ILOs: Communication & Transferable skills "T"						
	P1	**P 2**	**P3**	**T1**	**T2**	**T3**	**T4**	**T5**	**T6**	**T7**
Aim no. 1	X	X	X	X	X	X	X	X	X	X
Aim no. 2	X	X	X	X	X	X	X	X	X	X
Aim no. 3	X	X	X	X	X	X	X	X	X	X
Aim no. 4	X	X	X	X	X	X	X	X	X	X
Aim no. 5	X	X	X	X	X	X	X	X	X	X
Aim no. 6	X	X	X	X	X	X	X	X	X	X

PH.D Programme–Courses ILOs Matrix

Course Title/Code	Programme ILOs: Knowledge and Understanding "K"																		
	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12	K13	K14	K15	K16	K17	K18	K19
Special Embryology, ANA 601 BE	**X**			**X**	**X**	**X**												X	X
Radiological Anatomy, ANA 601 RA ANA 629							X	**X**											X
Genetics, ANA 601 BG									X										X
Human Anatomy and Embryology: ANA 601	X	**X**	X	X	X	X				X	**X**	X	X	X	**X**	X	x	X	X
Elective Course in Applied Anatomy, ANA 601 EAA	X				X	X					X	X						X	X

Course Title/Code	Programme ILOs: Intellectual Skills: "I"							
	I 1	I 2	I 3	I 4	I 5	I 6	I 7	I 8
Special Embryology, ANA 601 BE	**X**	**X**	**X**					
Radiological Anatomy, ANA 601 RA ANA 629				**X**	**X**			
Genetics, ANA 601 BG						**X**		
Human Anatomy and Embryology: ANA 601	X	X		X			**X**	X
Elective Course in Applied Anatomy	X	X		X			X	X

Course Title/Code	Programme ILOs: Professional/Practical Skills: "P"				Communications/Transferable Skills: "T"						
	P 1	P 2	P 3		T 1	T 2	T 3	T 4	T 5	T 6	T 7
Special Embryology, ANA 601 BE											
Radiological Anatomy, ANA 601 RA ANA 629											
Genetics, ANA 601 BG											
Human Anatomy and Embryology: ANA 601	X	X	X		**X**	X	X	**X**	**X**	**X**	**X**
Elective Course in Applied Anatomy	X	X	X		**X**	X	X	**X**	**X**	**X**	**X**

(7) Programme Admission Requirements:

- **General requirements:**

  Postgraduate bylaws of the Faculty of Medicine

- **Specific requirements (if applicable):**

  Not applicable

(8) Regulations for progression and programme completion:

1. Peer teaching observations and feedback.
2. Annual programme monitoring.
3. Attendance criteria: minimum attendance accepted for each course is 75%.
4. Log book should fulfill and signed by Head of the Department.
5. Successfully complete the courses by passing the different exams.
6. Successfully defend the Thesis.

(9) Evaluation of Programme's intended learning outcomes (ILOs):

1. First part:

Course	Assessment	Total
Special Embryology, ANA 501 GE	**3 hours written exam**	200
Genetics, ANA 502	**3 hours written exam**	200
Radiological Anatomy, ANA 501 RA	**3 hours written exam**	100
Total marks		**500**

2. Second part:

Course	Assessment	Distribution of marks			Total
		written	Oral	Practical	
Human Anatomy and Embryology: ANA 601	**3 hours written exam, Oral exam, Practical exam**	**150**	**75**	**75**	300
Elective Course in Applied Anatomy	**3 hours written exam, Oral exam, Practical exam**	**100**	**50**	**50**	200
TOTAL MARKS					**500**

We certify that all information required to deliver this programme is contained in the above specification and will be implemented. All course specification for this programme are in place.	
Programme coordinator: Name: **Prof. Adel El Hawary**	Signature & date:
Dean: Name: **Prof. El-Said Abdel-Hady**	Signature & date:
Executive director of the quality assurance unit: Name: **Seham Gad Elhak**	Signature & date:

P.S. The programme specification should have attached to it all courses specifications for all courses listed in the matrix.