



Program Specification for MD Degree in Anatomy

Program type: Single

Department offering the program: Department of anatomy & Embryology

Program Code: ANAT 900

Total Credit points: 285 (135 + 150 for the previous master degree)

Academic year: 2016/2017

External Evaluator: Prof. Dr. Kariman El-Gohari, Professor of Anatomy and Head of the Anatomy department, Ein-Shams University

I. Aim of the Program

To provide the candidate with the detailed knowledge and skills to be qualified for teaching different topics of anatomy and biology to the medical students of different categories and to introduce them to the field of anthropology and evolution. The program also allows the candidate to master the fine skills needed in dissection of different regions of human cadavers and to acquire the scientific thinking necessary for scientific medical research.

II. Intended Learning Outcomes of the Program (ILOs)

A. Knowledge and Understanding: By the end of the program the candidate should be able to:

- 1) Master the detailed description of the structures of the different tissues, organs and systems of the human body.
- 2) Identify the surface anatomy of bony landmarks, muscles, viscera and correlate them to X-Ray, MR, CT and sonography.
- 3) Describe in depth and details the changes which occur during different stages human development and growth with the possible anomalies or aberration that may occur at each stage.
- 4) Describe and explain the anatomical and embryological basis of clinical problems and syndromes.
- 5) Master the basic scientific knowledge in comparing human anatomy with that of different animal species.
- 6) Recognize the principals of performing a research study and how to use appropriate statistical methods.
- 7) Aware of the areas of research in the field of anatomy including the experimental one especially by using stem cells from different sources.

B. Intellectual Skills: By the end of the program the candidate should be able to:

- 1) Identify the surface anatomy of the different regions and structures of the limbs.
- 2) Map the detailed surface anatomy of the internal organs.
- 3) Detect the detailed anatomical features, relationship and the neurovascular connections of the internal organs in cadavers and preserved specimens.
- 4) Distinguish the different anatomical structures on various radiological techniques.
- 5) Interpret various clinical disorders on anatomical and developmental basis.

C. Professional and Practical Skills: By the end of the program the candidate should be able to:

- 1) Perform fine and accurate dissection of different regions, organs, vessels and nerves of the human body.
- 2) Prepare ideal specimens for museum presentation.
- 3) Demonstrate the anatomical structures as observed by different radiological methods.
- 4) Design experimental work in the field of stem cells.
- 5) Master the different histological techniques for the light and electron microscopy.

D. General and Transferable Skills: By the end of the program the candidate should be able to:

1. Acquire the confidence of the colleague, student and auxiliary staff by communication with them.
2. Affirm the values of the ethics and respect to all individuals inside and outside the department and particularly the dissecting room.
3. Adopt appropriate respect to cadaver.
4. Cooperate and be responsible towards his colleagues and students as well as to his seniors.
5. Present ideal image of his appearance, speech and behavior.
6. Accept and encourage team work.
7. Master computer skills required to present data bases as well as use the internet for learning communication and updating the latest knowledge.
8. Show perfect administrative skills enabling him to fulfill the needed paper work.
9. Acquire abilities to organize and control the juniors and subordinate paramedical staff.
10. Acquire different scientific methods and possess critical reading abilities.
11. Write perfect scientific articles according to the basis of scientific research.

III. Academic standards

1. Academic reference standers: The academic standers of anatomy program is adopted and accredited by the departmental council
2. External References for Standards:
This program is unique since it incorporated different topics from different disciplines.

IV. Program Admission Requirements

According to the Faculty of Medicine, Cairo University Bylaws for postgraduate Programs (July 2009), applicants should have Master degree or equivalent accredit degree accredit of in the same specialty. Admission to the program is open during January and July. The training prior to registration may be accredited according to departmental and hospital evaluation.

V. Program Structure and Contents

Program duration: Not less than two academic years.

Program structure: Total credit points 285 (Table 1)

- **Previous Master degree:** 150 points
- **Compulsory courses;** two academic year (30 weeks each)
 - Advanced detailed descriptive anatomy 10 credit points
 - Neuroanatomy 4 credit points
 - Anthropology 1 credit points
- **Elective courses;** choose two courses 8 credit points
 - Advanced genetics 4 credit points
 - Advanced Histology 4 credit points
 - Histopathology 4 credit points
- **Scientific activities:** 4 credit points
- **Practical training program** 48 credit points
- **Medical Doctorate thesis:** 60 credit points

Table 1: First part

Courses		Credit Points		ILOs
Code	Title	CPS	Total	
	Previous Master degree		150	
	Compulsory COURSES (Two academic years)			
ANAT 901 a	Advanced detailed Descriptive Anatomy	11	15	A1, A2, A3, A4, A5 B1, B2, B3, B4
ANAT 901 b	Neuroanatomy	4		A1, A2, A3, A4, A5 B1, B2, B3, B4 C1, C2
	ELECTIVE COURSES (ANAT) Choose 2 courses			
ANAT 910	Human Genetics	4	8	A4, A5, A6
ANAT 902	Advanced Histology	4		A4, A5, A6
ANAT 908	Histopathology	4		A4, A5, A6
ANAT 901 c	Anthropology	4		A4, A5
	SCIENTIFIC ACTIVITIES			
	Scientific activities	4	4	D1, D2, D3, D4, D5 D6, D7, D8, D9, D10
	PRACTICAL TRAINING			
ANAT 901 P	Practical training	48	48	B2, B2, B3, B4, B5 C1, C2, C3, C4, C5 D2, D3, D4, D5, D6
	THESIS			
	Thesis	60	60	A7 B5 C5 D6, D7, D8, D9, D10, D11

Practical training program (3rd phase, advanced training):

According to the faculty of Medicine, Cairo University Bylaws for postgraduate programs (July 2009), the duration of the advanced practical training is 24 months. All the students should complete the advanced training program for these two years in the Anatomy Department in order to acquire the needed credit points. During this period, the candidates will attend the practical sessions and share in the demonstration of Anatomy for the students of the following categories: 1st and 2nd year medical students, 1st year dentistry student, 1st and 2nd year students of physiotherapy, 1st year pharmacy student under supervision of senior staff members. The candidates should dissect different regions of the human cadavers properly and prepare them for the practical sessions. The candidates should also prepare museum specimens and share in preparing practical exam for the students of the above mentioned categories and marking it under supervision of the professors.

Medical Doctorate Thesis:

All MD degree students should prepare a thesis. The research and ethical committee must approve the protocol of the research. The thesis should include a review part and a research part. The thesis is supervised by one or more senior staff members and may include other specialties according to the nature of the research. The thesis should be evaluated by a committee of three professors including one of the supervisors and an external professor. The thesis should be evaluated and approved before submitting for final exam.

Scientific Activities:

The candidates should actively participate in the scientific activities of the department such as:

- Seminars.
- Journal clubs.
- Scientific meetings arranged by the department.
- Workshops.
- Conferences.
- Thesis discussions.

Each activity is monitored and given credit points recorded in a special section the in log book. Candidates should collect the required points before being allowed the admission for the final exam.

ANATOMY MD DEGREE PROGRAM MATRIX

Courses		A Knowledge and Understanding										B Intellectual Skills					C Clinical Skills											
		1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	1	2	3	4	5	6	7	8	9	10	11
Code	Name																											
ANAT 901 a	Advanced descriptive Anatomy																											
ANAT 901 b	Neuroanatomy																											
ANAT 901 c	Anthropology																											
ANAT 910	Human Genetics																											
ANAT 902	Advanced Histology																											
ANAT 908	Histopathology																											
	Scientific Activities																											
	Residency Training Program																											
	MD																											

VI. Regulations for Progression and Program Completion

After collecting the required credit points for the related courses of Anatomy syllabus, the advanced practical training, the scientific activities and ultimately the Thesis, the candidate will be eligible to sit for the final examination. In case of failure of the candidate to pass the examination, he/she may resubmit for the next examination. The candidate will receive the MD degree after passing this final examination. MD degree should be obtained within a maximum of six years after the registration date.

VII. Assessment

A: Assessment Tools

- **Supervision and Monitoring of Training Program**

According to the Faculty of Medicine, Cairo University Bylaws for practical Training Programs, the supervisors carry continuous assessment during the program. A practical training program logbook will be kept for each candidate to document all his/her practical activities as well as his/her participation in different scientific activities. The head of the department should allow the candidates to undergo the final examination when they complete their training program and collect the needed credit points.

- **Formal Assessment**

According to the Faculty of Medicine, Cairo University Bylaws for postgraduate Programs (July 2009). Students should be assessed at the end of the program.

- **Compulsory courses:** Descriptive Anatomy and Advanced Neuroanatomy + Anthropology: distributed in three written exam papers, three hours each (including long and short essays as well as multiple choice questions) + practical and oral exams.
- **Elective courses:** Human genetics, advanced Histology and Histopathology (choose two courses): distributed in one written exam paper for three hours (including long and short essays as well as multiple choice questions) + practical and oral exams.

B: Assessment Schedule:

Written examination will be held in four days (Three hours each) include short and long essay questions, and MCQ (include problem solving). This will be followed by the practical and oral examinations in separate days.

The written exam will be held in May/ November (four days)
Day one: Descriptive Anatomy (paper 1, 3 hours written exam)
Day two: Descriptive Anatomy (paper2, 3 hours written exam)
Day three: Advanced Neuroanatomy + Anthropology (3 hours written exam)
Day four: Human genetics, advanced Histology and Histopathology, choose only two courses, (3 hours exam)

The practical exams will be held in two days.
The oral exams will be held in two days.

C: Weighing Of Assessment (Marks allocated to courses): (50 marks for each credit point)

Courses		Marks			
Code	Title	Written	Oral	Practical	Total
Compulsory courses					
ANAT 901	Descriptiv anatomy	350	100	100	550
ANAT 901	Neuroanatomy	100	50	50	200
Elective courses (choose only 2 courses)					
ANAT 910	Human genetics	100	50	50	200
ANAT 902	Advanced Histology	100	50	50	200
ANAT 908	Histopathology	100	50	50	200
ANAT 901	Anthropolgy	100	100	-	200
Total					1150

- It is mandatory to pass all the papers of written exams separately.
- The passing mark in any written exam is $\geq 60\%$.

VIII. Evaluation of Program Intended Learning Outcomes

Evaluator	Tool	Sample
1. Senior Students	Questionnaire at the end of the program	All the PG students
2. Alumni	The faculty is currently developing an Alumni office for postgraduates	Not yet determined
3. Stakeholders	A meeting will be arranged during annual conference of the department	Available representatives from: <ul style="list-style-type: none"> - Army hospitals - National medical insurance - Medical syndicate - Ministry of health
4. External Evaluators	Review program and courses Attending the final exam	Once before implementation Bi-annual report
5. College Quality Assurance committee	Annual program reviewer	

Signatures

Date of approval by department: September 2016

Program coordinator:

Prof. Dr. Hoda Mahmoud El-Aasar

Prof. Dr. Sherief Zaky

Prof. Dr. Ehab Abdel Aziz Ahmed

Head of Department

Prof. Dr. Hoda Mahmoud El-Aasar