PROGRAMME SPECIFICATION

Postgraduate Master degree of Pathology

Faculty of Medicine–Mansoura University

(A) Administrative information

(1) Programme Title & Code	Postgraduate Master degree of Pathology/ PATH 505
(2) Final award/degree	Master degree
(3) Department (s)	Pathology Department
(4) Coordinator	Dr. Reham Mohamed Nagib
(5) External evaluator (s)	Dr. Hala Agena, professor and head of pathology department, Benha University.
(6) Date of approval by the Department`s council	26/7/2016
(7) Date of last approval of programme specification by Faculty council	9/8/2016

(B) Professional information

(1) Programme Aims:

The broad aims of the Programme are as follows:

1- Teaching our candidates the basic knowledge of general pathology.

2- To prepare our candidates to acquire the rational of diseases, their pathogenesis ,morphology as well as immunohistochemical profile within different body systems.

3- To prepare our candidates to acquire practical skills and applications relevant to further pathology practice such as:

- Dissection of surgical tissue specimens and fully describe gross picture.
- Interpreting different gross and microscopic data.
- Provide a differential diagnosis.
- Writing pathology report for a full range of histopathology and cytopathology.
- Spotting the light on the recent molecular and genetic principles, molecular diagnostic techniques, their possible application in surgical pathology.

4- To provide training in the communication and teaching skills necessary for effective practice.

5- To establish the ability to work effectively within a team. .

6- To establish the ability to perform scientific research and community service provided by the pathology department.

A- Knowledge and Understanding

A1: Identify the basics of general pathological features of inflammation, tissue repair, cell injury and cell death

A2: Recognize different forms of circulatory disturbances and their underlying pathogenesis

A3: Recognize types of immune cells, types, pathogenesis and examples of different types of hypersensitivity reactions and autoimmunity

A4: Describe in details immunologic tolerance, mechanisms of autoimmunity and immunologic deficiency Syndrome

A5: Recognize in depth the immunological basis and mechanisms of graft rejection

A6: Identify types, pathogenesis and clinical features of different genetic disorders and enlist methods of diagnosis of genetic disorders

A7: Identify different aspects of infections as toxaemia, bacteraemia, septicaemia and pyaemia and pathological features of bacterial, viral, mycotic and parasitic diseases .

A8: Recognize different environmental diseases as tobacco smoking, alcohol consumption, occupational diseases, exposure to irradiation, nutritional disorders and obesity.

A9: Recognize common diseases of infancy and childhood as congenital anomalies, prematurity, tumors

A10: Differentiate different patterns of cellular adaptation as atrophy, hypertrophy, metaplasia and dysplasia and recognize the growth disturbances as hamartomas and differentiate detween benign and malignant tumors as well as steps of carcinogenesis.

A11: Identify altered structure and function of the body and its major systems that are seen in various diseases wether nonneoplastic or neoplastic as regard definition, etiology, pathogenesis,morphology , prognosis, fate & complications of such diseases.

A12: Classify tumors of different body organs. Gradding and staging according to the recent WHO classification

A13: Identify the basics of cytopathology & immunohistochemistry.

A14: Identify the principles of molecular diagnostic techniques

A15: Understand the legal issues relating to surgical pathology and cytopathology reporting

A16:Identify principles and concepts of quality in laboratory processing including dissection, technical defects in the slides and how to be corrected, and staining techniques,

A17: Identify molecular background for pathogenesis of different diseases and molecular derangments of tumors

A18: Identify principles of research ethics and how to write scientific paper

B- Intellectual skills

B1: Interpret findings of pathological specimens safely and effectively

B2: Analyze various gross and microscopic pathologic data

B3: Enlist the differential diagnosis of various gross and microscopic pathologic features

B4: Discuss problematic cases with senior staffs and supervisors to improve professional performance.

B5: Construct a research design and choose proper research methodology.

B6: Differentiate molecular techniques relevant to diagnosis as FISH, PCR, and flow cytometry

B7: Detecting the basis of different diseases based on immunologic mechanisms

B8: Correlate molecular alterations to disease pattern

B9: Analyze features of transplant rejection in different organs

B10: Demonstrate an understanding of: the principles of evidence-based medicine,

B11: Detect potential hazards and risks related to specimen handling and laboratory processing

B12: Analyse feedback and comments and integrate them into plans for the service

C- Professional/practical skills

C1: Perform independent Dissection of most surgical specimens.

C2: Demonstrate the gross and microscopic pathologic features of different diseases aiming at reaching a diagnosis.

C3: Interpret tissue smears, cell block and tissue biopsy with routine stain and immunohistochemical staining.

C4: Apply pathologic grading and staging of various malignant tumors according to the recent WHO recommendations and the lifelong pathologic updates.

C5: Interpret the results of common molecular diagnostic techniques as FISH and flow cytometry

C6: Construct a proper pathology report that is clear and accurate.

C7: Practice diagnostic pathology services in pathology labs in all Mansoura university medical centers.

C8: Interpretation of microscopic data in different immunologic diseases

C9: Detect technical defects in slides and guide to correct them

C10: Correlate the available clinical and laboratory data for diagnosis

D- Communication & Transferable skills

D1: Present adequately themselves by improving descriptive capabilities and communication skills and respond positively to feedback.

D2: Respect ethical relationship with staff and colleagues together with ethics in research.

D3: Develop the skills of searching the literature

D4: Work in inter-professional teams

D5: Follow the legal issues relating to surgical pathology and cytopathology reporting.

D6: Manage cases at proper time.

D7: Following safe practice

D8: Demonstrate awareness of the extent of one's own limitations
and know when to ask for advice

D9: Demonstrate the ability to consult and admit mistakes

D10: Develop skills for using digital imaging devices effectively and manage image resolution and colour-space

Programme-objectives ILOs Matrix

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Objective	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
Objective 1	x	x	x	x	x	x	x	x	x	x						x			x	x	
Objective 2											x	x	x	x	x		x			x	x
Objective 3																					
Objective 4																					
Objective 5														X							
Objective 6																		x			X

Objective	B 4	B 5	B 6	B 7	B 8	B 9	B 10	B 11	B 12	C 1	C 2	C 3	C 4	C 5	C 6	C 7	C 8	C 9	C 10	D 1	D 2
Objective 1			x	x	x	x		x													
Objective 2																					
Objective 3							x			x	x	x	x	x	x	x	x	x	x		
Objective 4	x								x											x	x
Objective 5																					
Objective 6		x																			

Objective								
	D 3	D 4	D 5	D 6	D 7	D 8	D 9	D 10
Objective 1					x			
Objective 2			x	x				x
Objective 3								
Objective 4						x	x	
Objective 5		x						
Objective 6	x							

(3) Academic standards:

Academic standards for the programme are attached in Appendix I. in which **NARS** issued by the National Authority for Quality Assurance & Accreditation in Education are used. External reference points/Benchmarks are attached in Appendix II.

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

Benchmark / External reference point: The Royal college of pathologists

Website: http://www.rcpath.org/index.
http://www.rcpath.org/resources/pdf/histopathology_curriculum_ar.pdf

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

- The current specification fulfill requirements of the postgraduate training of the selected external reference.

- The current programme is compatible with the selected external reference in about 60% of the curriculum content and differ in the context of postmortem pathology (autopsy) as it is not part of the current program.

- The curriculum structure of the external reference is divided into stages from A to D but the current postgraduate programme is MSc. Which is divided into first and second parts.

(4) Curriculum structure and contents:

4.a- Duration of the programme :

4semesters

4.b- programme structure:

1- The programme consists of two parts:

- The first part composed of :

One compulsory course which is: General Pathology.

One elective course either : A-Immunologic basis of diseases

or

B-Molecular basis of diseases

- The second part composed of :

One compulsory course which is: Special Pathology.

One elective course either : A-Immunologic basis of diseases

or

B-Molecular basis of diseases

2- Candidates should fulfill a total of 45 credit hours.

3- Candidates undergo for the First part

- 2 Final exams after 12 months from admission to Master degree
- Two MCQ exams

4- Candidates undergo for the Second part

- Final exams after 36 months from admission to Master degree
- Two MCQ exams

5- Logbook includes No. of required performed skills and attendance Appendix IV.

●**4.b.1:** Number of credit hours (obligatory):

Theortical

First part: 8 hours : 6 hours for compulsory course

2 hours for elective course

Second part: 15 hours (theoretical): 13 hours for compulsory course

2 hours for elective course

Practical & log book 12 hours

Thesis 10 hours

●**4.b.2:** Teaching hours/week:

First part:

Compulsory course : lectures :6 hours/week , clinical/lab:2 hour/week. Total :8 hours/week with total of 90 hours for lectures, 60 hours for the practicle

Elective course: Lectures: 2hours/week Clinical/lab: 1hours/week Total:3 hours/week with total of 30hours for lectures,30 hours for the practicle

Second part:

Compulsory course :Lectures:13 hours/week Clinical/lab:12 hours/week Total: 195hours for lectures and 360 hours for the practicle.

Elective course: Lectures: 2hours/week with total of 30 hours(lectures)

(5) programme courses:

First part

a- Compulsory courses

Course Title	Course Code	NO. of hours per week					Total teaching hours	Programme ILOs covered (REFERRING TO MATRIX)
		Theoretical		Laboratory /practical	Field	Total		
		Lectures	seminars					
General pathology	- PATH 505 GP	6		2		8	Lectures 90 hours practicle 60 hours	A1-10, A16 B1-2 B6-9 B11 C1,2 D1-4,7

b- Elective courses

Course Title	Course Code	NO. of hours per week					Total teaching hours	Programme ILOs covered (REFERRING TO MATRIX)
		Theoretical		Laboratory /practical	Field	Total		
		Lectures	seminars					
• Immunologic basis of diseses	PATH 505 ID	2		1		3	Lectures 30 Practicle 30	A3,4,B7,C8 D1-4
• Molecular basis Of diseases	PATH 505 MD							A6,10,B6,C5 D1-4

Second part

Compulsory courses:

Course Title	Course Code	NO. of hours per week				Total teaching hours	Programme ILOs covered (REFERRING TO MATRIX)
		Theoretical		Laboratory /practical	Total		
		Lectures	seminars				
Special pathology	PATH 505 SPTa PATH 505 SPTb PATH 505 SPTc PATH 505 SPTd	13		12	25	Lectures 195 Practicle 360	A11-15,A17 B2,3,10 C3,4,6,10 D1 -6,10

a- Elective courses

Course Title	Course Code	NO. of hours per week					Total teaching hours	Programme ILOs covered (REFERRING TO MATRIX)
		Theoretical		Laboratory /practical	Field	Total		
		Lectures	seminars					
• Immunologic basis	PATH 505 IB	2				2	30	A5,B9,D1-4
• Molecular basis	PATH 505 MB							A13,14,17,B8, D1-4

Programme-Courses ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the course titles or codes are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

P.S. All courses` specifications are attached in Appendix III.

Course Title/Code	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
General pathology/ PATH 505 GP	x	x	x	x	x	x	x	x	x	x						x			x	X	
Special pathology/ PATH 505 SP											x	x	x	x	x		x	x		X	x
Immunologic basis of disease PATH 505 ID			x	x																	
Molecular basis of disease PATH 505 MD						x				x				x			x				
Immunologic basis of disease PATH 505 IB					x																
Molecular basis of disease PATH 505 MB													x	x			x				

Course Title/Code	B 4	B 5	B 6	B 7	B 8	B 9	B 10	B 11	B 12	C 1	C 2	C 3	C 4	C 5	C 6	C 7	C 8	C 9	C 10	D 1	D 2
General pathology/ PATH 505 GP	x		x	x	x	x		x	x	x	x					x		x		x	x
Special pathology/ PATH 505 SP	x	x					x		x			x	x		x	x			x	x	x
Immunologic basis of disease PATH 505 ID				x													x			x	x
Molecular basis of disease PATH 505 MD			x											x						x	x
Immunologic basis of disease PATH 505 IB						x														x	x
Molecular basis of disease PATH 505 MB					x															x	x

Course Title/Code	D 3	D 4	D 5	D 6	D 7	D 8	D 9	D 10
General pathology/ PATH 505 GP	x	x			x			
Special pathology/ PATH 505 SP	x	x	x	x				x
Immunologic basis of disease PATH 505 ID	x	x				x	x	
Molecular basis of disease PATH 505 MD	x	x						
Immunologic basis of disease PATH 505 IB	x	x						
Molecular basis of disease PATH 505 MB	x	x						

(6) Programme admission requirements:

- **General requirements:**

  Previous degree: BBCH & According to the faculty postgraduate by laws

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

  No specific requirements

(7) Regulations for progression and programme completion:

- Student must complete minimum of 45 credit hours in order to obtain the Master degree, which include the courses of first and second parts, essay and activities of the log book.
- Courses description are included in Appendix III.
- Registration for the M.Sc. essay is allowed one semester from the day of registration to the programme.

Log book fulfillment:

- Student must fulfill a minimum of 12credit of log book activities.
- Lectures and seminars of the previously described courses must be documented in the log book and signed by the lecturer.
- Number of activities to be done and recorded in the logbook:

1. Three workshops
2. Three conferences
3. Twenty scientific meetings (pathology specimen discussion)
4. Twenty specimen dissection and preparation
5. Ten demonstration session.

Final exam:

الجزء الأول

المقرر	الاختبار	الدرجة				إجمالي
		تحريري	MCQ	شفهي	عملي	
الباثولوجيا العامة	إختبار تحريري مدته ثلاث ساعات + اختبار شفهي + اختبار عملي	١٤٤	٣٦	٦٠	٦٠	٣٠٠
المقرر الاختياري	اختبار تحريري مدته ساعة ونصف + اختبار شفهي + اختبار عملي	٤٨	١٢	٢٠	٢٠	١٠٠
إجمالي الدرجة						٤٠٠

الجزء الثاني

المقرر	الاختبار	الدرجة				إجمالي
		تحريري	MCQ	شفهي	عملي	
الباثولوجيـــــــــا الخاصة	إختباران تحريريان مدة كل منهما ثلاث ساعات + اختبار شفهي + اختبار عملي	١٢٠ + ١٢٠	٣٠ + ٣٠	١٥٠	١٥٠	٦٠٠
المقرر الاختياري	اختبار تحريري مدته ساعة ونصف	٦٠	١٥			٧٥
إجمالي الدرجة						٦٧٥

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

Evaluator	Tools*	Signature
Internal evaluator (s)	Focus group discussion Meetings	
External Evaluator (s) Dr. Hala Agena	Reviewing according to external 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 coordinator: Name: **Dr. Reham Mohamed Nagib**	Signature & date:
Dean: Name: **Prof. Dr. Ehab Saad**	Signature & date:
Executive director of the quality assurance unit: Name: **Prof. Dr. Seham Gad El-Hak**	Signature & date: