PROGRAMME SPECIFICATION

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme Title & Code	Postgraduate **Medical Doctorate in Endocrinology , diabetes , clinical nutrition and metabolism.** EDCNM 600
(2) Final award/degree	MD
(3) Department (s)	Internal medicine department (Endorinology , diabetes and metabolism **unit) .**
(4) Coordinator(s)	Prof Nagy Shaaban, Professor of internal Medicine &head of .Endocrinology, diabetes and metabolism unit. Prof Omayma Saleh, Prof of internal medicine, Endocrinology, diabetes and metabolism unit.
(5) External evaluator (s)	Prof Farid Fawzy, Professor of internal medicine , Head of endocrinology unit , Zagazig university.
(6) Date of approval by the Department`s council	12/4/2015.
(7) Date of last approval of programme specification	9/6/2015

by Faculty council.	

(B) Professional information

(1) Programme Aims: The broad aims of the Programme are to produce specialist practitioners who:

(1) can develop a management plan for the patient in the field of endocrinology, diabetes, metabolism, and clinical nutrition.

(2) Achieve a sound knowledge the basic principles of human genetics and immunological basis of endocrine disorders and understand the physiology and biochemistry of hormones and aquire knowledge necessary for safe prescribing of drugs related to diabetes and endocrinology.

(3) The student should achieve evidence based standards of the specialty practice by acquiring satisfactory levels of basic knowledge clinical and some laboratory skil

(4) Can Integrate and update the knowledge of information of endocrine and metab disorders and understand the related neuropsychiatric disorders.

(5) Prepare the student to embrace and maintain continuous professional developme and to be updated.

(6) Show appropriate attitudes and communication skills in dealing with colleagues and patients

(7) Establish a differential diagnosis for patients presenting with diabetes/ endocrine disease by appropriate use of a clinical interview, physical examination , laboratory and radiological investigations.

(8) Are competent in performing the core investigations of the specialty

(9) Are able to manage and further develop integrated services in Endocrinology and Diabetes Mellitus and nutrition.

(2) Intended Learning Outcomes (ILOs)

On successful completion of the programme, the candidate will be able to:

A- Knowledge and Understanding

A 1 **Recognize the basics of genetics and immunology with special reference to endocrinology.**

A2 Review the basic scientific knowledge related to DM, endocrinological diseases, some of the common metabolic diseases,and some related topics in clinical nutrition.

A3 Recall the patho-physiological basis of the endocrine, diabetes, nutritional and metabolic disorders.

A4 Recognize the physiology and biochemistry of hormones .

A5 Demonstrate sufficient knowledge regarding neuropsychiatric aspects of endocrinal diseases.

A6 Describe the common clinical problems related to the different endocrinal glands.

A7 Describe the laboratory investigations and imaging techniques used for diagnosis of endocrinal and metabolic disorders

A8 Apply the basics and ethics of scientific research

B- Intellectual skills: Candidate should;

B1 Recognize and interpret the lab. results of the different endocrinological diseases.

B2 Recognize and interpret the different imaging techniques which help in the diagnosis of hypothalamic, pituitary , thyroid, adrenal and gonadal disorders.

B3 Apply basic pharmacology in safe prescribing and modify drug therapy in relation to patient co morbidities

B4 Formulate a differential diagnosis for patients presenting with metabolic and endocrinal diseases by the appropriate use of clinical data and investigations.

B5 Construct a management plan for the patient suffering from Diabetes Mellitus, endocrinal diseases and the common metabolic diseases including health promotion, disease prevention and long term management.

B6 Construct a healthy dietary plan for the patient suffering from DM, hyperlipidemia, hypertension, coronary heart disease,obesity, osteoporosis.

B7 Perform scientific research/ thesis about a scientific problem

B8 Write scientific papers

C- Professional/practical skills

C **1 show competency in basic and updated clinical examination skills and other procedures in the field of endocrinology, diabetes, clinical nutrition and metabolism.**

C 2 **Criticizes any lab.or imaging results which doesn't match the clinical data**

C 3**Analyze and interpret laboratory and radiological findings in diagnosis and treatment of the endocrine, diabetes and metabolic disorders including rare and obscure conditions.**

C4 Manage all diabetic, endocrinal and metabolic emergencies properly.

C **5 write and evaluate medical reports and maintain comprehensive , timely, legible medical records if applicable..**

C6 perform simple diagnostic procedures in the field of diabetes, endocrinology and clinical

D- Communication & Transferable skills

D 1 **demonstrate the ability to interact with diverse patient population including but not limited to diversity in gender ,age , culture , race ,religion, disabilities.**

D 2 **communicate effectively with physicians , other health professionals and health related agencies.**

D 3 **communicate effectively with patients , families, and the public as appropriate , across a broad range of socioeconomic and cultural backgrounds**

D 4 **teach and evaluate the performance of others including junior residents, house officers, nurses as well as patients and their relatives.**

D 5 **show compassion , integrity and respect of others and respect for patient privacy and autonomy and demonstrate responsiveness to patient needs that supersedes self interest.**

D 6 **be prepared for continuous self learning and self evaluation.**

D7 use different resources for gaining information and knowledge.

D8 work in a team and as a team leader of different working groups.

D9 run scientific meetings and show the ability of time management.

Comparison between the program aims and ILOs

	Aims								
ILOs	**A1**	**A2**	**A3**	**A4**	**A5**	**A6**	**A7**	**A8**	**A9**
A1		x							
A2	x			x					
A3		x							
A4		x							
A5				x					
A6	x			x					
A7			x				x	x	
A8	x		x						
B1			x				x	x	
B2	x		x				x	x	
B3	x	x							x
B4							x	x	
B5	x								x
B6	x								x
B7			x		x				x
B8			x		x				x
C1					x			x	
C2			x				x		
C3							x	x	
C4	x								x
C5					x	x			x
C6						x		x	
D1						x			
D2						x			
D3						x			
D4						x			
D5						x			
D6					x	x			
D7				x	x				
D8						x			
D9			x	x	x				

(2) Academic standards:

Academic standards for the programme which are issued by the National Authority for Quality Assurance & Accreditation in Education (NARS) are used.

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

Royal colleges of physicians training board in endocrinology and diabetes mellitus
American board of endocrinology

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

The aims of the Benchmark are covered by the current program .

There are differences in the credit hours and the time table of the program.

مقارنة ما يقدمه البرنامج من نتائج تعليمية مستهدفة مع المعايير المرجعية لبرنامج الدكتوراة في الغدد الصماء والسكر.

أ ـ المعرفة والفهم:

المقررات التى تحقق المعايير الأكاديمية للبرامج	ILOs مخرجات التعلم المستهدفة	(ARS) Benchmark المعايير الأكاديمية لجامعة	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الدكتوراة في الغدد الصماء والسكر.
Advanced studies in the medical field: a-Medical statistics. b-Research methodology. c- Use of computers in medical applications.	A1to A7	Apply the basics and ethics of scientific research	1- Recent advances and areas under research in the field of endocrinology and DM.
Advanced studies in the medical field: a-Medical statistics. b-Research methodology. c- Use of computers in medical applications.	A1to A7	The principles of qualitative, quantitative, bio-statistical and epidemiological research methods	2- Scientific research ethics, research methodology & research design. Curriculum must advance knowledge of the basic principles of research, including how research is conducted, evaluated, explained to patients, and applied to patient care.
		Apply ethics and legal implications for the professional practices of endocrinology and DM.	3- Legal aspects in practice of endocrinology and DM as well as medical ethics.
		Demonstrate the principles and basis of quality in professional practices of endocrinology and DM.	4- Principles and basic concepts of quality in professional practise including planning, improvement of performance and control of practising outcomes.
		Demonstrate the knowledge of the features of a safe working environment Understand the factors which influence health – psychological, biological, social, cultural and economic especially work and poverty	5- Knowledge related to environmental development, patient safety, safe occupational practise, serving communities and research results in improving public health outcomes.

ب ـ القدرات الذهنية :

المقررات التي تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(ARS) Benchmark المعايير الأكاديمية لجامعة	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العلي
Endocrinology, diabetes ,clinical nutrition and metabolism Clinical Pharmacology Radiology & nuclear medicine Applied physiology Clinical immunology & genetic Biochemistry and molecular biology	B1,B2,B3	Recognize and interpret the different imaging techniques which help in the diagnosis of hypothalamic, pituitary , thyroid, adrenal and gonadal disorders and Advise patients about use of medications prescribed, their benefits, important interactions and adverse drug effects	6- Medical data analysis, interpretation and proper therapy choice.
Endocrinology, diabetes ,clinical nutrition and metabolism Evidence-based medicine	B1,B2,B4	Appraise and apply retrieved evidence to address a clinical question	7- Medical problem solving and Evidence-based medicine.
Dissertation (Thesis) Evidence-based medicine	B7,B8	Perform scientific research/ thesis about a scientific problem	8- Participation in research development and innovation.
Dissertation (Thesis) Evidence-based medicine	B7,B8	Demonstrate the ability to write a scientific publication Develop critical appraisal skills and apply these when reading literature	9- Scientific paper reviewing.
Endocrinology, diabetes ,clinical nutrition and metabolism	B1 to B7	Evaluate risks in professional practice Improve patients' and colleagues' understanding of	10- Risk assessment in Environmental practice.

		the side effects and contraindications of therapeutic intervention	
Advanced studies in the medical field: a-Medical statistics. b-Research methodology. c- Use of computers in medical applications. Log book Activities		Participate in strategies aimed at improving patient education e.g. talking at support group meetings Demonstrate effective lecture, presentation, small group and bed side teaching skills	11- Planning for improvement of professional performance in the field of endocrinology and DM. Residents are expected to develop skills and habits to be able to meet the following goals: (1) identify strengths, deficiencies, and limits in one's knowledge and expertise; (2) set learning and improvement goals; (3) identify and perform appropriate learning activities; (4) systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement; (5) Incorporate formative evaluation feedback into daily practice; (6) locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems; (7) use information technology to optimize learning; and participate in the education of patients, families, students, residents and other health professionals.
	B4,B5,B6	Take professional decision in different situations	12- Decision making skill.
		Innovate and create	13- Development, innovation and medical breakthrough.
		Perform evidence based conversation and discussion	14- Safety culture of medical practise.

ج ـ المهارات العملية:

المقررات التى تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(ARS) Benchmark المعايير الأكاديمية لجامعة	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا
Endocrinology, diabetes ,clinical nutrition and metabolism	C1 to C6	Show competency in basic and updated clinical examination skills and other procedures in the field of endocrinology, diabetes, clinical nutrition and metabolism. Practise with professionalism including: - Integrity - Compassion - Altruism - Continuous improvement - Aspiration to excellence - Respect of cultural and ethnic diversity - Regard to the principles of equity	15- Professionalism and up to date practice. Providing patient care that is compassionate, appropriate, & effective for the treatment of health problems and the promotion of health. In this context; Residents must demonstrate a commitment to carrying out professional responsibilities & an adherence to ethical principles. Residents are expected to demonstrate: (1) compassion, integrity, and respect for others; (2) responsiveness to patient needs that supersedes self-interest; (3) respect for patient privacy and autonomy; (4) accountability to patients, society and the profession; and,(5) sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.
	C5	Write and evaluate medical reports and maintain comprehensive , timely, legible medical records if applicable..	16- Medical report writing and evaluation/appropriateness of workers' medical report.
Advanced studies in the medical field: a-Medical statistics. b-Research methodology. c- Use of computers in medical applications.	C1 to C6	Use technology to serve professional practices	17- Effective use of IT and healthcare information system in medical practise and patient medical records to optimize learning; and participate in the education of patients, families, students, residents and other health professionals

د- مهارات الاتصال:

المقررات التى تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(ARS) Benchmark المعايير الأكاديمية لجامعة	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا

	D1,D2,D3,D4,D5	Recognise the importance of prompt and accurate information sharing with other team members including Primary Care Respect the skills and contributions of colleagues	18- Interpersonal and communication skills that result in the effective exchange of information and collaboration with workers, their families, and other health professionals
	D4	teach and evaluate the performance of others including junior residents, house officers, nurses as well as patients and their relatives	19- Teaching and evaluation skills as senior staff.
	D6	Be prepared for continuous self learning and self evaluation.	20- Self-appraisal and life-long learning.
	D7	Use different resources for gaining information and knowledge.	21- Accessibility to specialty-specific and other appropriate reference material in print or electronic format. Electronic medical literature databases with search capabilities.
	D8	work in a team and as a team leader of different working groups.	22- Teamwork/leadership.
	D9	Run scientific meetings and show the ability of time management.	23- Time management and meeting organization

(3) Curriculum structure and contents:

4.a- Duration of the programme : (6 semesters)

4.b- programme structure:

Candidates should fulfill a total of 60 credit hours

●4.b.1: Number of credit hours:

First part: 5 credit hours. (First semester)

Second part: **(40 credit hours, 4 semesters)**

Obligatory and elective specialty courses**: 25 credit hours.**

Log book including clinical training, workshops and training courses on diagnostic procedures, and other scientific activities: 15 credit hours.

Dissertation: (15 credit hours , 4 semesters).

To be registered at the beginning of the second semester.

Programme courses:

First part (first semester, Compulsory courses ,5 credit hours)

Course Title	Course Code	NO. of hours per week		Total teaching hours	Credit hours
		Theoretical Lectures	Total		
Applied physiology	EDCNM603 EDCNM610AP	1	1	15	1
Clinical immunology & genetics	EDCNM 630 EDCNM610CG	١	1	15	1
Clinical Pharmacology	EDCNM 606 EDCNM610CP	1	1	15	1
Biochemistry and molecular biology	EDCNM 604 EDCNM610BC	٢	2	30	2

Advanced studies in the medical field: **a-Medical statistics.** **b-Research methodology.** **c- Use of computers in medical applications.**					
Total				**75 hours**	**5**

Advanced studies in medical fields consists of one hour lecture for 12 weeks.

In the seminars, the student will present topic related to the course with emphasis on recent advances in this topic, these topics will be included in the final exam for the first part.

Second part: a– Compulsory courses : (4 semesters)

Course Title	Course Code	NO. of hours per week					Credit hours
		Lectures	Seminars	Clinical		Total teaching hours	
Endocrinology, diabetes ,clinical nutrition and metabolism	**EDCNM610**	**240**	**105**			**345**	23 credit hours
Log book Activities							15 credit hours
Dissertation							15 credit hours

(Thesis)							

The course will be divided into 4 modules to be completed in 4 semesters, with an MCQ exam for continuous assessment following each module at the end of each semester. The sum of the exams represent 20% of the the written final exam. The chosen elective course will be studied in the same semester with module 4 of the obligatory course.

b-Elective courses: (2 credit hours , one semester)

The candidate will choose one of the following courses

Course Title	Code	NO. of hours per week		Total teaching hours	Credit hours
		Lectures	**Seminars**		
Neuro- psychiatry	**EDCNM612 EDCNM613 EDCNM610NP**	**2**		**30**	**2**
Evidence-based medicine	**EDCNM610EBM**	**2**		**30**	**2**
Radiology & nuclear medicine	**EDCNM629 EDCNM 617 EDCNM610RN**	**2**		**30**	**2**

In the seminars, the student will present a topic related to the course with emphasis on recent advances in this topic, these topics will be included in the final exam for the second part.

Programme-Courses ILOs Matrix

Course Title/ Code	Knowlege and understanding														
	a1	a2	a3	a4	a5	a6					b1	b2	b3	b4	b5
Applied physiology EDCNM603-EDCNM610AP			x												x
Clinical immunology & genetics /EDCNM634-EDCNM610CG	x														
Clinical Pharmacology /EDCNM 606- EDCNM610CP		x													
Biochemistry and molecular biology / EDCNM 604 -EDCNM610BC		x		x											
Advanced studies in the medical field					x	x								x	
Endocrinology, diabetes, clinical nutrition and metabolism EDCNM610	x		x	x	x	x					x	x		x	x
Neuro-psychiatry		x										x			
Evidence-based medicine												x	x	x	
Radiology & nuclear medicine						x						x			

Course Title/Code	Professional/practical skills							Communication & Transferable skills								
	C1	C2	C3	C4	C5	C6	C7	d1	d2	d3	d4	d5	d6	d7	d8	d9
Applied physiology /EDCNM603-EDCNM610AP																
Clinical Pharmacology /EDCNM 606- EDCNM600CP				x												
Biochemistry and molecular biology / EDCNM 604 -EDCNM610BC		x	x													
Clinical immunology& genetics /EDCNM634-EDCNM610CG																
Advanced studies in the medical field:																
Endocrinology, diabetes, clinical nutrition and metabolism EDCNM610	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x
Neuro- psychiatry																
Evidence-based medicine	x															
Dissertation (Thesis)					x				x			x	x	x		x

(4) Programme admission requirements:

- General requirements:

According to the faculty postgraduate bylaws .

- Specific requirements :

The applicants must have finished at least master degree of internal medicine with the dissertation in the field of endocrinology , diabetes and metabolism.

(5) Regulations for progression and programme completion:

- Students must complete minimum of 60 credit hours in order to obtain the MD. degree, which include the courses of first and second parts, thesis and activities of the log book.

Dissertation (15 credit hours)

The postgraduate student has to prepare a thesis(registered at the beginning of the second semester) on a chosen research topic in endocrinology, diabetes ,clinical nutrition and metabolism.

An open discussion of the results of the study presented by the student must be accomplished (at least 24 months after registration of the thesis). An accepted research article form the dissertation subject must be presented to be eligible for discussion.

Log book (15 credit hours , activities within the department):

1-Training courses to develop skills in modern diagnostics in the field of endocrinology, diabetes ,clinical nutrition and metabolism.
2- Attendance of theses discussion and writing reports about four of them.
3- Attendance of conferences and clinical seminars inside and outside the department.
4- Advanced workshops.

5- Journal clubs.
6- Weekly seminars.
7- Case presentations.

- Lectures and seminars of the previously described courses must be documented in the log book and signed by the lecturer.
- Works related to thesis must be documented in the log book and signed by the supervisors.

Final exam:

First part:

Course	Exam	Marks
Applied physiology	Written exam (1 hour)	100 marks
Biochemistry and molecular biology	Written exam (2 hours)	200marks
Clinical immunology& genetics	Written exam (1 hour)	100 marks
Clinical Pharmacology	Written exam (1 hour)	100 marks

An MCQ exam for continuous assessment at the end of the semester representing 20% of the total written exam marks of each course followed by a structured short essay exam in the first part courses.

Second part:

Total	Marks			Exam	Course
	Practical	clinical	Written		

600	100	200	120 120 60	2 written papers (3 hours each), •Paper 1 short essay questions in diabetes, endocrinology, clinical nutrition and metabolism. •Paper 2 short essay questions in diabetes, endocrinology, clinical nutrition and metabolism. Short case scenarios ========== •Clinical (OSCE + OSLERS) • Practical (diagnostic procedures)	Endocrinology, diabetes ,clinical nutrition and metabolism course.
50	25		25	Written + oral exam	Elective course

To be eligible for the final exam , the candidate must have passed the first part exam, fulfilled the credit hours of the courses and log book activities. To pass the final exam, the candidate should earn 60% of the marks of the exam

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

Evaluator	Tools*	Sample size
Internal evaluator **(s)** **Prof Mamdouh Elnahas** **Prof ELhadidy ElHadidy** **Prof Hanan Elsetouhy** **Prof Mohamed Ghoneim**	**Group discussion**	
External Evaluator **(s)** .	**External evaluator checklist** **Report**	
Senior student **(s)**	**None**	
Alumni	**None**	
Stakeholder **(s)**	**None**	
Others	**None**	

- TOOLS= QUESTIONNAIRE, INTERVIEW, WORKSHOP, COMMUNICATION, E_MAIL

We certify that all information required to deliver this programme is contained in the above specification and will be implemented. All course specification for this programme are in place.	
Programme coordinators: **Prof Nagy Shaaban** **Prof of internal medicine and head of endocrinology and diabetes unit** **Prof Omayma Saleh** **Prof of internal medicine , endocrinology and diabetes unit** .	Signature & date:

Executive director of the quality assurance unit: Name:	Signature & date:

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