Medical Doctorate (M.D.) Degree Program and Courses Specifications for Exact name of the program

(According to currently applied Credit point bylaws)

Name of department
Faculty of medicine
Assiut University
2017/2018

Contents

Item **Page**

M. D. degree of ……

A. Basic Information

- **Program Title:**
  ……
- **Nature of the program: Single.**
- **Responsible Department:**
  ……
- **Program Academic Director (Head of the Department):**
  ……..
- **Coordinator (s):**
  - **Principle coordinator:**
    ……
  - **Assistant coordinator (s) ……**
- **Internal evaluators:**
  ……..
- **External evaluator**
- **Date of Approval by the Faculty of Medicine Council of Assiut University: ……**
- **Date of most recent approval of program specification by the Faculty of Medicine Council of Assiut University:**
  ……
- **Total number of courses: courses**

B. Professional Information

1- Program aims

I/1……
……

1/2.
……
……

1/3……
……

2-Intended learning outcomes (ILOs) for the whole program:

2/1Knowledge and understanding:

A. Demonstrate in-depth knowledge and understanding of theories, basics and updated biomedical clinical epidemiological and socio behavioral science relevant to his speciality as well as the evidence – based application of this knowledge to practice including patient care.

B. Explain basics, methodology, tools and ethics of scientific medical, clinical research.

C. Mention ethical, medico logical principles and bylaws relevant to his practice in the field of.

D. Mention principles and measurements of quality assurance and quality improvement in medical education and in practice of the concerned speciality.

E. Mention public health and health policy issues relevant to this speciality and principles and methods of system –based improvement of related to his practice in the field of.

2/2 Intellectual outcomes

A. Apply the basic and clinically supportive sciences which are appropriate to the speciality related conditions / problem / topics.

B. Demonstrate an investigatory and analytic thinking "problem – solving "approaches to relevant situations related to speciality.

C. Plan research projects.
D. Write scientific paper.
E. Participate in clinical or laboratory risk management activities as a part of clinical governance.
F. Plan for quality improvement in the field of medical education and practice in his speciality.
G. Create / innovate plans, systems, and other issues for improvement of performance in his practice.
H. Present and defend his / her data in front of a panel of experts.

I. Formulate management plans and alternative decisions in different situations in the field of the speciality.

2/3 Skills

2/3/1 Practical skills (Patient Care)

A. Master practical skills relevant to that speciality for all common techniques and /or experiments including.

B. Master practical skills with non-routine, laboratory skills and techniques and under increasingly difficult circumstances, while demonstrating, appropriate and effective competency including.

C. Master proficiency in performing available complex laboratory techniques and handling unexpected complications including.

D. Gather essential and accurate information about practical/laboratory skills of the speciality related conditions including.

E. Make informed decisions about diagnostic laboratory tests for the speciality related conditions including.

F. Develop and carry out diagnostic and teaching plans for all speciality related conditions / skills including.

G. Use information technology to support practical decisions and students education in all speciality related practical situations including.

H. Provide health care or any relevant services aimed at preventing the speciality related health problems (if applied) including.

I. Lead other professionals, including those from other disciplines, to provide practical/laboratory-focused care in speciality related conditions including.

J. Write competently all forms of professional reports related to the speciality (lab reports, experiments reports,) including reports evaluating these charts and sheets.

2/3/2 General skills

Including:

· Practice-based Learning and Improvement

· Interpersonal and Communication Skills

· Professionalism

· Systems-based Practice

Practice-Based Learning and Improvement

A. Demonstrate the competency of continuous evaluation of different types of practice including service provision to patients in the different areas of his field.

B. Appraise scientific evidence.

C. Continuously improve his practice including service provision to patients based on constant self-evaluation and life-long learning.

D. Participate in medical audits and research projects.

E. Practice skills of evidence-based Medicine (EBM).

F. Educate and evaluate students, mentors and other health professionals.

G. Design logbooks.

H. Design guidelines and standard protocols for different techniques and procedures.

I. Apply knowledge of study designs and statistical methods to the appraisal of speciality related studies

J. Use information technology to manage information, access on- line medical information; for the important topics.

Interpersonal and Communication Skills

K- Master interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals, including:-

- Present a case.
- Write a consultation note.
- Inform patients of a diagnosis and therapeutic plan, Completing and maintaining comprehensive timely and legible medical records.
- Teamwork skills.

L. Create and sustain a therapeutic and ethically sound relationship with patients.

M. Elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.

N. Work effectively with others as a member or leader of a health care team or other professional group.

Professionalism

O. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.

P. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.

Q. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.

Systems-Based Practice

R. Work effectively in academic and health care delivery settings and systems related to speciality including good administrative and time management.

S. Practice cost-effective services provision and resource allocation that does not compromise quality.

T. Advocate for quality patient care and assist patients in dealing with system complexities.

U. Design, monitor and evaluate specification of under and post graduate courses and programs.

V. Act as a chair man for scientific meetings including time management

3- Program Academic Reference Standards (ARS) (Annex 2)

Academic standards for Medical Doctorate (MD) degree in Academic speciality

Assiut Faculty of Medicine developed MD degree programs' academic standards for different clinical specialties.

In preparing these standards, the General Academic Reference Standards for post graduate programs (GARS) were adopted. These standards set out the graduate attributes and academic characteristics that are expected to be achieved by the end of the program.

These standards were approved by the faculty council on 20/ 3/2010. These standards were revised and approved without changes by the Faculty Council on 23-9-2014.

4- Program External References

1. **ACGME (Accreditation Council for Graduate Medical Education).**

2. **(Academic Reference (s) related to speciality for program specification different from the above mentioned reference)**

5- Program Structure

A. Duration of program: 4-6 years

B. Structure of the program:

Total number of credit points: = 420 CP
Master degree: 180 credit point
Didactic #: 37 (30.8%), practical 83 (69.2%), total 120 CP
Thesis (80) and researches (40): 120 CP (50%)

First part
Didactic 10 (100%), practical 0 (0 %), total 10 CP
Second part

Didactic 24, (22.4 %), practical 83 (77.6 %), total 107 CP
Elective courses: 3 credit points
#Didactic (lectures, seminars, tutorial)

According the currently applied bylaws:
Total courses: 120 credit point
Compulsory courses: 117 credit point (97.5%)
Elective courses: 3 credit point (2.5%)

	Credit points	% from total
§ Basic courses	10	4.1%
§ Humanity and social courses	3	1.2%
§ Specialized courses	107	44.6%
§ Others (Computer, …)		
§ Field training	83	34.8%
Thesis	80	33.4%
2 published researches	40	16.7%
Master degree	180	

C-Program Time Table

Duration of program 4 years divided into

- Part 1

Program-related essential courses

Program-related essential courses
- Medical statistic
- Research methodology
- Medicolegal Aspects and Ethics in Medical Practice and Scientific Research

Students are allowed to sit the exams of these courses after 6 months from applying to the M D degree.

Students are allowed to sit the exams of the remaining essential courses after 12 months from applying to the MD degree.

Thesis and 2 published researches

For the M D thesis;

MD thesis subject should be officially registered within 1 year from application to the MD degree,

Discussion and acceptance of the thesis should not be set before 24 months from registering the M D subject;

It could be discussed and accepted either before or after passing the second part of examination

- Part 2

Program –related specialized science courses and ILOs
Students are not allowed to sit the exams of these courses before 4 years from applying to the MD degree.

Two elective courses can be set during either the 1st or 2nd parts.

The students pass if they get 50% from the written exams and 60% from oral exams, 60% from clinical/practical exams of each course and 60% of summation of the written exams, oral and clinical /practical exams of each course
Total degrees 1700 marks.
500 marks for first part
1200 for second part
Written exam 40% - 70%.
Clinical/practical l and oral exams 30% - 60%.

D-Curriculum Structure: (Courses):

Levels and courses of the program:

Courses and student work load list	Course Code	Core Credit points		
		didactic #	training	total
First Part				
Basic science Courses (10 CP) Course 1: Medical Statistics Course 2: Research Methodology Course 3: Medicolegal Aspects & Ethics in Medical Practice and Scientific Research ----------	 FAC309A FAC309B FAC310C	 1 1 1		
Elective courses*	3 CP			
- Elective course 1 - Elective course 2				
Thesis	80 CP			
Published researches**	40 CP			
Second Part	Speciality courses 24 CP Speciality Practical Work (log Book) 83 CP			
Speciality Courses 1) Course 1 2) Course 2 3) Course 3 ----------		**24**		
Speciality Practical Work (83 CP)			**83**	
Total of second part				

#Didactic (lectures, seminars, tutorial)

* Elective courses can be taken during either the 1st or 2nd parts.

Student work load calculation:

Work load hours are scheduled depending on the type of activities and targeted competences and skills in different courses

Elective Courses#:

- Advanced medical statistics.
- Evidence based medicine.
- Advanced infection control.
- Quality assurance of medical education.
- Quality assurance of clinical practice.
- -Hospital management

Two of the above mentioned courses are prerequisites for fulfillment of the degree.

3. Thesis / Researches:

40 CP are appointed to the completion and acceptance of the thesis.

**Another 40 points are appointed to acceptance or publication of one research from the thesis in international indexed medical journals or publication of 2 researches from the thesis in local specialized medical journals.

6. Courses Contents (Annex 1)

The competency based objectives for each course/module/rotation are specified in conjunction with teaching/training methods, requirements for achieving these objectives and assessment methods.

See Annex 1 for detailed specifications for each course/ module
Annex 6 II: Program Matrix

7-Admission requirements

- Admission Requirements (prerequisites) if any :
  I. General Requirements:
     - Master degree in the speciality.

II. Specific Requirements:

- Fluent in English (study language)
-

VACATIONS AND STUDY LEAVE

The current departmental policy is to give working residents ---------- week leave prior to first/ second part exams.

FEES:

As regulated by the postgraduate studies rules and approved by the faculty vice dean of post graduate studies and the faculty and university councils.

8-Progression and completion requirements

- Examinations of the first part (Medical statistic, Research methodology and Medicolegal Aspects and Ethics in Medical Practice and Scientific Research) could be set at 6 months from registering to the MD degree.
- Students are allowed to sit the exams of the remaining essential courses of the first part after 12 months from applying to the MD degree.
- Examination of the second part cannot be set before 4 years from registering to the degree.
- Discussion of the MD thesis could be set after 2 years from officially registering the MD subject, either before or after setting the second part exams.
- The minimum duration of the program is 4 years.

<u>The students are offered the degree when:</u>

1. Passing the exams of all essential, elective and specialized courses of this program as regulated by the post graduates approved rules by the faculty council.
2. Completing all scheduled CP and log book (minimum 80%).
3. Discussion and acceptance of the MD thesis.

4. Acceptance or publication of one research from the thesis in international indexed medical journals or publication of 2 researches from the thesis in local specialized medical journals.

9-Program assessment methods and rules (Annex IV)

Method	ILOs measured
Written examinations: Structured essay questions Objective questions MCQ Problem solving	K & I
Clinical: Long/short cases OSCE	K ,I, P &G skills
Structured oral	K ,I &G skills
Logbook assessment	All
Research assignment	I &G skills

Weighting of assessments:

Courses		Degrees			
	Course code	Written Exam	Oral and/or Practical l Exam		Total
First Part					
Basic science Courses:					
Medical Statistics	FAC309A	35	15		50
Research Methodology	FAC309B	35	15		50
Medicolegal Aspects & Ethics in Medical Practice and Scientific Research	FAC310C	35	15		50
Total					
Second Part					
	Course code	written	oral	Practical	Total
Speciality Courses					
Total of the second part					
Elective course 1					
Elective course 2					

* 25% of the oral exam for assessment of logbook

Total degree 1900

500 marks for first part

1200 for second part

Written exam ------% (----- marks).

Clinical/practical and oral exams--------% (---- marks

Examination system:

Ø First part:

- Written exam 2 hours in Medical Statistics and Research Methodology + oral examination
- Written exam 1 hours in Medicolegal Aspects and Ethics in Medical Practice and Scientific Research + oral examination
-

Ø Second part:

-

Ø Elective courses

- Written exam one paper 1 hour in Elective course 1 + Oral & Practical exam
- Written exam one paper 1 hour in Elective course 2 + Oral & Practical exam

10-Program evaluation

By whom	method	Sample
Quality Assurance Unit	Reports Field visits	#
External Evaluator (s):According to department council External Examiner (s): According to department council	Reports Field visits	#
Stakeholders	Reports Field visits questionnaires	#
Senior students	questionnaires	#
Alumni	questionnaires	#

#Annex 5 contains evaluation templates and reports.

11-Declaration

We certify that all of the information required to deliver this program is contained in the above specification and will be implemented.
All course specifications for this program are in place.

Contributor	Name	Signature	Date
Program Principle Coordinator:			
Head of the Responsible Department (Program Academic Director):			

Annex 1, Specifications for Courses / Modules

Annex 1: specifications for courses/ modules

Course 1----------

- **Name of department:**
- **Faculty of medicine**
- **Assiut University**
- 2017/2018

I. Course data

- **Course Title: …….**
- **Course code:**
  ……
- **Speciality……**
  ……..
- **Number of credit points: Didactic…….,.(-----%) practical……..(-----%).total…….**
- **Department (s) delivering the course:**
  ……
- **Coordinator (s):**
  - **Course coordinator: ……**
  - **Assistant coordinator (s) ……**
    …….
- **Date last approved by the Faculty Council:**
  …….
- **Requirements (prerequisites) if any :**
  - ----------
  - ----------
- **Requirements from the students to achieve course ILOs are clarified in the joining log book.**

2. Course Aims

1. ……
2. ……
3. ……
4. ……
5. ……
6. ……
7. ……

3. Course intending learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Describe different clinical conditions and diseases related to the course.		
B. Mention the details of different diagnostic tools of diseases related to the course/speciality.		
C. State update and evidence based Knowledge related to the course: ……		
D. Memorize the facts and principles of the other relevant basic and clinically supportive sciences related to speciality including: ……..		
E. Mention the basic ethical and medico legal principles revenant to the speciality.		
F. Explain the basics of quality assurance to ensure good professional skills in his field.		
G. Mention the ethical and scientific principles of medical research		
H. Explain the impact of common health problems in the field of speciality on the society		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Design / present case , seminars in common problem related to ----		
B. Apply the basic and clinically supportive sciences which are appropriate to the speciality related conditions / problem / topics.		
C. Demonstrate an investigatory and analytic thinking "problem – solving "approaches to clinical situation related to speciality		
D. Conduct or share in research projects.		
E. Write scientific papers.		
F. Participate in the management of risky conditions related to speciality.		
G. Plan for quality improvement in the field of medical education and professional practice in speciality.		
H. Create / innovate plans, systems, and other issues for improvement of performance in his practice.		
I. Present and defend his / her data in front of a panel of experts		
J. Formulate management plans and alternative decisions in different situations in the field of the speciality.		

C-Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Perform the following basic lab skills essential to the course:		
B. Perform the following advanced lab skills essential to the course:		
C. Use instruments and devices in evaluation of……		
D. Interpret the following non invasive/invasive procedures/ experiments ----------		
E. Perform the following non invasive/invasive procedures/ experiments ----------		
F. Perform the following basic experiments in related basic sciences to be utilized in the research work: ……		
G. Use information technology to support decisions in common situations related to speciality		
H. Develop and carry out diagnostic and teaching plans for all speciality related conditions / skills		
I. Counsel and educate patients and their family about ---- ----		
J. Use information technology to support decisions in common conditions related to the speciality		
K. Provide health care services aimed at preventing the following conditions ---- ----		

L. Work with health care professionals, including those from other disciplines, to provide patient-focused care.		
M. Write and evaluate competently all forms of professional reports related to the ---------- (lab reports, experiments reports,)		

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Perform practice-based improvement activities using a systematic methodology in the common problems (plan and conduct audit cycles)		
B. Locate, appraises, and assimilates evidence from scientific studies related to health problems.		
C. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies		
D. Use information technology to manage information, access on-line medical information; and support their own education		
E. Lead the learning of students and other health care professionals.		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F. Create and sustain a therapeutic and ethically sound relationship with patients		
G. Perform the following oral communications: ---- ----		
H. Fill the following reports: ---- ----		
I. Work effectively with others as a member or leader of a health care team e.g. in labor ward		

Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
J. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest.		1. Objective structured clinical examination 2. Patient survey
K. Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.		1. 360o global rating
L. Demonstrate sensitivity and responsiveness to others ' culture, age, gender, and disabilities		

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
M. Work effectively in different health care delivery settings and systems.		1. 360o global rating
N. Practice cost-effective health care and resource allocation that does not compromise quality of care		1. Check list evaluation of live or recorded performance
O. Advocate for quality patient care and assist patients in dealing with system complexities		1. 360o global rating 2. Patient survey
P. Partner with health care managers and health care providers to assess, coordinate, and improve health care and predict how these activities can affect system performance		

4. Course contents (topic s/modules/rotation
Course Matrix

Time Schedule: First Part/ Second part

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skill	General Skills

5. Course Methods of teaching/learning:

1. ……
2. ……
3. ……
4. ……

6. Course Methods of teaching/learning: for students with poor achievements

1. ……
2. ……
3. ……
4. ……

7. Course assessment methods:

i. Assessment tools: …….
……..
……..

ii. Time schedule: ……

iii. Marks: ……
……..

8. List of references

i. Lectures notes
……

ii. Essential books
…….
…….

iii. Recommended books
…….
…….

iv. Periodicals, Web sites, … etc

- **…….**
- **…….**
- **…….**

v. Others

- **…….**
- **…….**
- **…….**

9. Signatures

Course Coordinator: **……**	**Head of the Department:** **……**
Date: **……**	**Date:** **……**

Course 2----------

Course 3----------

Course 4----------

Course 5----------

Course 6----------

.....

.....

ANNEX 2
Program Academic Reference Standards (ARS)

1- Graduate attributes for medical doctorate *in* ---------

The Graduate (after residence training and medical doctorate years of study) must:

1- Demonstrate competency and mastery of basics, methods and tools of scientific research and medical audit in the chosen field of medicine.

2- Have continuous ability to add knowledge to the speciality through research and publication.

3- Appraise and utilise relevant scientific knowledge to continuously update and improve practical skills.

4- Acquire excellent level of medical knowledge in the basic biomedical, behavioural and related clinical sciences, medical ethics and medical jurisprudence and apply such knowledge in practical skills and scientific research.

5- Function as a leader of a team to provide appropriate, effective and compassionate reaction when dealing with problems related to speciality.

6- Identify and create solutions for health problems related to his speciality.

7- Acquire an in depth understanding of common areas of speciality, from basic practice and related clinical care to application, and possession of required skills to manage independently all problems in these areas.

8- Demonstrate leadership competencies including interpersonal and communication skills that ensure effective information exchange with other health professions, the scientific community and the public.

9- Function as teacher in relation to colleagues, medical students and other health professions.

10- Master decision making capabilities in different situations related to his field of practice.

11- Show leadership responsiveness to the larger context of the related health care systems, including the organisation, partnership with health care providers and managers, and resource allocations.

12- Demonstrate in depth awareness of public health and related health policy issues including independent ability to improve health care, and identify and carryout system-based improvement of care.

13- Show model attitudes and professionalism.

14- Demonstrate commitment for lifelong learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages and in the speciality or one of its subspecialties.

15- Use recent technologies to improve his practice in the speciality field.

16- Share in updating and improving practical practice in the speciality field.

2- Competency based Standards for medical doctorate in --------

2.1- Knowledge and understanding

By the end of the program, the graduate should demonstrate satisfactory knowledge and understanding of

2-1-A- Established, updated and evidence-based theories, basics and developments of speciality and relevant sciences.

2-1-B- Basic, methods and ethics of medical research.

2-1-C- Ethical and medicologal principles of medical practice related to speciality field.

2-1-D- Principles and measurements of quality in the speciality field.

2-1-E- Principles and efforts for maintaining and improvements of public health.

2- Intellectual skills

By the end of the program, the graduate should be able to demonstrate the following

2-2-A- Application of basic and other relevant science to solve speciality related problems.

2-2-B- Problem solving based on available data.

2-2-C- Involvement in research studies related to the speciality.

2-2-D- Writing scientific papers.

2-2-E- Risk evaluation in the related clinical practice.

2-2-F- Planning for performance improvement in the speciality field.

2-2-G- Creation and innovation in the speciality field.

2-2-H- Evidence – based discussion.

2-2-I- Decision making in different situations related to the speciality fields.

2.3- Clinical skills

By the end of the program, the graduate should be able to

- **Competency-based outcomes for Patient Care:-**

2-3-A- Provide extensive level of practical and or laboratory services that can help patient care ,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 his field of practice.

2-3-B- Master practical / laboratory skills relevant to that speciality.

2-3-C- Write and evaluate reports for situations related to the field of speciality.

2.4- General skills

By the end of the program, the graduate should be able to

- **Competency-based outcomes for Practice-based Learning and Improvement**

2-4-A- Master practice-based learning and improvement skills that involves investigation and evaluation and improvements of their own practice, appraisal and assimilation of scientific evidence and risk management.

2-4-B- Use competently all information sources and technology to improve his practice.

2-4-C- Master skills of teaching and evaluating others.

- **Competency-based objectives for Interpersonal and Communication Skills**

2-4-D- Master interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, technicians and other health professionals.

- **Competency-based objectives for Professionalism**

2-4-E- Master Professionalism behavior, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

- **Competency-based objectives for Systems-based Practice**

2-4-F- Demonstrate the ability to effectively use system resources to provide relevant services and care that is of optimal value.

2-4-G- Participate in improvement of the education system.

2-4-H- Demonstrate skills of leading scientific meetings including time management.

2-4-O- Demonstrate skills of self and continuous learning.

Annex 3, Methods of teaching/learning

Annex 3, Methods of teaching/learning

	Patient care	Medical knowledge	Practice-based learning/ Improvement	Interpersonal and communication skills	Professionalism	Systems-based practice
Didactic (lectures, seminars, tutorial)	X	X		X	X	X
journal club,	X	X	X			
Educational prescription	X	X	X	X	X	X
Present a case (true or simulated) in a grand round	X	X	X	X	X	
Observation and supervision	X		X	X	X	X
conferences		X	X	X		X
Written assignments	X	X	X	X	X	X
Oral assignments	X	X	X	X	X	X

Teaching methods for knowledge

- Didactic (lectures, seminars, tutorial)
- journal club
- Critically appraised topic
- Educational prescription (a structured technique for following up on clinical questions that arise during rounds and other venues).
- Present a case (true or simulated) in a grand round
- Others

Teaching methods for patient care

- Observation and supervision /Completed tasks procedure/case logs
- On-the-job" training without structured teaching is not sufficient for this skill (checklists).
- Simulation is increasingly used as an effective method for skill/ teamwork training.

Teaching methods for other skills

- Written communication (e.g., orders, progress note, transfer note, discharge summary, operative reports, and diagnostic reports).

- Oral communication (e.g., presentations, transfer of care, interactions with patients, families, colleagues, members of the health care team) and/or non verbal skills (e.g., listening, team skills)

- Professionalism, including medical ethics, may be included as a theme throughout the program curriculum that includes both didactic and experiential components (e.g., may be integrated into already existing small group discussions of vignettes or case studies and role plays, computer-based modules) and may be modeled by the faculty in clinical practice and discussed with the resident as issues arise during their clinical practice.

Annex 4, Assessment methods

Annex 4, ILOs evaluation methods for MD students.

Method	Practical skills	K	Intellectual	General skills			
	Patient care	K	I	Practice-based learning/ Improvement	Interpersonal and communication skills	Professionalism	Systems-based practice
Record review	X	X	X		X	X	X
Checklist	X				X		
Global rating	X	X	X	X	X	X	X
Simulations	X	X	X	X	X	X	
Portfolios	X	X	X	X	X		
Standardized oral examination	X	X	X	X	X		X
Written examination	X	X	X	X			X
Procedure/ case log	X	X					

Annex 4, Glossary of MD students assessment methods

- Record Review – Abstraction of information from patient records, such as medications or tests ordered and comparison of findings against accepted patient care standards.

- Chart Stimulated Recall – Uses the MD doctor's patient records in an oral examination to assess clinical decision-making.

- Mini clinical evaluation: Evaluation of Live/Recorded Performance (single event) – A single resident interaction with a patient is evaluated using a checklist. The encounter may be videotaped for later evaluation.

- Standardized Patients (SP) – Simulated patients are trained to respond in a manner similar to real patients. The standardized patient can be trained to rate MD doctor's performance on checklists and provide feedback for history taking, physical examination, and communication skills. Physicians may also rate the MD doctor's performance.

- Objective Structured Clinical Examination (OSCE) – A series of stations with standardized tasks for the MD doctors to perform. Standardized patients and other assessment methods often are combined in an OSCE. An observer or the standardized patient may evaluate the MD doctors.

- Procedure or Case Logs – MD doctors prepare summaries of clinical experiences including clinical data. Logs are useful to document educational experiences and deficiencies.

- PSQs – Patients fill out Patient Survey questionnaires (PSQs) evaluating the quality of care provided by MD doctors.

- Case /problems – assess use of knowledge in diagnosing or treating patients or evaluate procedural skills.

- Models: are simulations using mannequins or various anatomic structures to assess procedural skills and interpret clinical findings. Both are useful to assess practice performance and provide constructive feedback.

- 360 Global Rating Evaluations – MD doctors, faculty, nurses, clerks, and other clinical staff evaluate MD doctors from different perspectives using similar rating forms.

- Portfolios – A portfolio is a set of project reports that are prepared by the MD doctors to document projects completed during the MD study years. For each type of project standards of performance are set. Example projects are summarizing the research literature for selecting a treatment option, implementing a quality improvement program, revising a medical student clerkship elective, and creating a computer program to track patient care and outcomes.

- Examination MCQ – A standardized examination using multiple-choice questions (MCQ). The in-training examination and written board examinations are examples.

- Examination Oral – Uses structured realistic cases and patient case protocols in an oral examination to assess clinical decision-making.

- Procedure or Case Logs – MD doctors prepare summaries of clinical experiences including clinical data. Logs are useful to document educational experiences and deficiencies.

- PSQs – Patients fill out Patient Survey questionnaires (PSQs) evaluating the quality of care provided by MD doctors.

Annex 5,
Program evaluation tools

By whom	Method	sample
Quality Assurance Unit	Reports Field visits	#
External Evaluator (s):According to department council External Examiner (s): According to department council	Reports Field visits	#
Stakeholders	Reports Field visits questionnaires	#
Senior students	questionnaires	#
Alumni	questionnaires	#

Annex 6, Program Correlations:

مصفوفة توافق المعايير القومية القياسية العامة لبرامج الدكتوراه مع المعايير الأكاديمية المعتمدة من كلية الطب – جامعة أسيوط لدرجة الدكتوراه ----------

I- General Academic Reference Standards (GARS) versus Program ARS

1- Graduate attributes

NAQAAE General ARS for Postgraduate Programs	Faculty ARS
١-إتقان أساسيات و منهجيات البحث العلمي	1- Demonstrate competency and mastery of basics, methods and tools of scientific research and medical audit in the chosen field of medicine.
٢-العمل المستمر علي الإضافة للمعارف في مجال التخصص	2- Have continuous ability to add knowledge new developments to the speciality through research and publication.
٣-تطبيق المنهج التحليلي والناقد للمعارف في مجال التخصص و المجالات ذات العلاقة	3- Appraise and utilise scientific knowledge to continuously update and improve practical skills
٤-دمج المعارف المتخصصة مع المعارف ذات العلاقة مستنبطا و مطورا للعلاقات البينية بينها	4- Acquire excellent level of medical knowledge in the basic biomedical, related clinical, behavioural and clinical sciences, medical ethics and medical jurisprudence and apply such knowledge in practical skills and scientific research.
٥-إظهار وعيا عميقا بالمشاكل الجارية و النظريات الحديثة في مجال التخصص	5- Function as a leader of a team to provide appropriate, effective and compassionate reaction when dealing with problems related to speciality. 7- Acquire an in depth understanding of common areas of speciality, from basic practice and related clinical care to application, and possession of skills to manage independently all problems in these areas.
٦-تحديد المشكلات المهنية و إيجاد حلولا مبتكرة لحلها	6- Identify and create solutions for health problems related to his speciality.

٧-إتقان نطاقا واسعا من المهارات المهنية في مجال التخصص	5- Function as a leader of a team to provide appropriate, effective and compassionate reaction when dealing with problems related to speciality. 7- Acquire an in depth understanding of common areas of speciality, from basic practice and related clinical care to application, and possession of skills to manage independently all problems in these areas.
٨- التوجه نحو تطوير طرق و أدوات و أساليب جديدة للمزاولة المهنية	16- Share in updating and improving practical practice in the speciality field. 9- Function as teacher in relation to colleagues, medical students and other health professions.
٩-استخدام الوسائل التكنولوجية المناسبة بما يخدم ممارسته المهنية	15- Use recent technologies to improve his practice in the speciality field.
١٠-التواصل بفاعلية و قيادة فريق عمل في سياقات مهنية مختلفة	8- Demonstrate leadership competencies including interpersonal and communication skills that ensure effective information exchange with other health professions, the scientific community and the public. 5- Function as a leader of a team to provide appropriate, effective and compassionate reaction when dealing with problems related to speciality.
١١-اتخاذ القرار في ظل المعلومات المتاحة	10- Master decision making capabilities in different situations related to his field of practice.

1- Graduate attributes (Continuous)

NAQAAE General ARS for Postgraduate Programs	Faculty ARS
١٢-توظيف الموارد المتاحة بكفاءة و تنميتها والعمل على إيجاد موارد جديدة	11- Show leadership responsiveness to the larger context of the related health care system, including the organisation, partnership with health care providers and managers, and resource allocations.
١٣-الوعي بدوره في تنمية المجتمع و الحفاظ على البيئة	12- Demonstrate in depth awareness of public health and related health policy issues including independent ability to improve health care, and identify and carryout system-based improvement of care.
١٤-التصرف بما يعكس الالتزام بالنزاهة و المصداقية و قواعد المهنة	13- Show model attitudes and professionalism.
١٥-الالتزام بالتنمية الذاتية المستمرة و نقل علمه و خبراته للآخرين	14- Demonstrate commitment for lifelong learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages and in the speciality or one of its subspecialties. 15- Use recent technologies to improve his practice in the speciality field.

2- Academic standards

NAQAAE General ARS for Postgraduate Programs	Faculty ARS
٢-١-أ- النظريات و الأساسيات والحديث من المعارف في مجال التخصص والمجالات ذات العلاقة	2.1. A- Established updated and evidence-based theories, basics and developments of speciality and relevant sciences.
٢-١-ب - أساسيات و منهجيات و أخلاقيات البحث العلمي و أدواته المختلفة	2.1. B- Basic, methods and ethics of medical research.
٢-١-ج- المبادئ الأخلاقية و القانونية للممارسة المهنية في مجال التخصص	2.1. C- Ethical and medicologal principles of medical practice related to speciality field.
٢-١-د مبادئ و أساسيات الجودة في الممارسة المهنية في مجال التخصص	2.1. D- Principles and measurements of quality in the speciality field.
٢-١-هـ - المعارف المتعلقة بآثار ممارسته المهنية على البيئة وطرق تنمية البيئة وصيانتها	2.1. E- Principles and efforts for maintaining and improvements of public health.
٢-٢-أ -تحليل و تقييم المعلومات في مجال التخصص و القياس عليها و الاستنباط منها	2.2. A- Application of basic and other relevant science to solve speciality related problems.
٢-٢-ب -حل المشاكل المتخصصة استنادا على المعطيات المتاحة	2.2. B- Problem solving based on available data.
٢-٢-ج -إجراء دراسات بحثية تضيف إلى المعارف	2.2. C- Involvement in research studies related to the speciality.
٢-٢-د- صياغة أوراق علمية	2.2. D- Writing scientific papers.
٢-٢—هـ تقييم المخاطر في الممارسات المهنية	2.2. E- Risk evaluation in the related clinical practice.
٢-٢-و -التخطيط لتطوير الأداء في مجال التخصص	2.2. F- Planning for performance improvement in the speciality field.
٢-٢-ز - الابتكار /الإبداع	2-2-G- Creation and innovation in the speciality field.
٢-٢-ح- الحوار والنقاش المبني على البراهين	2.2. H- Evidence – based discussion.

والأدلة	
٢-٢-ط -اتخاذ القرارات المهنية في سياقات مهنية مختلفة	2.2. I- Decision making in different situations related to the speciality fields.
٢-٣-أ -إتقان المهارات المهنية الأساسية و الحديثة في مجال التخصص	2.3. A- Provide extensive level of practical and or laboratory services that can help patient care ,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 his field of practice. 2.3. B- Master practical / laboratory skills relevant to that speciality.
٢-٣-ب- كتابة و تقييم التقارير المهنية.	2.3. C- Write and evaluate reports for situations related to the field of speciality.
٢-٣-ج -تقييم و تطوير الطرق و الأدوات القائمة في مجال التخصص	2.4. A-Master practice-based learning and improvement skills that involves investigation and evaluation and improvements of their own practice, appraisal and assimilation of scientific evidence and risk management.
٢-٣-د - استخدام الوسائل التكنولوجية بما يخدم الممارسة المهنية	2.4. B- Use competently all information sources and technology to improve his practice.
٢-٣-هـ -التخطيط لتطوير الممارسة المهنية وتنمية أداء الآخرين	2.4. A-Master practice-based learning and improvement skills that involves investigation and evaluation and improvements of their own practice, appraisal and assimilation of scientific evidence and risk management. 2.4. G- Participate in improvement of the education system.

2- Academic standards (Continues)

NAQAAE General ARS for Postgraduate Programs	Faculty ARS
٢-٤-أ التواصل الفعال بأنواعه المختلفة	2.4. D- Master interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, technicians and other health professionals.
٢-٤-ب - استخدام تكنولوجيا المعلومات بما يخدم تطوير الممارسة المهنية	2.4. B- Use competently all information sources and technology to improve his practice.
٢-٤-ج - تعليم الآخرين وتقييم أداءهم	2.4. C- Master skills of teaching and evaluating others. 2.4.G- Participate in improvement of the education system.
٢-٤-د - التقييم الذاتي والتعلم المستمر	2.4. E- Master professionalism behavior, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population. 2.4.0- Demonstrate skills of self and continuous learning.
٢-٤-هـ - استخدام المصادر المختلفة للحصول على المعلومات و المعارف	2.4. C- Master skills of teaching and evaluating others.
٢-٤-و - العمل في فريق وقيادة فرق العمل	2.4. F- Demonstrate the ability to effectively use system resources to provide relevant services and care that is of optimal value.
٢-٤-ز - إدارة اللقاءات العلمية والقدرة علي إدارة الوقت	2.4.H- Demonstrate skills of leading scientific meetings including time management

II-Program ARS versus program ILOs

Comparison between ARS- ILOS for medical doctorate for-------

(ARS)	(ILOs)
2-1- Knowledge and understanding 2-1-A- Established, updated and evidence-based theories, basics and developments of speciality and relevant sciences.	*2-1- Knowledge and understanding* 2-1-A- Demonstrate in-depth knowledge and understanding of theories, basics and updated biomedical, clinical epidemiological and socio behavioral science relevant to his speciality as well as the evidence – based application of this knowledge to practice including patient care.
2-1-B Basic, methods and ethics of medical research. .	2-1-B- Explain basics, methodology, tools and ethics of scientific medical, clinical research.
2-1-C- Ethical and medicologal principles of medical practice related to speciality field.	2-1-C- Mention ethical, medico logical principles and bylaws relevant to his practice in the field of.
2-1-D- Principles and measurements of quality in the speciality field.	2-1-D- Mention principles and measurements of quality assurance and quality improvement in medical education and in practice of the concerned speciality.
2-1-E-Principles and efforts for maintaining and improvements of public health.	2-1-E- Mention public health and health policy issues relevant to this speciality and principles and methods of system –based improvement of related to his practice in the field of.

continuous **(ARS)**	continuous **(ILOs)**
2-2- Intellectual skills: 2-2-A-Application of basic and other relevant science to solve speciality related problems.	*2-2- Intellectual skills:* 2-2-A- Apply the basic and clinically supportive sciences which are appropriate to the speciality related conditions / problem / topics.
2-2-B-Problem solving based on available data.	2-2-B- Demonstrate an investigatory and analytic thinking "problem – solving "approaches to relevant situations related to speciality.
2-2-C- Involvement in research studies related to the speciality.	2-2-C- Plain research projects.
2-2-D Writing scientific papers.	2-2-D- Write scientific paper.
2-2-E-Risk evaluation in the related clinical practice.	2-2-E- Participate in clinical or laboratory risk management activities as a part of clinical governance.
2-2-F-Planning for performance improvement in the speciality field.	2-2-F- Plan for quality improvement in the field of medical education and practice in his speciality.
2-2-G-Creation and innovation in the speciality field.	2-2-G- Create / innovate plans, systems, and other issues for improvement of performance in his practice.
2-2-H-Evidence – based discussion.	2-2-H- Present and defend his / her data in front of a panel of experts.
2-2-I-Decision making in different situations related to the speciality fields.	2-2-I- Formulate management plans and alternative decisions in different situations in the field of the speciality.

continuous **(ARS)**	continuous **(ILOs)**
2-3- Clinical skills: 2-3-A- provide extensive level of practical and or laboratory services that can help patient care ,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 his field of practice. 2-3-B- Master practical/laboratory skills relevant to that speciality	*2/3/1/Practical skills (Patient care :)* 2-3-1-A- Master practical skills relevant to that speciality for all common techniques and /or experiments including. 2-3-1-B- Master practical skills with non-routine, laboratory skills and techniques and under increasingly difficult circumstances, while demonstrating, appropriate and effective competency including. 2-3-1-C- Master proficiency in performing available complex laboratory techniques and handling unexpected complications including. 2-3-1-D- Gather essential and accurate information about practical/laboratory skills of the speciality related conditions including. 2-3-1-E- Make informed decisions about diagnostic laboratory tests for the speciality related conditions including. 2-3-1-F- Develop and carry out diagnostic and teaching plans for all speciality related conditions / skills including. 2-3-1-G- Use information technology to

	support practical decisions and students education in all speciality related practical situations including. 2-3-1-H- Provide health care or any relevant services aimed at preventing the speciality related health problems (if applied) including. 2-3-1-I- Lead other professionals, including those from other disciplines, to provide practical/laboratory-focused care in speciality related conditions including.
2-3-C- Write and evaluate reports for situations related to the field of speciality.	2-3-1-J- Write competently all forms of professional reports related to the speciality (lab reports, experiments reports,) including reports evaluating these charts and sheets.

continuous (ARS)	continuous (ILOs)
2-4- General skills 2-4-A- Master Practice-Based Learning and Improvement skills that involves investigation and evaluation and improvements of their own practice, appraisal and assimilation of scientific evidence and risk management.	*2/3/2 General skills* 2-3-2-A- Demonstrate the competency of continuous evaluation of different types of practice including service provision to patients in the different areas of his field. 2-3-2-B- Appraise scientific evidence. 2-3-2-C- Continuously improve his practice including service provision to patients based on constant self-evaluation and life-long learning. 2-3-2-D- Participate in medical audits and research projects. 2-3-2-E- Practice skills of evidence-based Medicine (EBM). 2-3-2-G- Design logbooks. 2-3-2-H- Design guidelines and standard protocols for different techniques and procedures.
2-4-B- Use competently all information sources and technology to improve his practice.	2-3-2-I- Apply knowledge of study designs and statistical methods to the appraisal of speciality related studies. 2-3-2-J- Use information technology to manage information, access on-line medical information; for the important topics.
2-4-C- Master skills of teaching and evaluating others.	2-3-2-F- Educate and evaluate students, mentors and other health

	professionals.
2-4-D- Master interpersonal and communication Skills that result in effective information exchange and teaming with patients, their families, technicians and other health professionals.	2-3-2-K- Master interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals, including:- · Present a case. · Write a consultation note. · Inform patients of a diagnosis and therapeutic plan, Completing and maintaining comprehensive timely and legible medical records. · Teamwork skills. 2-3-2-L- Create and sustain a therapeutic and ethically sound relationships with patients. 2-3-2-M- Elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills. 2-3-2-N- Work effectively with others as a member or leader of a health care team or other professional group.
2-4-E- Master Professionalism behavior, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.	2-3-2-O- Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society. 2-3-2-P- Demonstrate a commitment to ethical principles including provision or withholding of

	clinical care, confidentiality of patient information, informed consent, and business practices. 2-3-2-Q- Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.
2-4-F- Demonstrate the ability to effectively use system resources to provide relevant services and care that is of optimal value. 2-4-G- Participate in improvement of the education system.	2-3-2-R- Work effectively in academic and health care delivery settings and systems related to speciality including good administer and time management. 2-3-2-S- Practice cost-effective services provision and resource allocation that does not compromise quality. 2-3-2-T- Advocate for quality patient care and assist patients in dealing with system complexities. 2-3-2-U- Design, monitor and evaluate specification of under and post graduate courses and programs.
2-4-H- Demonstrate skills of leading scientific meetings including time management	2-3-2-V- Act as a chair man for scientific meetings including time management 2-3-2-R- Work effectively in academic and health care delivery settings and systems related to speciality including good administrative and time management.
0- Demonstrate skills of self and continuous learning.	From A to H.

II-Program matrix

Course	Program Covered ILOs								

III- Program ILOS versus courses ILOS

IV-Graduate attributes versus ARS

Annex 7, Additional information:

- **Example:**
- **Department information:**

- **Staff members:**

- **Opportunities within the department:**

- **Department quality control insurance for completing the program:**

Annex 1, Specifications for Courses / Modules