كلية الطب
Faculty of Medicine

MINIA UNIVERSITY

Doctorate (MD) Program specification of Human Anatomy and Embryology

Doctorate (MD) Program & Course Specifications in Human Anatomy and Embryology
2022- 2023

University: El- Minia

Faculty(s): Medicine

Department: Human Anatomy and Embryology

A- Basic Information:

1- Program title: Doctorate Degree in Human Anatomy and Embryology

2- Program type: **Single** ☑ Double ☐ Multiple ☐

3- Department responsible for offering the degree: Human Anatomy and Embryology

4- Departments involved in the program: Human Anatomy and Embryology, and Public health and preventive medicine department.

5- Program duration: minimum 3.5 years

6- **Number of program courses:** 4 courses (Medical Statistics and Research Methodology & Use of Computer in Medicine, select one course in Human Anatomy and Embryology, and general & specific Human anatomy and embryology AN: 100)

7- Coordinator: Dr. Sayed Fouad El-Sheikh Ali

8- External evaluators: Prof. Dr. Fatma Alzahraa Fouad Abdel- Baky

B- Professional Information:

1- Program aims:

Graduate of Doctorate Degree in human anatomy and embryology the candidate should be able to:

1- Illustrate competency and mastery of basics, methods and tools of scientific research and medical audit in Human Anatomy and Embryology.
2-Have a continuous ability to add knowledge new developments in Human Anatomy and Embryology through research and publication.
3- Use scientific knowledge to continuously update and improve practical skills**.**
4- Award an excellent level of medical knowledge and apply such knowledge in practical skills and scientific research.
5- Develop and show an in-depth understanding of common areas/ problems and recent advances in the field of specialty, from basic clinical care to evidence based clinical application.
6- Create solutions for health problems related to Human Anatomy and Embryology.
7- Outline excellent level of a wide range of professional skills to manage independently all problems in the areas of Human Anatomy and Embryology.
8- Utilize recent technologies in improvement of Human Anatomy and Embryology.
9- Demonstrate commitment for life-long learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages and in the area of specialty or its subspecialties.

2- Intended learning outcomes (ILOs)

2.1. (a) Knowledge and understanding:

By the end of the study of doctorate program in anatomy the candidate should be able to:

a1. Define the normal structure of human organs by naked eye.

a2. Demonstrate and interpret established updated and evidence-based theories, basics and developments of Human Anatomy and Embryology and relevant sciences.

a3. Define basic, methods and ethics of medical research.

a4. Rephrase the principles and measurements of quality in the field of Human Anatomy and Embryology

a5. Rephrase principles and efforts for maintenance and improvements of health.

a6. State the growth and development of the human organ system.

a7. Demonstrate the anatomical basis of surface anatomy

a8. Explain the anatomical basis by using imaging techniques: CT, MRI.

a9. Mention the principles of ethics and legal aspects of professional practice in anatomy.

a10. Identify the comparative anatomy

a11. Discuss the basics of cytogenetics and know how the genome affects all the characteristics of the human body.

a12. Demonstrate the mechanism of walking biomechanics and biophysics.

2.2. (b) Intellectual skills:

By the end of doctorate program in anatomy the candidate should be able to:

b1. Establish judgment skills for analytical and critical problem solving.

b2. Integrate knowledge and deal with complex subjects to solve problems

b3. Organize for involvement in research studies related to Human Anatomy and Embryology.

b4. Integrate different anatomical subjects in limited time

b5. Establish goals to improve performance in the field of anatomy.

b6. Interpret the anatomical data and its clinical correlates.

b7. Illustrate the anatomical facts on the basis of embryological development.

b. 8- Writing scientific papers.

b. 9- Apply risk evaluation in the related the practice of Human Anatomy and Embryology.

b10. Apply risk evaluation in the related the practice of Human Anatomy and Embryology.

2.3. (c) Professional and practical skills

By the end of the study of doctorate program in anatomy, the candidate should be able to:

c1. Practice the basic and modern professional skills in anatomy.

c2. Write and evaluate scientific anatomical researches.

c3. Assess methods and tools existing in anatomy.

c4. Create extensive level of professional practical services that can help solving health problems and better understanding of the normal structure and function extensive level means in depth understanding from basic science to evidence – based clinical application and possession of skills to manage independently all problems in the practice of Human Anatomy and Embryology.
c5. Develop MD practical relevant to Human Anatomy and Embryology.
c6. Write and evaluate reports for situations related to the field of Human Anatomy and Embryology.
c7. Construct MD practice-based learning and improvement skills that involves investigation and evaluation and improvements of practice in Human Anatomy and Embryology, appraisal and assimilation of scientific evidence and risk management.
c8. Use competently all information sources and technology to improve practice in Human Anatomy and Embryology.
c9. Conclude in improvement of the education system.

2.4. (d) General and transferable skills

By the end of the study of doctorate program in anatomy the candidate should be able to:

d1. Communicate effectively by all types of effective communication.
d2. Use information technology to serve the development of professional practice.
d3. Assess the candidate himself and identify personal learning needs.
d4. Use different sources to obtain information and knowledge.
d5. Assess the performance of others.
d6. Work in a team, and team's leadership in various professional contexts.
d7. Employ time wisely.
d8. Demonstrate skills of self-learning and lifelong learning needs of medical profession.

3- Program Academic Reference Standards(ARS):

- Faculty of medicine, Minia university adopted the general national academic reference standards provided by the national authority for quality assurance and accreditation of education (NAQAAE) for all postgraduate programs. (Faculty Council Decree No.6854, in its cession No.177 Dated: 18\5\2009). **{Annex 1}.**

Then, Faculty of medicine, Minia university has developed the academic standards (ARS) for doctorate (MD) program and approved in faculty council decree No.7528, in its cession No.191 dated: 15\3\2010 and these standards (faculty ARS) have been updated and approved in faculty council No.52\2 dated: 20\2\2023 **{Annex 1}.**

Then Human Anatomy and Embryology has adopted these standards and developed intended learning outcome (ILOS) for MD program in Human Anatomy and Embryology and the date of program specification 1st approval by department council:13\5\2013 and the last date of program specification approval by department council: 5\3\2023 {Annex 2}.

Program External References

- Faculty of medicine, Minia university adopted the standards provided by "Accreditation council for graduate Medical Education" (http: acgme.org). (Faculty Council Decree No.7528, in its cession No.191, dated: 15\3\2010).

5. Program Structure and Contents:

A. Program duration: (minimum 3.5years).

B. Program structure:

Overall number of hours/weeks:

First part:

- Use computer in Medicine

- Lectures: 15 hours
- Practical/clinical: 30 hours
- Total: 45 hours

- Medical statistics and research methodology

- Lectures: 20 hours
- Practical/clinical: 10 hours
- Total: 30 hours

Elective courses; choose one course of

- 1-Anthropology.

- Lectures: 22 hours
- Practical: 7 hours
- Total: 29 hours

- 2-Comparative anatomy

- Lectures: 27 hours
- Practical: 7 hours
- Total: 34 hours

3-Growth

Lectures: 26 hours
Practical: 6 hours
Total: 32 hours

- 4- Genetics

- Lectures: 24 hours
- Practical: 7 hours
- Total: 31 hours

- 5- Biomechanics.

- Lectures: 28 hours
- Practical: 7 hours
- Total: 35 hours

Second part*:*

Human Anatomy and Embryology:
Lectures: 48 hours
Practical: 12 hours
Total: 60 hours

A. First part:

Use computer in medicine: Percentage 43 %

Medical statistics and research methodology: Percentage 28.5%

Selected course of Anatomy: Percentage 28.5%

B. Second part

Human Anatomy and Embryology: Percentage 100%

C. Levels of program in credit hours system: Not applicable

D. Program courses:

Number of courses: 4 courses

N.B. {Courses' specifications are present in Annex 3} & {Correlations of Program ILOs with courses are present in Annex 4}.

6- Program admission requirements:

5. 1. General requirements:

A. Candidates should have one of the following:

- MBBCH degree from any Egyptian faculty of Medicine or
- Equivalent degree from medical schools abroad approved by the Ministry of higher education.

B. Master's degree in Human Anatomy and Embryology.

C. Follows postgraduate regulatory rules of postgraduate studies of Faculty of Medicine, El-Minia University.

5. 2. Specific requirements:

A. Candidates graduated from Egyptian universities should be have at least "Good Rank" in their final year / cumulative year examination and grade "Good Rank "in Human Anatomy and Embryology course too.

D. B. Master degree in Human Anatomy and Embryology with at least" Good Rank".

C. Candidate should know how to speak& write English well.

D. Candidate should have computer skill.

1. Regulations for progression and program completion:

Duration of program is (Minimum 3.5 years), starting from registration till acceptance of the thesis; divided to:

First Part (≥6 months):

• All courses as specified in the internal bylaw

• At least six months after registration should pass before enrolling for the first part examination.

• The exam is set twice a year in April and in October.
• For the student to pass the first part exam, a score of at least 60% in each curriculum is needed.
• Those who fail in one curriculum need to re-exam it only.

Second Part (≥24months):

• Program related specialized Courses.
• At least 24 months after passing the first part should pass before student can ask for examination in the second part.
• Fulfilment of the requirements in each course as described in the template registered in the log book is a prerequisite for candidates to be assessed and undertake part 1 and part 2 exams; as following:

a) Training courses
b) Seminars
c) Thesis discussion
d) Other scientific activities requested by the department

• Two sets of exams: first in April— second in October.
• 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 re-attend the written exam.

Thesis/essay (24-48 months):

- Could start after protocol registration and should be completed, defended and accepted after passing the 2nd part final examination, and after passing of at least 24 months after documentation of the subject of the thesis.
- Publishing 2 paper- based thesis: at least 1 international paper in an international journal with (cite score 0.5 or more-has an ISSN) is required to pass this part.

8-Methods of teaching and learning:

- Lecture
- Practical l **{**skill lab, cadavers, platinated and plastic models: 80% self-directional, 20% instructor guided} - (computer and statistical programs skills)- (anthropometric skills)
- Presentation/seminar
- Group discussion
- Training courses & workshops

Coverage of Course ILOS by Methods of teaching and learning: attached to file (annex 4)

9-Methods of student assessment:

1- **written exam**

Short assay: to assess Knowledge, understanding
Problem solving: assess intellectual skills
Multiple choice: assess Knowledge, understanding and intellectual skills
Periodic quizzes: assess Knowledge, understanding and intellectual skills

2- **Practical exams (**skill lab exams)**: to assess practical skills as well as intellectual skills.**

3- **Oral exam: to assess understanding, intellectual skills and transferrable**

Coverage of Course ILOS by Methods of assesment: attached to file (annex 4)

10. Methods of Program Evaluation:

Evaluator (By whom)	Method/tool	Sample
1. **doctorate students**	Questionnaires	Attached to the file
2. **Graduates**	Questionnaires	Attached to the file
3. **Stakeholders**	Meeting	Attached to the file
4. **External & Internal evaluators and external examiners**	Reports	Attached to the file

- **Program Coordinators:**

Dr. Sayed Fouad El-Sheikh Ali

- **Head of Department**: Prof. Dr. Fatma Alzahraa Fouad Abdel- Baky

Date of program specifications 1st approval by department council: 26/8/2013.

Date of last update & approval by department council: 5\3\2023

Annex I: comparison between general academic reference standards (GARs) and faculty academic reference standards (ARS):

2. المعايير القياسية العامة: NAQAAE General Academic Reference Standards "GARS" for MD Programs	2. Faculty Academic Reference Standards (ARS) for MD Program
1.2. المعرفة والفهم: بانتهاء دراسة برنامج الدكتوراه يجب أن يكون الخريج قادرا علي الفهم والدراية بكل من:	2.1. Knowledge and understanding: Upon completion of the doctorate Program (MD), the graduate should have sufficient knowledge and understanding of:
1.1.2. النظريات والأساسيات والحديث من المعارف في مجال التخصص والمجالات ذات العلاقة	2.1.1. Theories, basics and updated knowledge in his scholarly field and related basic sciences.
2.1.2. أساسيات ومنهجيات وأخلاقيات البحث العلمي وأدواته المختلفة	2.1.2. Basic, methods and ethics of medical research.
3.1.2. المبادئ الأخلاقية والقانونية للممارسة المهنية في مجال التخصص	2.1. 3. Ethical and medicolegal principles of medical practice.
4.1.2. مبادئ وأساسيات الجودة في الممارسة المهنية في مجال التخصص	2.1. 4. Identify Principles and fundamental of quality in professional medical practice.
5.1.2. المعارف المتعلقة بآثار ممارسته المهنية على البيئة وطرق تنمية البيئة وصيانتها	2.1.5. Knowledge related to effects of professional practice on public health and methods of maintenance and system-based improvement of public health.

2.2. Intellectual skills:	2.2. المهارات الذهنية:
Upon completion of the doctorate program (MD), the graduate must be able to:	بانتهاء دراسة برنامج الدكتوراه يجب أن يكون الخريج قادرا على:

2.2.1 Analysis and evaluation of information to correlate and deduce from it.	2.2.1.تحليل وتقييم المعلومات في مجال التخصص والقياس عليها والاستنباط منها
2.2.2. Problem solving skills based on analysis of available data for common health problems related to his scholarly field.	2.2.2. حل المشاكل المتخصصة استنادا على المعطيات المتاحة
2.2.3. Carryout research projects related to his scholarly field.	2.2.3. إجراء دراسات بحثية تضيف إلى المعارف
2.2.4. Write and publish scientific papers.	2.2.4. صياغة أوراق علمية
2.2.5. Assess risk in professional medical practice.	2.2.5. تقييم المخاطر في الممارسات المهنية
2.2.6. Establish goals, commitments and strategies for improved productivity and performance.	2.2.6. التخطيط لتطوير الأداء في مجال التخصص
2.2.7. Making professional decisions in different professional contexts.	2.2.7. اتخاذ القرارات المهنية في سياقات مهنية مختلفة
2.2.8. Demonstrate intellectual curiosity necessary for scientific discovery and innovation through active participation in research.	2.2.8. الابتكار/ الإبداع

9.2.2. الحوار والنقاش المبني على البراهين والأدلة	2.2.9. Using Evidence-based strategies to during discussion or teaching others.
3.2. مهارات المهنية: **بانتهاء دراسة برنامج الدكتوراه يجب أن يكون الخريج قادرا على:**	**2.3. Professional skills:** Upon completion of the doctorate program (MD), the graduate must be able to:
1.3.2. إتقان المهارات المهنية الأساسية والحديثة في مجال التخصص	2.3.1. Master the basic as well as modern professional practical and/or clinical skills.

2.3.2 . كتابة وتقييم التقارير المهنية	2.3.2. Write and evaluate professional reports.
2.3.3 . تقييم وتطوير الطرق والأدوات القائمة في مجال التخصص	2.3.3. Evaluate and improve the methods and tools in the specific field
4.3.2. استخدام الوسائل التكنولوجية بما يخدم الممارسة المهنية	2.3.4. use of technological means to serve Professional practice
2.3.5. التخطيط لتطوير الممارسة المهنية وتنمية أداء الآخرين.	2.3.5. Planning for the development of professional practice and improve of the performance of others
4.2. المهارات العامة والمنتقلة: **بانتهاء دراسة برنامج الدكتوراه يجب أن يكون الخريج قادرا على:**	**2.4. General and transferable skills** Upon completion of the doctorate program (MD), the graduate must be able to:

1.4.2. التواصل الفعال بأنواعه المختلفة	2.4.1. Communicate (in writing and orally) effectively and respectfully with peers, faculty, colleagues, and other members of the health care team, understanding the role of consultations and referrals.
2.4.2. استخدام تكنولوجيا المعلومات ب ما يخدم تطوير الممارسة المهنية	2.4.2. Use of information technology to serve Professional Practice Development.
3.4.2. تعليم الآخرين وتقييم أداءهم	2.4.3. Demonstrate effective teaching and evaluating others.
4.2.4. التقييم الذاتي والتعلم المستمر.	2.4.4. Self-assessment and continuous learning.
5.4.2. استخدام المصادر المختلفة للحصول على المعلومات والمعارف.	2.4.5. use physical information resources (print, analog), online (electronic, digital,) text, audio-video, book and journal to address medical questions and knowledge to sustain professional growth
6.4.2. العمل في فريق وقيادة فرق العمل	2.4.6. Work as a member in larger teams and as well as a team leader knows how to develop "teaming strategy" to plan how people will act and work together.
7...4.2 إدارة اللقاءات العلمية والقدرة علي إدارة الوقت	2.4.7. Manage of scientific meetings and the ability to manage Time effectively.

Annex II: Comparison between faculty academic reference standards (ARS) and MD program for Human anatomy and embryology (ILOs):

2. Faculty Academic Reference Standards (ARS) for MD Program	**MD Program of** Human Anatomy and Embryology
2.1. Knowledge and understanding: Upon completion of the doctorate Program (MD), the graduate should have sufficient knowledge and understanding of:	2.1. Knowledge and Understanding Upon completion of the doctorate Program (MD) in Human Anatomy and Embryology, the graduate should be able to
2.1.1. Theories, basics and updated knowledge in his scholarly field and related basic sciences.	a2. Demonstrate and interpret established updated and evidence-based theories, basics and developments of Human Anatomy and Embryology and relevant sciences.
2.1.2. Basic, methods and ethics of medical research.	a3. Define basic, methods and ethics of medical research.
2.1. 3. Ethical and medicolegal principles of medical practice.	a9. Mention the principles of ethics and legal aspects of professional practice in anatomy.
2.1. 4. Identify Principles and fundamental of quality in professional medical practice.	a4.Rephrase the principles and measurements of quality in the field of Human Anatomy and Embryology

2.1.5. Knowledge related to effects of professional practice on public health and methods of maintenance and system-based improvement of public health.	a5. Rephrase principles and efforts for maintenance and improvements of health. a6. State the growth and development of the human organ system. a7. Demonstrate the anatomical basis of surface anatomy a8. Explain the anatomical basis by using imaging techniques: CT, MRI.
2.2. Intellectual skills: Upon completion of the doctorate program (MD), the graduate must be able to:	**2.2 Intellectual skills by the end of the program the student should be able to**:
2.2.1 Analysis and evaluation of information to correlate and deduce from it.	b1. Establish judgment skills for analytical and critical problem solving, related to anatomy field. b2. Integrate knowledge and deal with complex subjects to solve problems
2.2.2. Problem solving skills based on analysis of available data for common health problems related to his scholarly field.	b1. Establish judgment skills for analytical and critical problem solving, related to anatomy field.
2.2.3. Carryout research projects related to his scholarly field.	b3. Organize for involvement in research studies related to Human Anatomy and Embryology.
2.2.4. Write and publish scientific papers.	B8. Writing scientific papers.
2.2.5. Assess risk in professional medical practice.	b10. Apply risk evaluation in the related the practice of Human Anatomy and Embryology.

2.2.6. Establish goals, commitments and strategies for improved productivity and performance.	b5. Establish goals to improve performance in the field of anatomy.
2.2.7. Making professional decisions in different professional contexts.	b4. Integrate different anatomical subjects in limited time b6. Interpret the anatomical data and its clinical correlates.
2.2.8. Demonstrate intellectual curiosity necessary for scientific discovery and innovation through active participation in research.	b10. Develop the creation and innovation in the field of Human Anatomy and Embryology
2.2.9. Using Evidence-based strategies to during discussion or teaching others.	b7. Illustrate the anatomical facts on the basis of embryological development.
2.3. Professional skills: Upon completion of the doctorate program (MD), the graduate must be able to:	**2.3 Professional and practical skills** After completing the program, the student should be able to:
2.3.1. Master the basic as well as modern professional practical and/or clinical skills.	c1. Practice the basic and modern professional skills in anatomy. c7. Construct MD practice-based learning and improvement skills that involves investigation and evaluation and improvements of practice in Human Anatomy and Embryology, appraisal and assimilation of scientific evidence and risk management.

2.3.2. Write and evaluate professional reports.	c6. Write and evaluate reports for situations related to the field of Human Anatomy and Embryology.
2.3.3. Evaluate and improve the methods and tools in the specific field	c3. Assess methods and tools existing in anatomy.
2.3.4. use of technological means to serve Professional practice	c8. Use competently all information sources and technology to improve practice in Human Anatomy and Embryology. c9. Conclude in improvement of the education system.
2.3.5. Planning for the development of professional practice and improve of the performance of others	c4. Create extensive level of professional practical services that can help solving health problems and better understanding of the normal structure and function extensive level means in depth understanding from basic science to evidence – based clinical application and possession of skills to manage independently all problems in the practice of Human Anatomy and Embryology. c5. Develop MD practical relevant to Human Anatomy and Embryology.
2.4. General and transferable skills Upon completion of the doctorate program (MD), the graduate must be able to:	**2.4. General and transferable skills** Upon completion of the doctorate program (MD), the graduate must be able to:

2.4.1. Communicate (in writing and orally) effectively and respectfully with peers, faculty, colleagues, and other members of the health care team, understanding the role of consultations and referrals.	d1. Communicate effectively by all types of effective communication.
2.4.2. Use of information technology to serve Professional Practice Development.	d2. Use information technology to serve the development of professional practice such as 3D videos, smart screens, and animations.
2.4.3. Demonstrate effective teaching and evaluating others.	d5. Assess the performance of others.
2.4.4. Self-assessment and continuous learning.	d8. Demonstrate skills of self-learning and lifelong learning needs of medical profession.
2.4.5. use physical information resources (print, analog), online (electronic, digital,) text, audio-video, book and journal to address medical questions and knowledge to sustain professional growth	d4. Use different sources to obtain information and knowledge. d2. Use information technology to serve the development of professional practice such as 3D videos, smart screens, and animations.
2.4.6. Work as a member in larger teams and as well as a team leader knows how to develop "teaming strategy" to plan how people will act and work together.	d6. Work in a team, and team's leadership in various professional contexts.
2.4.7. Manage of scientific meetings and the ability to manage Time effectively.	d7. Employ time wisely.

Annex III

مسمى البرنامج	Doctorate (MD) of anatomy
كود البرنامج	AN100

جامعة/أكاديمية : المنيا

كلية / معهد: الطب

قسم: التشريح

Matrix of Coverage of MD Program ILOs By Course

Courses (List of courses in 1st and 2nd parts)	Program Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
1. Medical statistics and research methodology	a.5, a.6, a.7	b.6, b.7,	c2, c3 c.5, c7, c8, c9,	d 1, d 2, d.3, d.4, d.5, d.6, d7.
2. Use computer in medicine	A2,5,	B5,7	C7,8,10	D1,2,3,6,7,8,9,10
3. Elective one course, comparative,	A4, A10,11,12,	B.3, B.6,B7	**C1,c2,c3,c4**	d.1, d.2, d.3, d.4.

Genetics, Growth, Biomechanics, Anthropology.				
4. Human anatomy and embryology	a.1, a.2, a.5, a.8	b.1, b.2, b.3, b.4, b.5, b.6, b.7,	c4, c.6, c.9,	d.1, d.2, d.3, d.4, d.5, d.6d.3, d.4, d.5, d.6. d.7

Matrix of Coverage of Course ILOs by Methods of teaching and learning

Methods of Teaching & Learning	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
Lecture	1,2,4,5,6,7,8,9,10, 11,12	1, 2,3, 4, 5, 6, 7,8		
Practical: 1. Dissection skills. 2. jars preparation.			1,3,4,5	
Presentation/seminar				1, 2,3, 4, 5, 6, 7,8
Thesis discussion	12, 14	1,2,8	2	1, 2,3, 4, 5, 6, 7,8

Matrix of Coverage of Course ILOs by Methods of Assessment

Methods of Assessment	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	**B. Intellectual Skills**	**C. Professional & Practical skills**	**D. General & Transferable Skills**
	A	**B**	**C**	**D**
Written exam Paper based exam	A1,A2,A.3,A.4, A.5,A.6, A.7,A8,A9,A10 ,A11,A12	B.1;B10		
Practical exam , skill lab exam			C.1;C9	
Oral Exam	A.1, A.2, A3,A4	B.2,B3,B4		D1; D5

- **Program Coordinators:**

Dr. Sayed Fouad El-Sheikh Ali

- **Head of Department**:

Prof. Dr. Fatma Alzahraa Fouad Abdel- Baky

Date of program specifications 1st approval by department council: 26/8/2013.

Date of last update & approval by department council: 5 \ 3 \2023

Annex IV: courses specifications and matrices:

Course specification of "Uses of Computer in Medicine" In MD degree

- **University:** Minia
- **Faculty:** Medicine
- **Department delivering the course:** Department of Public Health and Preventive Medicine
- **Program(s) in which the course is offered:** All Clinical and Academic postgraduate MD programs – First part

1. Course Information	
▪ **Academic Year/level:** First part MD ▪ **Course Title: Uses of Computer in Medicine** ▪ **Number of teaching hours:** - **Lectures: 20 hours** - **Practical/clinical: 10 hours** - **Total: 30 hours**	
2. Overall Aims of the course	***By the end of the course, the student must be able to:*** 1. Recognize knowledge about the software and their applications in Medicine 2. Gain skills necessary for using and managing heath care information systems
3. Intended learning outcomes of course (ILOs): ***Upon completion of the course, the student should be able to:***	
A. Knowledge and understanding	A.1. Define each part of computer hardware and its function A.2. Discuss various computer applications in medicine - for instruction, information managing, and computer based medical record, etc. A.3. Define telemedicine and its importance A.4. Recognize importance of health information technology in improvement of healthcare A.5. Describe electronic medical records and obstacles facing it A.6. Identify the concept of big data analysis
B. Intellectual Skills	B.1. Criticize adoption of telemedicine B.2. Discover factors constraining adoption of

	telemedicine
C. Professional and Practical Skills	C.1. Design framework for understanding of health information system performance
D. General and transferable Skills	D.1. Utilize computers in conducting research D.2. Appraise adoption of telemedicine D.3. Discover skills to carry out the process of improving health information system performance

4. Course Contents			
Topic	**No. of hours**	**Lecture**	**Tutorial/ Practical**
Uses of Computer in Medicine			
General concepts Introduction to Microsoft PowerPoint	6	4	2
Health Information Systems (HIS)	6	4	2
Telemedicine	6	4	2
Software Used in the Health Care	6	4	2
Big Data Analysis in Health	6	4	2
Total	**30**	**20**	**10**

5. Teaching and Learning Methods	**Since COVID-19 pandemic, blended learning approach was adopted that mixes virtual face-to-face interaction activities with the online learning. 60% of study method is offline and 40% of study is online** **Online learning materials are available at Minia University site** ▪ Lectures: Face to face lectures, Pre-recorded video lectures ▪ Practical lessons ▪ Assignment ▪ Online quizzes
6. Teaching and Learning Methods for students with limited Capacity	▪ Outstanding student rewarded certificate of appreciation due to high level of achievement ▪ Limited students divided into small group to make learning more effective
7. Student Assessment	
A. Student Assessment Methods	7.1. **Research assignment:** to assess general transferable skills, intellectual skills. 7.2. **Written exams:** • Short essay: to assess knowledge.

	• Commentary: to assess intellectual skills. 7.3. **Practical Exams:** to assess practical skills, intellectual skills. 7.4. **Oral Exams:** Oral exams to assess knowledge and understanding, attitude, communication 7.5. **Structured oral exams:** to assess knowledge.
B. Assessment Schedule (Timing of Each Method of Assessment)	- Assessment 1: Final written exam week: 24-28 - Assessment 2: Oral exam week: 24-28 - Assessment 3: Practical exam week: 24-28
C. Weighting of Each Method of Assessment	- Final Written Examination 100% - Oral Examination 100% - Practical Examination 100% - Total 100%
8. List of References	
A. Course Notes/handouts	Department notes, lectures and handouts
B. Essential Books	Essential Medical Statistics, Betty R. Kirkwood and J. A. Sterne (2000), 2nd edition
C. Recommended Textbooks	Management and Analytics for Medicine and Healthcare: Begoli, Edmon, Fusheng Wang, and Gang Luo. Springer, 2017.
D. Periodicals, websites	-National Institutes of Health: http://www.nih.gov -American Medical Informatics Association: http://www.amia.org/

- **Course Coordinators:**

Dr. Shaimma Mahmoud

Dr. Chrestina Monir

- **Head of Department:**

Professor Dr. Nashwa Nabil Kamal

- **Date of last update & approval by department council:** 5/3/2023

Matrix of Coverage of Course ILOs By Contents

Contents (List of course topics)	Week No.	Intended Learning Outcomes (ILOs)			
		A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
		A	B	C	D
Uses of Computer in Medicine					
General concepts Introduction to Microsoft PowerPoint		A.1, A.2,			D.1
Health Information Systems (HIS)		A.4, A.5		C1	D.3
Telemedicine		A.3	B.1, B.2		D.2
Software Used in the Health Care		A.5, A.6			D.1
Big Data Analysis in Health		A.6			

Matrix of Coverage of Course ILOs by Methods of Teaching & Learning

Methods of Teaching & Learning	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
Lecture	A.1 to A.6	B.1		
Practical			C1	
Assignment	A.4	B.2		D1.D.2,D.3

Matrix of Coverage of Course ILOs by Methods of Assessment

Methods of Assessment	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
Written paper based exam	A.1, to A.6	B.1		
Practical computer exam			C.1	D.1

(For SPSS, PowerPoint)				
Oral Exam	A.4, A.6	B.2	C.1	D.2, D.3

Test blueprint for Uses of computer in Medicine course

Topic	**Hour**	**% of topic**	**Total No. of items**	**Written exam (100 marks)**		**Marks (%)**	**Modified marks (%)**
				Knowledge	**Intellectual**		
Use of Computer in Medicine							
General concepts Introduction to Microsoft PowerPoint	4	20%	6	4	2	30%	30%
Health Information Systems (HIS)	4	20%	4	4		20%	15%
Telemedicine	4	20%	6	2	4	25%	30%
Software Used in the Health Care	4	20%	5	4	1	20%	15%
Big Data Analysis in Health	4	20%	1	1		5%	10%
Total	20	100%	20			100%	100%

Course specification of
"Medical Statistics and Research Methodology"
In MD degree

- **University:** Minia
- **Faculty:** Medicine
- **Department delivering the course:** Department of Public Health and Preventive Medicine
- **Program(s) in which the course is offered:** All Clinical and Academic Postgraduate MD programs – First part

1. Course Information	
▪ **Academic Year/level:** First part MD ▪ **Course Title: Medical Statistics and Research Methodology** ▪ **Number of teaching hours:** - **Lectures: 30 hours** - **Practical/clinical: 15 hours** **- Total: 45 hours**	
2. Overall Aims of the course	***By the end of the course, the student must be able to:*** 1. Gain skills necessary for proper practice in the field of Research Methods including diagnostic, problem solving and decision making skills. 2. Apply ethical principles of scientific research with good awareness about patient´s rights. 3. Use precisely the research methodology in researches 4. Influence the students to adopt an analytical thinking for evidence-based medicine 5. Enable graduate students to use statistical principles to improve their professional work and develop the concept of critical interpretation of data 6. To use precisely computer programs SPSS, Epi Info and Excel in data analysis
3. Intended learning outcomes of course (ILOs): ***Upon completion of the course, the student should be able to:***	
A. Knowledge and understanding	A.1. Define terms of research methodology. A.2. Describe the spectrum of research methodology. A.3. Explain tie strategies and design of research. A.4. Describe the study design, uses, and limitations. A.5. Explain evidence-based Medicine A.6. Define causation and association. A.7. Tell the principles and fundamentals of ethics.

	A.8. Describe the different sampling strategies A.9. Summarize the advantages and disadvantages of different sampling strategies A.10. Summarize different methods of samples size calculation A.11. Recognize the sources and the recent methods in data collection and analysis. A.12. Identify the types of variables A.13. Identify types of tabular and graphic presentation of data A.14. Describe the normal curves and its uses A.15. Identify the characters of normal distribution curve A.16. Identify measures of central tendency and measures of dispersion A.17. Explain regression analysis, its use and differentiate its types A.18. Define the screening tests pertinent to selected diseases and the at-risk approach in the application of screening tests A.19. Explain the usefulness of screening tests
B. Intellectual Skills	B. l. Apply research methods to different community health problems. B.2. Apply appropriate research strategies for use. B.3. Select appropriate research methods. B.4. Teach and advocate appropriately in the research design. B.5. Interpret the normal curves B.6. Interpret and summarize data B.7. Select the proper test of significance for a specific data. B.8. Interpret selected tests of significance and the inferences obtained from such tests
C. Professional and Practical Skills	C.1. Plan a research proposal for community diagnosis. C.2. Design questionnaires. C.3. Conduct research. C.4. Judge association and causation. C.5. Criticize for bias and confounding factors C.6. Design data entry file C.7. Validate data entry C.8. Manage data files C.9. Construct tables and graphs C.10. Calculate different samples sizes C.11. Calculate measures of central tendency and

	measures of dispersion C.12. Calculate sensitivity, specificity, and predictive values
D. General and transferable Skills	D. l. Lead a research team to conduct a specific study. D.2. Take part and work coherently with his associates to in research. D.3. Write scientific papers. D.4. Appraise scientific evidence D.5. Analyze and interpret data D.6. Use standard computer programs for statistical analysis effectively

4. Course Contents

Topic	**No. of hours**	**Lecture**	**Tutorial/ Practical**
Research methods			
Introduction: - Introduction to research. - Terminology and Rationale - Originality		3	
- Study design: -Cross sectional study and the prevalence rate -Cohort study, incidence rate, relative & attributable risk -Case-control study, Odd's ratio sampling -Experimental study and clinical trials		4	
- Sources of Errors in Medical Research **- Bias and confounding and its Control.**		3	
- Validity and reliability		2	
- The questionnaire design		2	
- Writing the Research Paper or Manuscript **- Protocol Writing**		2	2
- Critic technique for the literature review		2	2
- Association and causation		1	
- Evidence -based approach in medical practice		2	1
- Ethics of medical research		2	
Statistics			
Sampling		1	
Introduction to Sample Size Calculation		1	1
Data presentation		1	1
Tests of significance		2	
Introduction to SPSS		1	1

Proportion test			1
Chi-square test			1
Student T test, Paired T test			1
ANOVA test			1
Correlation (simple and multiple)			1
Regression			1
Screening		1	1
Total		**30**	**15**

5. Teaching and Learning Methods	**Since COVID-19 pandemic, blended learning approach was adopted that mixes virtual face-to-face interaction activities with the online learning. 60% of study method is offline and 40% of study is online** **Online learning materials are available at Minia University site** ▪ Lectures: Face to face lectures, Pre-recorded video lectures ▪ Practical lessons ▪ Assignment ▪ Online quizzes
6. Teaching and Learning Methods for students with limited Capacity	▪ Outstanding student rewarded certificate of appreciation due to high level of achievement ▪ Limited students divided into small group to make learning more effective
7. Student Assessment	
A. Student Assessment Methods	7.1. **Research assignment:** to assess general transferable skills, intellectual skills. 7.2. **Written exams:** • Short essay: to assess knowledge. • Commentary: to assess intellectual skills. 7.3. **Practical Exams:** to assess practical skills, intellectual skills. 7.4. **Oral Exams:** Oral exams to assess knowledge and understanding, attitude, communication 7.5. **Structured oral exams:** to assess knowledge.
B. Assessment Schedule (Timing of Each Method of Assessment)	- Assessment 1: Final written exam week: 24-28

	- Assessment 2: Oral exam week: 24-28 - Assessment 3: Practical exam week: 24-28
C. Weighting of Each Method of Assessment	- Final Written Examination 100% - Oral Examination 100% - Practical Examination 100% - Total 100%
8- List of References	
A. Course Notes/handouts	- Department notes, lectures and handouts
B. Essential Books	-The Lancet Handbook of Essential Concepts in Clinical Research
C. Recommended Textbooks	***Research methods:*** **- Introducing Research Methodology**; A Beginner's Guide to Doing a Research Project -**Understanding Clinical Research**, Renato Lopes and Robert Harrington; ISBN-10: 0071746781 | ISBN-13: 978-0071746786 - **Users' guides to the medical literature: a manual for evidence-based clinical practice:** Guyatt, G., D. Rennie, M. Meade and D. Cook (2002), AMA press Chicago. -**Research Methods in Community Medicine:** Surveys, Epidemiological Research, Program Evaluation, Clinical Trials, 6th Edition Joseph Abramson, Z. H. Abramson ***Computer:*** - Discovering statistics using IBM SPSS statistics, Field, A. (2013). sage. - Medical Statistics: A Guide to SPSS, Data Analysis and Critical Appraisal, Belinda Barton, Jennifer Peat - 2nd Edition Everitt, Brian S. - Medical statistics from A to Z: a guide for clinicians and medical students. Cambridge University Press, 2021. - Bowers, David. Medical statistics from scratch: an introduction for health professionals. John Wiley & Sons,

	2019. - Aviva, P. (2005): Medical Statistics at a Glance, Blackwell Company, 2nd , ed., Philadelphia
D. Periodicals, websites	- https://phrp.nihtraining.com/users/login.php - http://www.jhsph.edu/ - Journal of Biomedical Education - https://lagunita.stanford.edu/courses/Medicine/MedStats-SP/SelfPaced/about?fbclid=IwAR3nfirLM4wnuEqqUjLjk8TCR7lzPdnpGqwin06L-GjFq32a62w3j6R5s9c

- **Course Coordinators:**

Dr. Chrestina Monir

Dr. Shaimma Mahmoud

- **Head of Department**:

Professor Dr. Nashwa Nabil Kamal

- **Date of last update & approval by department council:** 5/3/2023

- **Matrix of Coverage of Course ILOs By Contents**

Contents (List of course topics)	**Week No.**	**Intended Learning Outcomes (ILOs)**			
		A. Knowledge & Understanding	**B. Intellectual Skills**	**C. Professional & Practical skills**	**D. General & Transferable Skills**
		A	**B**	**C**	**D**
Introduction: - Introduction to research. - Terminology and Rationale - Originality		A.1, A.2			
- Study design : -Cross sectional study and the prevalence rate -Cohort study, incidence rate, relative & attributable risk -Case-control study, Odd's ratio sampling -Experimental study and clinical trials		A.3, A.4	B.l, B.2, B.3, B.4,	C.1	
- Sources of Errors in Medical Research **- Bias and confounding and its Control.**			B.3	C.5	
- Validity and reliability					

- The questionnaire design				C.2	
- Writing the Research Paper or Manuscript **- Protocol Writing**			B.3	C.3	D.1, D.2, D.3
- Critic technique for the literature review					
- Association and causation		A.6		C.4	
- Evidence -based approach in medical practice		A.5			
- Ethics of medical research		A.7			
Statistics					
Sampling		A.8, A.9, A.11			D.4
Introduction to Sample Size Calculation		A.10		C.10	D.4
Data presentation		A.13, A.14	B.6	C.9	D.4
Tests of significance		A.15, A.16	B.5	C.11	D.4
Introduction to SPSS		A.12	B.6	C.6, C.7, C.8	D.5, D.6
Proportion test		A.11	B.7, B.8		D.5, D.6
Chi-square test		A.11	B.7, B.8		D.5, D.6
Student T test, Paired T test		A.11	B.7, B.8		D.5, D.6
ANOVA test		A.11	B.7, B.8		D.5, D.6
Correlation (simple and multiple)		A.11	B.7, B.8		D.5, D.6
Regression		A.17	B.7, B.8		D.5, D.6
Screening		A.18, A.19	B.7, B.8	C.12	D.4

○

○ Matrix of Coverage of Course ILOs by Methods of Teaching & Learning

Methods of Teaching & Learning	**Intended Learning Outcomes (ILOs)**			
	A. Knowledge & Understanding	**B. Intellectual Skills**	**C. Professional & Practical skills**	**D. General & Transferable Skills**
	A	**B**	**C**	**D**
Lecture	A.1, A.2, A.3, A.4, A.5, A.6, A.7 , A.8, A.9, A.10, A.11, A.12, A.13, A.14, A.15, A.16, A.17, A.18	B.1, B.2, B.3, B.4, B5, B.6, B.7, B.8		
Practical			C.1, C.3, C.4, C.5, C.6, C.7, C.8. C.9, C.10, C.11,C.12	
Assignment	A.11, A.13, A.18	B.7, B.8	C.2, C.6, C.8, C.9, C.10, C.12	D.1, D.2., D.4, D.5, D.6

○

○ Matrix of Coverage of Course ILOs by Methods of Assessment

Methods of Assessment	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	**B. Intellectual Skills**	**C. Professional & Practical skills**	**D. General & Transferable Skills**
	A	**B**	**C**	**D**
Written paper based exam	A.3, A.4, A.5, A.6, A.7, A.8, A.9, A.14, A.15, A.16, A.18	B.3, B.5,		
Practical exam (Statistical exam)			C.1, C.2, C.5, C.6, C.7,C.8, C.9, C.10, C.11, C.12	
Oral exam	A.10, A.11, A.12, A.13, A.15, A.16, A.17, A.18	B.1, B.2, B.6, B.7, B.8		D.1, D.2, D.5, D.6

○ Test blueprint for Research methodology course

Topic	Hour	% of topic	Total No. of items	Written exam (100 marks)		Marks (%)	Modified marks (%)
				Knowledge	Intellectual		
Research							
- Introduction to research. - Terminology and Rationale - Originality	3	10%	5	4	1	7%	5%
- Writing the Research Paper or Manuscript - Protocol Writing	2	6.67%	4	1	3	13%	10%
- Association and causation	1	3.33%	3	2	1	7%	8%
- Evidence -based approach in medical practice	2	6.67%	1	1		3%	5%
- Ethics of medical research	2	6.67%	2	2		3%	6%
Statistics							
Sampling	1	3.33%	2	1	1	4%	4%
Introduction to Sample Size Calculation	1	3.33%	1	1		2%	2%
Data presentation	1	3.33%	3	2	1	5%	4%
Tests of significance	2	6.67%	2	1	1	8%	8%
Introduction to SPSS	1	3.33%	1	1		3%	3%
Screening	1	3.33%	2	1	1	3%	3%
Total	**30**	**100%**					**100%**

3-Course Specification of Anatomy and Embryology of 1st part (Anthrolpology) - Doctorate Degree (MD) in ANATOMY

University: Minia

Faculty: Medicine

Department: **Human Anatomy and Embryology**

1. Course Information		
Academic Year/level: **1st part MD in Human Anatomy and Embryology**	**Course Title: Anthropology**	• **Code**: **AN100**
• **Number of teaching hours:** - **Lectures:** two hours per week - **Practical**: one hour per week		
2. Overall Aims of the course	*To provide the candidate with detailed knowledge and skills about evolutionary changes of human & changes from cave man to modern man.*	
3. Intended learning outcomes of course (ILOs): ***Upon completion of the course, the student should be able to:***		
A- Knowledge and Understanding	A1. Mention the normal structure and function of the body systems on the macro levels. A2. Identify evolutionary changes in the body structures. A3. Determine main skeletal changes in cave and modern man. A5. Master the basic knowledge of different human species with chronological modifications. A6. To study the basic knowledge of Neanderthal. A7. List changes of different body systems according to environment.	
B- Intellectual Skills	B1. Differentiate the anatomical variations of some structures as nerve distribution and presence of some muscles. B2. Integrate the structure and function of the nervous system as	

	functional neuroanatomy. B3. Analyze the evolution of human brain B4. Connect between important anatomical gross features with radiological techniques.
C- Professional and Practical Skills	C1. Practice professional techniques for identification of morphological skeletal features of human & hominids. C2. Evaluate differences of skull features between cave & modern man. C3. Master the different experimental technique for preparing histological specimen blocks for light and electron microscopic examination. C4. Describe different anatomical features of radiological films (X-ray, CT, and MRI films). C5. Describe of chronologic changes of anatomical features of different body systems. C6. Master knowledge about origin of human and extinct species of the cave man (Neandertal).
D- General and transferable Skills	D1. Use information technology to serve the development of professional practice. D2. Assessing himself and identify personal learning needs. D3. Acquire ethics and respect of the colleagues, staff members and respect to cadaver. D4. Encourage team work with colleagues, seniors and students. D5. Know computer skills required to present data and use learning communications to update the latest knowledge. D7. Cooperate with colleagues and seniors for best working. D8. Learning to write scientific articles according to basis of scientific research.

Topic **1- Anthropology**	**Lecture hours/week**	**Practical/Clinical hours/wee**	**Total No. of hours hours/week**

		k	
1-Development and growth of nervous system in apes and monkeys	4	1	5
2-Main features of the skull, jaw and teeth of apes and monkeys	4	1	5
3-Anatomy of upper and lower limbs in apes and monkeys	4	1	5
4-Palaenthrological data on the making of man	4	1	5
5-Characters of pithecanthropi, palaenthropi and neanthropi	4	1	5
Revision	2	2	4
Total	22	7	29

4. Teaching and Learning Methods	1 - Lectures. 2 -Seminars. 3- Assignments for the students to empower and assess the general and transferable skills
5. Teaching and Learning Methods for students with limited Capacity	
6. Student Assessment	
A. Student Assessment Methods	1- Paper based exam 2-Practical exam, skill lab – x ray- image 3- oral exam

B. Weighting of Each Method of Assessment	Written exam, 100 Practical, 100 Oral exam, 100

7. List of References:

- Kindred: Neanderthal life, love, death and art by Rebecca Wragg Sykes, 2015.
- Evolution's Bite: A story of teeth, diet and human origin, 2013.
- The Origins of Man: by Douglas Palmer, 2007

A. Course Notes/handouts	Lecture notes prepared by staff members in the department.
B. Essential Books	The Origins of Man: by Douglas Palmer, 2007.
C. Recommended Text Books	A colored Atlas of Human anatomy and Embryology.
D. Periodicals, websites	American J. of Anatomy Cochrane Library,Medline & Popline

Course Coordinator/s:

Prof. Dr. Fatma Elzahraa Fouad

Head of Department:

Prof. Fatma Elzahraa Fouad

Date of last update& approval by department Council:

5/ 3/ 2023

نموذج رقم (١١)

جامعة : المنيا
كلية : الطب
قسم: التشريح

مسمى المقرر	التشريح
كود المقرر	AN100

A. Matrix of Coverage of Course ILOs By Contents

Contents (List of course topics)	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
1-Development and growth of nervous system in apes and monkeys	**1,4**	**2,3**	**5**	
2-Main features of the skull, jaw and teeth of apes and monkeys	**1,2,4**	**1,4**	**1,3**	
3-Anatomy of upper and lower limbs in apes and monkeys	**2,3**	**1,2**	**1**	
4-Palaenthrological data on the making of man	**1,2,7**	**2**	**3**	
5-Characters of pithecanthropi, palaenthropi and neanthropi	**2,3**	**1,4**	**4**	

Matrix of Coverage of Course ILOs by Methods of Teaching & Learning

Methods of Teaching & Learning	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
Lecture	1,2,3,4	1,2		1,2
Practical			1,2,3	
Presentation/seminar	1,4			1,2,5
Journal club				1,8
Thesis discussion				1,5,8
Training courses & workshops			1,2	8

B. Matrix of Coverage of Course ILOs by Methods of Assessment

Methods of Assessment	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
Written exam	1,2,3,4	1,2		
Practical exam			2	
Oral Exam	1,2,3,4	1,2,4		
Assignment	1,2			1,2,5

Blueprint" Exam Paper "100 Marks"

Topic **Elective courses** **1-Anthropology**	Hours	Knowledge %	Intellectual%	% topic	No. of items per topic	Knowledge Mark	Intellectual mark	Mark	Actual mark
1-Development and growth of nervous system in apes and monkeys	4	75%	25%	20%		15	5	20	20
2-Main features of the skull, jaw and teeth of apes and monkeys	4	75%	25%	20%		15	5	20	20
3-Anatomy of upper and lower limbs in apes and monkeys	4	66.7%	33.3%	20%		13.34	6.66	20	20
4-Palaenthrological data on the making of man	4	75%	25%	20%		15	5	20	20
5-Characters of pithecanthropi, palaenthropi and neanthropi	4	75%	25%	20%		15	5	20	20

4-Course Specification of Anatomy and Embryology of 1st part (Biomechanics) - Doctorate Degree (MD) in ANATOMY

University: Minia

Faculty: Medicine

Department: Human Anatomy and embryology

8. Course Information		
• **Academic Year/level: 1st part - MD in Human Anatomy and embryology** •	• **Course Title: (Biomechanics)**	• **Code**: **AN100**
• **Number of teaching hours:** - **Lectures:** two hours per week - **Practical**: one hour per week		
9. Overall Aims of the course	*To provide the candidate with detailed knowledge and skills of biomechanics of different body joints.*	
10. Intended learning outcomes of course (ILOs): ***Upon completion of the course, the student should be able to:***		
E- Knowledge and Understanding	A1. Mention the normal structure and function of the body joints. A2. Identify bony landmarks, bone age with correlation to radiological & clinical techniques. A3. Define early embryological development & normal growth of the bones and correlations to gene study. A4. Enumerate explanations for congenital and medical disorders on bases of development and gene disorders. A5. Discuss the basic knowledge geometric structure of joints and angles of movement.	

	A6. Explain the basic knowledge of cell biology and statistical methods to help in scientific researches. A7. List the recent advances in the abnormal structure, function, growth and development of musculoskeletal system. A8. Identify the structure of different body joints and their action in relation to planes and axes of movement.
F- Intellectual Skills	B1. Appraise the anatomical variations of some structures as nerve distribution and presence of some muscles. B2. Integrate the structure and function of the nervous system as functional neuroanatomy. B3. Analyze some clinical conditions on anatomical basis. B4. Link between important anatomical gross features with radiological techniques. B5. Conduct research study and / or write a scientific study on a research problem. B6. Evaluate diseases based on anatomical and developmental disruptions.
G- Professional and Practical Skills	C1. Practice professional and modern techniques for accurate dissection different body regions, organs & neurovascular structures. C2. Making different perfect anatomical specimens for museum. C3. Perform the different experimental technique for preparing histological specimen blocks for light and electron microscopic examination. C4. Describe different anatomical features of radiological films (X-ray, CT, and MRI films). C5. Describe diseases and anomalies based on anatomical data. C6. Differentiate the origin of human and extinct species of the cave man (Neandertal).

H- General and transferable Skills	D1. Use information technology to serve the development of professional practice. D2. Assessing himself and identify personal learning needs. D3. Acquire ethics and respect of the colleagues, staff members and respect to cadaver. D4. Encourage team work with colleagues, seniors and students. D5. Know computer skills required to present data and use learning communications to update the latest knowledge. D7. Cooperate with colleagues and seniors for best working. D8. Learning to write scientific articles according to basis of scientific research.

Topic **2- Biomechnics**	**Lecture hours/week**	**Practical/Clinical hours/week**	**Total No. of hours hours/week**
1- Type of motion or displacement – linear and angular motion- Newton law of motion	5	1	6
2- Posture, anatomical planes and axes of movement- Kinematic chain; open and closed	5	1	6
3- External and internal force- Moment of force or torque- Lever system	5	1	6
4- Biomechanics of joints of upper limb-Hand	5	1	6
5- Biomechanics of joints of lower limb- Foot	5	1	6
Revision	3	2	5
Total	28	7	35

11.Teaching and Learning Methods	1 - Lectures. 2 -Seminars. 3- Assignments for the students to empower and assess the general and transferable skills

12.Teaching and Learning Methods for students with limited Capacity	
13.Student Assessment	
C. Student Assessment Methods	1- paper based exam 2-Practical exam, skill lab – x ray- image 3- oral exam
D. Weighting of Each Method of Assessment	Written exam, 100 Practical, 100 Oral exam, 100
14.List of References: - **Fundamentals of biomechanics, by Duane Knudson, 2003.** - **Biomechanics of sports and exercise, by peter Metron, 1999.** - **Biomechanics for Dummies, by Steve McCaw, 2014.**	
E. Course Notes/handouts	Lecture notes prepared by staff members in the department.
F. Essential Books	**Fundamentals of biomechanics, by Duane Knudson, 2003.**

Course Coordinator/s:
Prof. Dr. Fatma Elzahraa Fouad
Head of Department:
Prof. Fatma Elzahraa Fouad
Date of last update& approval by department Council:

5/ 3 / 2023

	Intended Learning Outcomes (ILOs)

مسمى المقرر	التشريح
كود المقرر	AN100

نموذج رقم (١١)

جامعة : المنيا

كلية : الطب

قسم: التشريح

C. Matrix of Coverage of Course ILOs By Contents

	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
1- Type of motion or displacement – linear and angular motion- Newton law of motion	1, 2, 3, 5, 6, 7	2,3	5	
2- Posture, anatomical planes and axes of movement- Kinematic chain; open and closed	1, 2, 3, 4, 5, 7,8	1,4	1,3	
3- External and internal force- Moment of force or torque- Lever system	3, 6, 7, 8	6	1	
4- Biomechanics of joints of upper limb- Hand	2, 5, 7	4	3	
5- Biomechanics of joints of lower limb- Foot	2, 3, 4, 5, 8	5, 6	4	

Matrix of Coverage of Course ILOs by Methods of Teaching & Learning

Methods of Teaching	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
Lecture	1,2,3,4	1,2		1,2
Practical			1,2,3	
Presentation/seminar	1,4			1,2,5
Journal club				1,8
Thesis discussion				1,5,8
Training courses & workshops			1,2	8

D. Matrix of Coverage of Course ILOs by Methods of Assessment

Methods of Assessment	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
Written exam	1,2,3,4	1,2		
Practical exam			2	
Oral Exam	1,2,3,4	1,2,4		
Assignment	1,2			1,2,5

Blueprint" Exam Paper "100 Marks"

Topic **Elective course: Biomechanics-**	**Hours**	**Knowledge %**	**Intellectual%**	**% topic**	**No. of items per topic**	**Knowledge** **Mark**	**Intellectual** **mark**	**Mark**	**Actual mark**
1- Type of motion or displacement – linear and angular motion- Newton law of motion	5	75%	25%	%٢٠		15	5	20	20
2- Posture, anatomical planes and axes of movement- Kinematic chain; open and closed	5	75%	25%	%٢٠		15	5	20	20

3- External and internal force- Moment of force or torque- Lever system	5	75%	25%	20%		15	5	20	20
4- Biomechanics of joints of upper limb- Hand	5	75%	25%	20%		15	5	20	20
5- Biomechanics of joints of lower limb- Foot	5	75%	25%	20%		15	5	20	20
Total	25			100%				100	100

5-Course Specification of Anatomy and Embryology of 1st part (Comparative) - Doctorate Degree (MD) in ANATOMY

University: Minia

Faculty: Medicine

Department: Anatomy

Course Information		
• **Academic Year/level: 1st part MD in Human Anatomy and Embryology**	• **Course Title: Course Specification of Anatomy and Embrylogy for 1st part (Comparative) - MD in Anatomy**	• **Code**: **AN100**
• **Number of teaching hours:** - **Lectures:** two hours per week - **Practical**: one hours per week		
15.Overall Aims of the course	*To provide the candidate with detailed knowledge and skills of comparative anatomy and embryology.*	
16.Intended learning outcomes of course (ILOs): ***Upon completion of the course, the student should be able to:***		
I- Knowledge and Understanding	A1. Mention the normal structure and function different types of animals. A2. Identify specific anatomic features especially for domestic animals. A3. Determine early embryological development of birds, amphibians and mammals. A4. List explanations for different types of embryological development.	

	A5. Discuss the basic knowledge of comparative anatomy with other animals and recognize the anatomical modifications to adapt their environment. A6. Explain the basic knowledge of cell biology and statistical methods to help in scientific researches. A7. List the recent advances in the abnormal structure, function, growth and development of musculoskeletal system. A8. Identify the structure of different types of locomotion among animals.
J- Intellectual Skills	B1. Compare the anatomical variations of some structures as nerve distribution and presence of some muscles. B2. Integrate the structure and function of the nervous system as functional neuroanatomy. B3. Evaluate microscopic slide of different stages of chick embryo. B4. Connect between important anatomical gross features with adaptation for living environment. B5. Conduct research study and / or write a scientific study on a research problem. B6. Interpret the changes of anatomic structures of different animals, especially for domestics.
K- Professional and Practical Skills	C1. Practice professional and modern techniques for accurate dissection different body regions, organs & neurovascular structures. C2. Make different perfect anatomical specimens for museum. C3. Perform different experimental technique for preparing histological specimen blocks for light and electron microscopic examination. C4. Describe different anatomical features of radiological films (X-ray, CT, and MRI films). C5. Describe of diseases and anomalies based on anatomical data. C6. Compare the origin of human and extinct species of the cave man (Neandertal).

L- General and transferable Skills	D1. Use information technology to serve the development of professional practice. D2. Assess himself and identify personal learning needs. D3. Acquire ethics and respect of the colleagues, staff members and respect to cadaver. D4. Encourage team work with colleagues, seniors and students. D5. Know computer skills required to present data and use learning communications to update the latest knowledge. D7. Cooperate with colleagues and seniors for best working. D8. Write scientific articles according to basis of scientific research.

Topic **Comparative anatomy**	**Lecture** **hours/week**	**Practical/Clinical** **hours/week**	**Total No. of hours** **hours/week**
1-Comparative anatomy with anthropoid apes	5	1	6
2-Girdles, limbs and locomotion	5	1	6
3-Digestive system in domestic animals	4	1	5
4-Respiratory and Urinary systems	5	1	6
5- Genearal embryology	5	1	6
Revision	3	2	5
Total	27	7	34

17.Teaching and Learning Methods	1 - Lectures. 2 -Seminars. 3- Assignments for the students to empower and assess the general and transferable skills

18.Teaching and Learning Methods for students with limited Capacity	
19.Student Assessment	
E. Student Assessment Methods	1- paper based exam 2-Practical exam, skill lab – x ray- image 3- oral exam
F. Weighting of Each Method of Assessment	Written exam, 100 Practical, 100 Oral exam, 100
20.List of References: - Vertebrates: Comparative anatomy by Kenneth V. Kardong, 1994. - Text book of comparative anatomy by Arnold lang, 1891. - Comparative anatomy of vertebrates by R.K. Saxena, 2008	
G. Course Notes/handouts	Lecture notes prepared by staff members in the department.
H. Essential Books	Comparative anatomy of vertebrates by R.K. Saxena, 2008
I. Recommended Text Books	Comparative anatomy atlas by Carl Gans and John F. Storr.

Course Coordinator/s:

Prof. Dr. Fatma Elzahraa Fouad

Head of Department:

Prof. Fatma Elzahraa Fouad

Date of last update& approval by department Council:

5/ 3 / 2023

نموذج رقم (١١)

جامعة : المنيا

كلية : الطب

قسم: التشريح

مسمى المقرر	التشريح
كود المقرر	AN100

E. Matrix of Coverage of Course ILOs By Contents

Contents (List of course topics)	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
1-Comparative anatomy with anthropoid apes	**1, 2, 3, 5, 6, 7**	**2,3**	**5**	
2-Girdles, limbs and locomotion	**1, 2, 3, 4, 5, 7,8**	**1,4**	**1,3**	
3-Digestive system in domestic animals	**3, 7, 8**	**6**	**1**	
4-Respiratory and Urinary systems	**2, 5, 7**	**4**	**3**	
5- Genearal embryology	**2, 3, 4, 5, 8**	**5, 6**	**4**	

Matrix of Coverage of Course ILOs by Methods of Teaching & Learning

Methods of Teaching & Learning	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
Lecture	1,2,3,4	1,2		1,2
Practical			1,2,3	
Presentation/seminar	1,4			1,2,5
Journal club				1,8
Thesis discussion				1,5,8
Training courses & workshops			1,	8

F. Matrix of Coverage of Course ILOs by Methods of Assessment

Methods of Assessment	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
Written exam	1,2,3,4	1,2		
Practical exam			2	
Oral Exam	1,2,3,4	1,2,4		
Assignment	1,2			1,2,5

Blueprint" Exam Paper "100 Marks"

Comparative anatomy	**Hours**	**Knowledge %**	**Intellectual%**	**% topic**	**No. of items per topic**	**Knowledge Mark**	**Intellectual mark**	**Mark**	**Actual mark**
1-Comparative anatomy with anthropoid apes	5	75%	25%	20.8%		15.6	5.2	20.8	21
2-Girdles, limbs and locomotion	5	75%	25%	20.8%		15.6	5.2	20.8	21
3-Digestive system in domestic animals	4	66.7%	33.3%	16%		11.07	5.53	16	16
4-Respiratory and Urinary systems	5	75%	25%	20.8%		15.6	5.2	20.8	21
5- Genearal embryology	5	75%	25%	20.8%		15.6	5.2	20.8	21
Total	24			100%				100	100

6-Course Specification of Anatomy and Embryology of 1st part (Genetics) - Doctorate Degree (MD) in ANATOMY

University: Minia

Faculty: Medicine

Department: Anatomy

21. Course Information		
• **Academic Year/level: 1st part Doctorate Degree (MD) in ANATOMY**	**Course Title: Course Specification of Anatomy and Embryology of 1st part (Genetics) - Doctorate Degree (MD) in ANATOMY**	• **Code: AN100**
• **Number of teaching hours:** - **Lectures:** Two hours per week - **Practical**: one hour per week		
22. Overall Aims of the course	*To provide the candidate with detailed knowledge and skills to be qualified for cell biology and basis of genetics.*	
23. Intended learning outcomes of course (ILOs): ***Upon completion of the course, the student should be able to:***		
M- Knowledge and Understanding	A1. Mention the normal cell cycle. A2. Identify different types of cell division and cell reproduction. A3. Determine the normal structure of chromosomes. A4. List explanations for gene sequence and protein synthesis. A5. Discuss the basic knowledge of structure of nuclear DNA and	

	replication of nuclear material. A6. Explain the basic knowledge of cell biology and gene mutations. A7. List the recent advances in gene sequences and hereditary disorders. A8. Identify the structure of gene and basis of gene therapy.
N- Intellectual Skills	B1. Appraise the cell cycle and types of cellular divisions. B2. Integrate the structure and function different cellular organelles and their role in cell vitality. B3. Analyze some clinical conditions on genetic basis. B4. Connect between important anatomical gross features with gene disorders. B5. Conduct research study and / or write a scientific study on a research problem. B6. Evaluate hereditary diseases based on gene and developmental disruptions.
O- Professional and Practical Skills	C1. Practice professional and modern techniques for cell staining and microscopic examination. C2. Making different perfect anatomical specimens for museum. C3. Perform different experimental technique for preparing histological specimen blocks for light and electron microscopic examination. C4. Describe applications for karyotype. C5. Describe diseases and anomalies based on genetic disorders. C6. Apply recent applications of genetics and correlates with transplant and gene therapy for cancer treatment.
P- General and transferable Skills	D1. Use information technology to serve the development of professional practice. D2. Assessing himself and identify personal learning needs. D3. Acquire ethics and respect of the colleagues, staff members and respect to cadaver.

	D4. Encourage team work with colleagues, seniors and students. D5. Know computer skills required to present data and use learning communications to update the latest knowledge. D7. Cooperate with colleagues and seniors for best working. D8. Write scientific articles according to basis of scientific research.

Topic **Genetics**	**Lecture** **hours/week**	**Practical/Clinical** **hours/week**	**Total No. of hours** **hours/week**
1-Cell division	5	1	6
2-Structure of human chromosome	3	1	4
3-Chromosomal abnormality	5	1	6
4-Karyotyping	4	1	5
5-The normal and abnormal structure of genes-Mutation	5	1	6
Revision	2	2	4
Total	24	7	31

24.Teaching and Learning Methods	1 - Lectures. 2 -Seminars. 3- Assignments for the students to empower and assess the general and transferable skills
25.Teaching and Learning Methods for students with limited Capacity	
26.Student Assessment	
G. Student Assessment Methods	1- paper based exam 2-Practical exam, skill lab – x ray- image

	3- oral exam
H. Weighting of Each Method of Assessment	Written exam, 100 Practical, 100 Oral exam, 100
27. List of References: - **The gene: An intimate history, by Siddharthra Mukherjee, 2016.** - **Concepts of genetics: William S. Klog, 2018.**	
J. Course Notes/handouts	Lecture notes prepared by staff members in the department.
K. Essential Books	**Concepts of genetics: William S. Klog, 2018.**

Course Coordinator/s:

Prof. Dr. Fatma Elzahraa Fouad

Head of Department:

Prof. Fatma Elzahraa Fouad

Date of last update& approval by department Council:

5/ 3/ 2023

نموذج رقم (١١)

جامعة : المنيا
كلية : الطب
قسم: التشريح

مسمى المقرر	التشريح
كود المقرر	AN100

G. Matrix of Coverage of Course ILOs By Contents

Contents (List of course topics)	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	**B. Intellectual Skills**	**C. Professional & Practical skills**	**D. General & Transferable Skills**
	A	**B**	**C**	**D**
1-Cell division	**1, 2, 3, 5, 6, 7**	**2,3**	**5**	
2-Structure of human chromosome	**1, 2, 3, 4, 5, 7,8**	**1,4**	**1,3**	
3-Chromosomal abnormality	**3, 7, 8**	**6**	**1**	
4-Karyotyping	**2, 5, 7**	**4**	**3**	
5-The normal and abnormal structure of genes- Mutation	**2, 3, 4, 5, 8**	**5, 6**	**4**	

Matrix of Coverage of Course ILOs by Methods of Teaching & Learning

Methods of Teaching & Learning	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
Lecture	1,2,3,4,5,6,7,8			1,2
Practical		1,2,3,4,5,6	1,2,3	
Presentation/seminar	1,4,6			1,2,5
Journal club				1,8
Thesis discussion				1,5,8
Training courses & workshops			1,2	8

H. Matrix of Coverage of Course ILOs by Methods of Assessment

Methods of Assessment	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
Written exam	1,2,3,4,5,6,7,8	1,2		
Practical exam		1,2,3,4,5,6	4	
Oral Exam	1,2,3,4,5,6,7,8	1,2,4		
Assignment			1,2,3,4,5,6	1,2,5

Blueprint" Exam Paper "100 Marks"

Topic **Elective course: Genetics**	Hours	Knowledge%	Intellectual%	% topic	No. of items per topic	Knowledge Mark	Intellectual mark	Mark	Actual mark
1-Cell division	5	75%	25%	22.73%		17.04	5.69	22.73	23
2-Structure of human chromosome	3	75%	25%	13%		17.04	5.69	13	13
3-Chromosomal abnormality	5	75%	25%	22.73%		17.04	5.69	22.73	23
4-Karyotyping	4	75%	25%	18.18%		17.04	5.69	18.18	18
5-The normal and abnormal structure of genes-Mutation	5	75%	25%	22.73%		17.04	5.69	22.73	23
Total	22			100%				100	100

Course Specification of Anatomy and Embryology of 1st part (Growth) - Doctorate Degree (MD) in ANATOMY

University: Minia

Faculty: Medicine

Department: Anatomy

Course Information		
• **Academic Year/level: 1st part Doctorate Degree (MD) in ANATOMY**	**Course Title: Course Specification of Anatomy and Embryology of 1st part (Growth) - Doctorate Degree (MD) in ANATOMY**	• **Code: AN100**
• **Number of teaching hours:** - **Lectures:** Two hours per week - **Practical**: One hour per week		
28.Overall Aims of the course	*To provide the candidate with detailed knowledge and skills to be qualified for growth of different body systems.*	
29.Intended learning outcomes of course (ILOs): ***Upon completion of the course, the student should be able to:***		
Q- Knowledge and Understanding	A1. Mention the normal parameters and measurements for growth, head circumference and teething. A2. Identify bone age with correlation to radiological & clinical techniques. A3. Determine early embryological development & normal growth and development of the body systems and correlations to gene study. A4. List explanations for congenital and medical disorders on bases	

	of development and growth disorders. A5. Define the basic knowledge of factors affecting growth and ossification centers. A6. Explain the basic knowledge of cell biology and statistical methods to help in scientific researches. A7. List the recent advances in the abnormal structure, function, growth and development of musculoskeletal system. A8. Identify the structure of different body systems and their growth changes since time of birth till senility.
R- Intellectual Skills	B1. Interpret the anatomical variations of structures as nerve changes with age. B2. Integrate the structure and function of different body system. B3. Analyze some clinical conditions on growth basis. B4. Connect between important anatomical gross features with radiological techniques. B5. Conduct research study and / or write a scientific study on a research problem. B6. Differentiate diseases based on anatomical and developmental disruptions.
S- Professional and Practical Skills	C1. Practice professional and modern techniques for accurate dissection different body regions, organs & neurovascular structures. C2. Making different perfect anatomical specimens for museum. C3. Perform different experimental technique for preparing histological specimen blocks for light and electron microscopic examination. C4. Describe different growth features of radiological films (X-ray, CT, and MRI films). C5. Describe of diseases abnormal growth. C6. Appraise natural deterioration of different body systems with old age.

T- General and transferable Skills	D1. Use information technology to serve the development of professional practice. D2. Assess himself and identify personal learning needs. D3. Acquire ethics and respect of the colleagues, staff members and respect to cadaver. D4. Encourage team work with colleagues, seniors and students. D5. Know computer skills required to present data and use learning communications to update the latest knowledge. D7. Cooperate with colleagues and seniors for best working. D8. Write scientific articles according to basis of scientific research.

Topic **Growth**	**Lecture** **hours/week**	**Practical/Clinical** **hours/week**	**Total No. of hours** **hours/week**
1-Stages of growth	5	1	6
2-Growth of body tissues and systems	5	1	6
3- Factors affecting growth- Methods used for determination of growth	5	1	6
4- Indices of maturity	4		4
5- Senility	4	1	5
Revision	3	2	5
Total	26	6	32

30.Teaching and Learning Methods	1 - Lectures. 2 -Seminars. 3- Assignments for the students to empower and assess the general and transferable skills
31.Teaching and Learning Methods for students with limited Capacity	

32.Student Assessment	
I. Student Assessment Methods	1- paper based exam 2-Practical exam, skill lab – x ray- image 3- oral exam
J. Weighting of Each Method of Assessment	Written exam, 100 Practical, 100 Oral exam, 100
33.List of References: - **Human growth and development, by Chris Beckett & Hilary Taylor, 2010 2nd edition.** - **Human growth and development, by John Sudbery, 2009.**	
L. Course Notes/handouts	Lecture notes prepared by staff members in the department.
M. Essential Books	**Human growth and development, by Chris Beckett & Hilary Taylor, 2010 2nd edition.**

Course Coordinator/s:

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Head of Department:

Prof. Fatma Elzahraa Fouad

Date of last update& approval by department Council:

5/ 3 / 2023

نموذج رقم (١١)

جامعة : المنيا

كلية : الطب

قسم: التشريح

مسمى المقرر	التشريح
كود المقرر	AN100

I. Matrix of Coverage of Course ILOs By Contents

Contents (List of course topics)	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
1-Stages of growth	**1, 2, 3, 5, 6, 7**	**2,3**	**5**	
2-Growth of body tissues and systems	**1, 2, 3, 4, 5, 7,8**	**1,4**	**1,3**	
3- Factors affecting growth- Methods used for determination of growth	**3, 8**	**6**	**1**	
4- Indices of maturity	**2, 5, 7**	**4**	**3**	
5- Senility	**2, 3, 4, 5, 8**	**5, 6**	**4**	

Matrix of Coverage of Course ILOs by Methods of Teaching & Learning

Methods of Teaching & Learning	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
Lecture	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6		1,2
Practical	2, 5, 8		1, 2, 3, 4	
Presentation/seminar	1,4			1,2,5
Journal club				1, 8
Thesis discussion				1,5,8

J. Matrix of Coverage of Course ILOs by Methods of Assessment

Methods of Assessment	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
Written exam	1, 2, 3, 4, 5, 6, 7, 8	1, 4, 5, 6		
Practical exam		1, 3, 4, 5, 6	4, 5	
Oral Exam	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 4		
Assignment	1, 2, 5, 7			1, 2, 3, 4, 5, 6

Blueprint" Exam Paper "100 Marks"

Topic **Growth**	Hours	Knowledge%	Intellectual%	% topic	No. of items per topic	Knowledge Mark	Intellectual mark	Mark	Actual mark
1-Stages of growth	5	75%	25%	%21.7		16.27	5.43	21.7	22
2-Growth of body tissues and systems	5	75%	25%	%		16.27	5.43	21.7	22
3- Factors affecting growth- Methods used for determination of growth	5	65%	35%	%		14.1	7.6	21.7	22
4- Indices of maturity	4	75%	25%	%		16.27	5.43	17.39	17
5- Senility	4	75%	25%	%		16.27	5.43	17.39	17
Total	23			100%				100	100

8-Course Specifications of Anatomy and Embryology in Doctorate Degree
2nd part (MD) Doctorate in ANATOMY

University: Minia

Faculty: Medicine

Department: Anatomy

34. Course Information

• **Academic Year/level:** 2nd part **MD in Anatomy**	• **Course Title: Course Specifications of Anatomy and Embryology for MD in Anatomy**	• **Code**: **AN100**
• **Number of teaching hours:** - **Lectures:** six hours per week - **Practical**: three hours per week		
35. Overall Aims of the course	*To provide the candidate with detailed knowledge and skills to be qualified for teaching anatomy and embryology to medical students and to allow the candidate to master fine skills of dissection of different anatomical regions of human cadavers and acquire necessities for scientific medical researches.*	
36. Intended learning outcomes of course (ILOs): ***Upon completion of the course, the student should be able to:***		
U- Knowledge and Understanding	A1. Mention the normal structure and function of the body systems on the macro levels. A2. Identify of surface anatomy, bony landmarks, bone age with correlation to radiological & clinical techniques. A3. Determine early embryological development & normal growth and development of the body systems and correlations to gene study. A4. List explanations for congenital and medical disorders on bases of development and gene disorders. A5. Discuss the basic knowledge of comparative anatomy with other	

	animals and recognize the anatomical modifications to adapt their environment. A6. Explain the basic knowledge of cell biology and statistical methods to help in scientific researches. A7. List the recent advances in the abnormal structure, function, growth and development of musculoskeletal system. A8. Identify the structure of different body joints and their action in relation to planes and axes of movement.
V- Intellectual Skills	B1. Compare between anatomical variations of some structures as nerve distribution and presence of some muscles. B2. Integrate the structure and function of the nervous system as functional neuroanatomy. B3. Analyze some clinical conditions on anatomical basis. B4. Connect between important anatomical gross features with radiological techniques. B5. Conduct research study and / or write a scientific study on a research problem. B6. Evaluate diseases based on anatomical and developmental disruptions.
W- Professional and Practical Skills	C1. Practice professional and modern techniques for accurate dissection different body regions, organs & neurovascular structures. C2. Making different perfect anatomical specimens for museum. C3. Perform different experimental technique for preparing histological specimen blocks for light and electron microscopic examination. C4. Describe different anatomical features of radiological films (X-ray, CT, and MRI films). C5. Describe diseases and anomalies based on anatomical data. C6. Compare between the origin of human and extinct species of the cave man (Neandertal).

X- General and transferable Skills	D1. Use information technology to serve the development of professional practice. D2. Assess himself and identify personal learning needs. D3. Acquire ethics and respect of the colleagues, staff members and respect to cadaver. D4. Encourage team work with colleagues, seniors and students. D5. Know computer skills required to present data and use learning communications to update the latest knowledge. D7. Cooperate with colleagues and seniors for best working. D8. Write scientific articles according to basis of scientific research.

37.Course structure and Contents: Program duration: Not less than two academic years.

Program structure:

 Compulsory courses; two academic year (30 weeks each)

Topic	**Lecture hours/week**	**Practical/Clinical hours/week**	**Total No. of hours hours/week**
Neuro-anatomy.	5	1	6
Head and neck	5	1	6
Human embryology	5	1	6
Advanced detailed descriptive anatomy of upper.	5	1	6
Lower limb	5	1	6
Thorax	5	1	6
Abdomen	5	1	6
Pelvis and perineum	5	1	6
General human biology	5	1	6

Revision	3	3	6
Total	48	12	60

38.Teaching and Learning Methods	1 - Lectures 2 -Seminars. 3- Assignments for the students to empower and assess the general and transferable skills
39.Teaching and Learning Methods for students with limited Capacity	

40.Student Assessment

K. Student Assessment Methods	1- paper based exam 2-Practical exam, skill lab – x ray- image 3- oral exam
L. Weighting of Each Method of Assessment	Written exam, 100 Practical, 100 Oral exam, 100

41.List of References:

- **Standring,S, Ellis, H., Healy, J.C., Johnson, D., and Williams, J.C., 2022. Gray's anatomy. 50th edition.**
- **Junqueira, L.C. and Carneiro, J., 2020. Basic histology. 10th edition.**
- **Moore K.L., and Agur A.M.R., 2016. Essential clinical anatomy. 14th edition.**

Romanes G.J., 2021. Cunningham's manual of practical anatomy, Oxford.

N. Course Notes/handouts	Lecture notes prepared by staff members in the department.
O. Essential Books	Gray's Anatomy.
P. Recommended Text Books	A colored Atlas of Human anatomy and Embryology.
Q. Periodicals, websites	American J. of Anatomy

	Cochrane Library,Medline&Popline

Course Coordinator/s:

Prof. Dr. Fatma Elzahraa Fouad

Head of Department:
Prof. Fatma Elzahraa Fouad

Date of last update& approval by department Council:

5/ 3 / 2023

نموذج رقم (١١)

جامعة : المنيا
كلية : الطب
قسم: التشريح

مسمى المقرر	التشريح
كود المقرر	AN100

K. Matrix of Coverage of Course ILOs By Contents

Contents (List of course topics)	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	**B. Intellectual Skills**	**C. Professional & Practical skills**	**D. General & Transferable Skills**
	A	**B**	**C**	**D**
Compulsory COURSES (Two academic years)				
Head and neck	**1,2,3,4**	**1,3,4**	**1,2**	
Neuroanatomy	**1,2,3,4**	**1,2,3,4**	**1,2**	**-**
Human embryology	**3,4**	**6**	**5**	
Upper and lower limbs	**2,7**	**1,4**	**1,2**	
Thorax	**1,2**	**1,4**	**1,2**	
Abdomen	**1,2**	**1,4,6**	**1,2,4**	
Pelvis and perineum	**1,2**	**1,3,6**	**1,2,4**	
General human biology	**1,2,3**	**4**	**1,2,4**	

Matrix of Coverage of Course ILOs by Methods of Teaching & Learning

Methods of Teaching & Learning	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
Lecture	1,2,3,4	1,2		1,2
Practical			1,2,3	
Presentation/seminar	1,4			1,2,5
Self directed learning	1,2,3	1,2,3	1,2,3	
Thesis discussion				1,5,8

L. Matrix of Coverage of Course ILOs by Methods of Assessment

Methods of Assessment	Intended Learning Outcomes (ILOs)			
	A. Knowledge & Understanding	B. Intellectual Skills	C. Professional & Practical skills	D. General & Transferable Skills
	A	B	C	D
Paber- based exam	1,2,3,4	1,2		
Practical exam Skill lab			2	
Oral Exam	1,2,3,4	1,2,4		1,2

Blueprint" Examination Paper""100 Marks"

	Topic Compulsory COURSES	Hours	Knowledge %	Intellectual %	% topic	No. of items per topic	Knowledge Mark	Intellectual mark	Mark	Actual mark
1	Head and neck	6/w	56%	44%	%		١٠	٨	١٨	١٨
2	Neuroanatomy	6/w	56%	44%	%		١٠	٨	١٨	١٨
3	Human embryology	6/w	62.5%	37.5%	%		١٠	٦	١٦	١٦
4	Upper limb	6/w	62.5%	37.5%	%		٥	٣	٨	٨
5	Lower limb	6/w	62.5%	37.5%			٥	٣	٨	٨
6	Thorax	6/w	50%	50%	%		٤	٤	٨	٨
7	Abdomen	6/w	60%	40%	%		٦	٤	١٠	١٠
8	Pelvis and perineum	6/w	62.5%	37.5%	%		٥	٣	٨	٨
9	General human biology	6/w	66.6%	33.3%	%		٤	٢	٦	٦
	Total	54	59%	41%	%		٥٩	41	١٠٠	١٠٠