



توصيف برنامج ماجستير الباثولوجي
(عام 2013-2014)

*** معلومات أساسية :** Basic information

- 1 - اسم البرنامج : **Master of Pathology.**
- 2 - طبيعة البرنامج : single
- 3- الأقسام المسؤولة عن البرنامج: **الباثولوجى**
- 4- تاريخ إقرار البرنامج فى مجلس القسم: 2 / 9 / 2013
- 5- تاريخ إقرار البرنامج فى مجلس الكلية 306 : 15 / 9 / 2013
- 6- مسؤل البرنامج: أ.د. هالة عادل عجينة (رئيس قسم الباثولوجى سابقا ورئيس وحدة الكشف المبكر عن الأورام)
- 7- المراجعة الداخلية للبرنامج: أ.د. سامية يوسف (أستاذ الباثولوجي طب بنها ورئيس القسم سابقا)
- 8- المراجعة الخارجية للبرنامج: أ.د. زينب عبدالرحمن قطب (أستاذ الباثولوجى كلية طب عين شمس)

*** معلومات متخصصة:** Professional information

1 - الأهداف العامة للبرنامج :

1- Program aims:

The overall aims of the program are to :

- 1.1. Update knowledge in surgical pathology, increase skills, performance and development of an appropriate professional attitudes
- 1.2. Conduct an efficacious research according to the needs of the Egyptian community and be prepared for continuous professional development.
- 1.3. Demonstrate good working relationships with colleagues and appropriate communication skills
- 1.4. Respect confidentiality of patients and interact with an honest manner

2 - المخرجات التعليمية المستهدفة من البرنامج :

2-Intended Learning Outcomes (ILOS):

2.a. Knowledge and Understanding

أ.2 - المعرفة والفهم :

On successful completion of the program, the graduate will be able to:



- 2.a.1. Describe the main disease categories that may affect the human body as well as the basic mechanisms underlying these disorders
- 2.a.2. Determine the fate & complications of each particular disease and its relation to surrounding environment.
- 2.a.3. Discuss of the principles of laboratory processing within surgical pathology, mainly specimen dissection and macroscopic description.
- 2.a.4. Describe of the microscopic features in different body tissues as well as the major common patterns of diseases.
- 2.a.5. Discuss of the steps of preparation and staining techniques, principles of special histochemical and immunohistochemical methods.
- 2.a.6. Recognize of the principles and ethics of medical research study, how to use appropriate statistical methods.
- 2.a.7. Identify the ethical and legal principles of professional practice in the field of surgical pathology
- 2.a.8. Recognize of the fundamentals of quality control in the professional practice in the field of pathology
- 2.a.9 Update knowledge in surgical pathology.

2.b. Intellectual Skills:

٢. ب - القدرات الذهنية :-

On successful completion of the program, the graduate will be able to:

- 2.b.1. Develop habits of lifelong learning by building on previous undergraduate and general medical training experience.
- 2.b.2. Correlate of the pathological finding with clinical, laboratory and X-rays findings to reach the most accurate diagnosis and effective management of the disease.
- 2.b.3. Interpret of data effectively with other members of the pathology department, other departments and clinicians.
- 2.b.4. Analyze all available data to make professional decision in various pathological problems.
- 2.b.5. Categorize and compose an accurate pathology report.
- 2.b.6. Analyze of medical research about specified medical problem (thesis)
- 2.b.7. Assess of risk in professional practices in surgical pathology.
- 2.b.8. Plan for development of performance in the field of pathology
- 2.b.9. Differentiate between problematic cases in absence of complete given clinical data.

2.c. Practical and professional Skills:

٢. ج . مهارات مهنية وعملية :

On successful completion of the program, the graduate will be able to:

- 2.c.1. Write adequate pathological request concerning clinical data and



main features of gross appearance of the specimen.

- 2.c.2. Handle and process properly tissue specimens sent for pathological examination.
- 2.c.3. Examine microscopically of different neoplastic and non-neoplastic tissue lesions as well as the major common patterns of diseases.
- 2.c.4. Write an accurate pathological report that gives clinicians the information they need.
- 2.c.5. Perform histochemical and immunohistochemical staining using paraffin section.
- 2.c.6. Evaluate different staining methods and determine value of different stains and tumor markers in diagnosis of particular disease.
- 2.c.7. Describe the received specimen and select blocks accurately during surgical reporting and correlate with the clinical situation.

٢. د . مهارات عامة و منتقلة:

2.d. General and transferable skills:-

By the end of the program the candidate should be able to:

- 2.d.1. **Communicate** clearly, sensitively and effectively with their colleagues from a variety of health and social care professions.
- 2.d.2. Communicate effectively with the patients and their relatives, transferring them information about illness in clear and suitable manner.
- 2.d.3. Use the sources of information technology to remain current with the advances in knowledge & practice.
- 2.d.4. Use the available sources of biomedical information for continuous retrieval of knowledge.
- 2.d.5. Apply of self-evaluation and specification of his medical educational needs (e.g. through tutorials).
- 2.d.6. Assess of the performance of undergraduate students in practical lessons.
- 2.d.7. Apply recent methods of teaching for undergraduate inside the lab
- 2.d.8. Demonstrate independent and continuous learning.
- 2.d.9. Respect team working and do his role well in different situations.

٣ - المعايير الأكاديمية للبرنامج:

3- Academic Standards:

Academic Standards of Master Program of Pathology, approved in department council date 2 / 6 / 2013, and in faculty council no. (354) date 16 / 6 / 2013. (ملحق ١)



4- Reference standards

4- العلامات المرجعية:

a) المعايير القياسية لبرامج الدراسات العليا (درجة الماجستير) الصادرة عن الهيئة القومية لجودة التعليم والإعتماد (مارس ٢٠٠٩)

Academic reference standards (ARS) , Master Program (March 2009)

, which were issued by the National Authority for Quality Assurance & Accreditation NAQAA (ملحق ٢)

(5): Program structure and contents

5 - هيكل ومكونات البرنامج :

أ - مدة البرنامج : عامين

Program duration

1st part: - One Semester (6 months). 🚩

2nd part: - Two Semester (one year). 🚩

thesis: One Semester 6 months) 🚩

ب - هيكل البرنامج:

Program structure

Total hours of program 36 credit hours

Theoretical12 credit hours

Practical8 credit hours ...

Thesis: 6 credit hours

University & faculty requirements: 6 credit hours

Log book: 4 credit hours

ج - مستويات ومقررات البرنامج:

الزامي compulsory

الساعات المعتمدة	الكود	المقررات	البند
6 ساعات	UNIV 601	الجامعة والكلية	متطلبات
6 ساعات	PATH 601	مواد إجبارية: باثولوجيا عامة	الجزء الأول
14 ساعة	PATH 602	مواد إجبارية: باثولوجيا خاصة وتتضمن دراسة - أمراض وأورام جميع أجهزة الجسم المختلفة -دراسة باثولوجيا الخلية	الجزء الثانى
		دراسة الطرق المختلفة للتشخيص في مجال الباثولوجي	
4 ساعات		١-حضور الندوات والمؤتمرات العلمية ومناقشات الرسائل العلمية بالقسم والدورات التدريبية	كراسة النشطة



		حضور حالات2- التشريح المرضي الباثولوجي والقيام به وفحص العينات الجراحية بالعين المجردة فحص العينات بالميكروسكوب والتدريب علي 3 - دلالات الأورام	
6 ساعات		فصل دراسي واحد	رسالة الماجستير
36 ساعة			الاجمالي

First part (one semester):

a- Compulsory courses:

Course Title	Course Code	NO. of hours per week					Total teaching hours
		Theoretical		Laboratory /practical	Total	Total	
		Lectures	Seminars				
General pathology	PATH 601	3	1	6			10
Log book activities							None
Total:		45	15	90			150 Hours

b- Elective courses: none

c- Elective courses : none

Second part (2 semesters):

a- Compulsory courses:

Course Title	Course Code	NO. of hours per week					Total teaching hours weeks
		Theoretical		Laboratory /practical	Total	Total	
		Lectures	Seminars				
Systemic pathology	PATH 602	3	1.5	7.5			12
Log book activities							4 credit (360 teaching h)
Total:		90	45	225			360
Thesis							4 credit (270 teaching h)

b- Elective courses: none

c- Selective: none



٦- محتويات المقررات (راجع توصيف المقررات ملحق ٦)

- كود أو رقم المقرر :
- اسم المقرر :
- المحتويات: (طبقاً لما هو مذكور في اللائحة)

7-Program admission requirements

٧ - متطلبات الإلتحاق بالبرنامج :

مادة (٤): **يشترط فى قيد الطالب لدرجة الماجستير:

(١)

- أن يكون حاصلًا على درجة البكالوريوس فى الطب والجراحة من احدى جامعات ج.م.ع أو على درجة معادلة لها من معهد علمى معترف به من الجامعة بتقدير جيد على الأقل.
- يسمح للحاصل على الدبلوم وفقا لنظام هذه اللائحة وبتقدير جيد على الأقل بتسجيل رسالة لاستكمال درجة الماجستير بشرط ألا يكون قد مر أكثر من ثلاث سنوات على تاريخ حصوله على درجة الدبلوم وبغض النظر على تقديره فى درجة البكالوريوس.
- يسمح للحاصل على الدبلوم وعلى خلاف لنظام هذه اللائحة أن يسجل لدرجة الماجستير بشرط أن يكون تقديره فى الدبلوم لا يقل عن جيد وبغض النظر عن تقديره فى البكالوريوس.
- (٢) أن يكون قد أمضى السنة التدريبية أو ما يعادلها (سنة الامتياز
- (٣) أن يتفرغ للدراسة لمدة سنة على الأقل فى الجزء الثانى (فصلين دراسيين)
- مادة (٥): يكون التقدم للقيد لدرجة الماجستير مرة واحدة فى السنة خلال شهري يوليو وأغسطس من كل عام، تبدأ الدراسة لدرجة الماجستير فى شهر أكتوبر من كل عام.

٨ - القواعد المنظمة لإستكمال البرنامج :

- مادة (٦): تتولى لجنة الدراسات العليا بالكلية عن طريق لجنة تشكل لكل تخصص من أعضاء مجلس القسم التابع له المادة والقسم المانح للدرجة وضع البرنامج التفصيلى للمقررات فى حدود الساعات المعتمدة الواردة باللائحة وعند الاختلاف يتم الاسترشاد بمقررات جامعة القاهرة ومقررات الشهادات العالمية الاوربية والامريكية يعتمدها مجالس الأقسام ثم يقرها مجلس الكلية وتشمل هذه الساعات محاضرات نظرية ودروس عملية وتدريب اكلينيكي ومحاضرات وندوات مشتركة.
- مادة (٧): يشترط فى الطالب لنيل درجة ماجستير التخصص فى أحد الفروع الاكلينيكية والعلوم الطبية الأساسية:
- أ- حضور المقررات الدراسية والتدريبات الاكلينيكية والعملية والمعملية بصفة مرضية طبقا للساعات المعتمدة.
 - ب- أن يقوم بالعمل كطبيب مقيم أصلى أو زائر لمدة سنة على الأقل فى قسم التخصص بالنسبة للعلوم الاكلينيكية.
 - ت- أن ينجح فى امتحان القسمين الأول والثانى.
 - ث- اجتياز الطلب لثلاث دورات فى الحاسب الألى (دورة فى مقدمة الحاسب – دورة تدريبية متوسطة – دورة فى تطبيقات الحاسب الألى) وذلك قبل مناقشة الرسالة.
 - ج- اجتياز اختبار التوفيل بمستوى لا يقل عن ٤٠٠ وحدة وذلك قبل مناقشة الرسالة.
- أن يقوم باعداد بحث فى موضوع تقره الجامعة بعد موافقة مجلس القسم ومجلس الكلية ينتهى باعداد رسالة تقبلها لجنة التحكيم.



٩ - Students Assessment Methods

٩- طرق وقواعد تقييم الملتحقين بالبرنامج

ما تقيسة من مخرجات التعلم المستهدفة	الطريقة	م
To assess knowledge and understanding & intellectual skills: From 2.a.1.....2.a.10. and b.1.....2.b.8.	Written examination	١
To assess knowledge and understanding, intellectual skills & General & transferable skills .٢ a.1.....2.a.10., .٢ b.1.....2.b.8., 2.d.1.....2.d.8.	Oral examination	٢
To assess knowledge and understanding & intellectual skills & practical and clinical skills and General & transferable skills: .٢ a.1.....2.a.10., 2.b.1.....2.b.٨., .٢ d.1.....2.d.8.2.a.1.....2.a.10., 2.c.1.....2.c.8.	Practical & clinical examination	٣
To assess knowledge and understanding & intellectual skills & practical and clinical skills and General & transferable skills: .٢ a.1.....2.a.10., 2.b.1.....2.b.٨., .٢ d.1.....2.d.8.2.a.1.....2.a.10., 2.c.1.....2.c.8.	Thesis	4

First part

إجمالي	الدرجة				الاختبار	المقرر
	إكلينيكي	عملي	شفهي	تحريري		
٣٠٠		٩٠	٦٠	١٥٠	اختبار تحريري مدته ثلاث ساعات + اختبار شفهي	General pathology
٣٠٠	إجمالي الدرجة					

Second part

إجمالي	الدرجة				الاختبار	المقرر
	عملي	إكلينيكي	شفهي	تحريري		
٧٠٠	210		140	175 + 175	اختباران تحريريان مدة كل منهما ثلاث ساعات + اختبار شفهي + اختبار إكلينيكي	Systemic pathology
٧٠٠	إجمالي الدرجة					

Third part, Thesis: Pass or fail according to the committee decision.



10-Evaluation of Program:

١٠ - طرق تقويم البرنامج:

Evaluator	Tools	sample
مقيّم داخلي Internal evaluator (s)	Report	٢-١ Report
مقيّم خارجي External Evaluator (s)	Report	1-2 Report
طلاب السنة النهائية Senior student (s)	interviews, questionnaires	All
الخريجون Alumni	interviews, questionnaires	عينة لا تقل عن ٥٠% من ط آخر ٣ دفعات
أصحاب العمل Stakeholder (s)	interviews, questionnaires	عينة ممثلة لجميع جهات العمل
طرق أخرى Others	None	

١١ : استراتيجيات التعليم و التعلم علي مستوي البرنامج:

١. استراتيجية التعلم النشط. Active learning
٢. استراتيجية التعليم المبني على المخرجات. Outcome-based learning
٣. استراتيجية التعليم المبني على حل المشكلات. Problem-based learning

المسئول عن البرنامج : أ.د. هالة عادل عجينة
التوقيع هالة عادل عجينة
التاريخ : 2013/ 9

الملحقات

ملحق ١: Academic standard of the program

- ملحق ٢: المعايير القياسية العامة للدراسات العليا الصادرة عن الهيئة.
- ملحق ٣: مصفوفة مضاهاة المعايير الأكاديمية المتبناة للبرنامج مع المعايير القياسية للدراسات العليا الصادرة عن الهيئة لدرجة الماجستير.
- ملحق ٤: مصفوفة مضاهاة المعايير الأكاديمية للبرنامج وأهداف ونواتج تعلم البرنامج
- ملحق ٥: مصفوفة مضاهاة مقررات البرنامج مع المعارف والمهارات للبرنامج الدراسي

توصيف المقررات Program courses

First part
General pathology
Second part
Systemic pathology



Benha University

Faculty of Medicine

Department of Pathology

Course Specification

Course title: Pathology, First part

(Code): PATH 601

Academic Year (2013 – 2014)

A) Basic Information:

- Department offering the course: ...Pathology Department.
- Academic year of (MSc) program: ...2013-2014.
- Major or minor elements of the program: ...Pathology (major).
- Academic level: ...Master degree, 1st part.
- Date of specification approval: Department council date...9-2013...
- Allocated marks: 300 marks
- Course duration: 15 weeks of teaching
- Teaching hours: 4.5 hours/week = 105 total teaching hours

	Hours / week	Total hours
1- Lectures	2	45
2- Small group teaching / tutorials	1	30
3- Practical	1.5	30
4- Others	Non	None
Total	4.5	105

B) Professional Information:

1- Overall Aim of the Course:

- The overall aims of the course are to
- Update knowledge in surgical pathology, increase skills and develop appropriate professional attitudes.
 - Demonstrate good working relationships with colleagues and appropriate communication skills.



2- Intended Learning Outcomes (ILOs):

2.a. Knowledge and understanding:

By the end of the course, students should be able to:

- 2.a.1. Describe the main disease categories that may affect the body (general pathology) as well as the basic mechanisms underlying these disorders (ecology, pathogenesis & natural history).
- 2.a.2. . Discuss different causes, mechanisms, effects and types of cell injury
- 2.a.3. Discuss different causes, mechanisms, effects and types of inflammation including granulomas
- 2.a.4. Describe different processes of repair and different types of stem cells.
- 2.a.5 Explain the basic facts of immunopathology as well as the mechanisms underlying different immunological disorders affecting the body.
- 2.a.6. explain the mechanisms of different circulatory disturbances and their complications.
- 2.a.7. discuss basic facts of molecular carcinogenesis and describe different types of tumors affecting the human body.
- 2.a.8. explain the principles of laboratory processing within surgical pathology particularly the principles of specimen dissection, macroscopic description and block selection in neoplastic and non-neoplastic disease.
- 2.a.9. Identify the ethical and legal principles of professional practice in the field of pathology
- 2.a.10. Recognize of the fundamentals of quality in the professional practice in the field of pathology

2.b. Intellectual Skills:

By the end of the course, students should be able to:

- 2.b.1. Categorize and compose a pathology report.
- 2.b.2. design a research study, the principles of research ethics and the structure and function of local research ethics committees
- 2.b.3. select appropriate statistical methods.

2.c. Practical and Clinical Skills:

By the end of the course, students should be able to:

- 2.c.1. Perform proper handling of and processing tissue specimens sent for pathological examination.
- 2.c.2 Write adequate pathological request concerning clinical data and main features of gross appearance of the specimen.

**2.d. General and transferable Skills:***By the end of the course, students should be able to:*

- 2.d.1. Use the sources of biomedical information to remain current with the advances in knowledge & practice.
- 2.d.2. Express themselves freely and adequately.
- 2.d.3. Maintain a professional image in manner, dress, speech and interpersonal relationships that is consistent with the medical profession's accepted contemporary standards in the community.
- 2.d.4. Develop the habit of lifelong learning by building on previous undergraduate and general medical training experience -so that relevant knowledge of disease processes is acquired and maintained at a level consistent with the requirements of independent practice in this group of medical specialties.
- 2.d.5. Communicate with other members of the pathology department of the departments and clinical teams.

3- Course contents:

Subject	Lectures (hrs)	Tutorial / Small group discussion (hrs)	Practical (hrs)	Total (hrs)	% of Total
General Pathology	45	30	30	105	100
1. PATHOLOGY & ITS RELATED DISCIPLINES	1	1	0	2	
2- TECHNICAL POINTS ON SAMPLE HANDLING, SENDING, PROCESSING & REPORTING & QUALITY CONTROL OF SURGICAL BIOPSY MATERIAL	2	2	0	4	
3- INFLAMMATION & REPAIR	5	2	6	13	
4. CELL INJURY & ACCUMULATIONS DEPOSITIONS	6	2	6	14	
5.GROWTH DISTURBANCES & NEOPLASIA	10	6	8	24	



6. FLUID & HEMODYNAMIC DISTURBANCES & GANGRENE	8	6	3	17	
7. IMMUNE RESPONSE & VIRAL INFECTION	3	2	0	5	
8. SPECIFIC INFECTIONS- GRANULOMA, & MYCOTIC DISEASES	6	4	6	16	
9. GENETIC, NUTRITIONAL DISORDERS & IONIZING RADIATION EFFECTS	4	2	1	7	
12. HOW TO RESEARCH A TOPIC	0	3	0	3	

4- Teaching and learning methods:

METHODS USED:

- 1- **General lectures:** which start by listening the objectives and are given in either: white board, electronic, slide projector or overhead projector presentation
- 2- **Small group discussions and case studies** to provide clinical correlation and integration.
- 3- **Practical sessions;** the primary purpose of which is to provide a visual aid to understand of the mechanisms of disease and to correlate with the clinical manifestations and complications of the disease. Therefore learning concepts rather than only memorizing reports is the main aim of practical lessons.
 - **Histopathology slide lab:** are used to examine, recognize and identify prepared histopathological sections.
 - **Museum of pathology:** is providing jars for inspection and interpretation of gross surgical pathology specimens.

4- Tutorials

TEACHING PLAN:

Lectures: Division of students into one groups

once /week, Time from 10 to 11am.

Tutorials:

**Practical classes****Time plan:**

Item	Time schedule	Teaching hours	Total hours
Lectures	<u>1</u> times/week; one hour each between 10 to 11	45	45
Practical	<u>1.5</u> hours / <u>week</u>	30	30
Tutorial	<u>1</u> hours / <u>week</u>	30	30
Total	3.5	105	105

5- Students Assessment methods:**5-A) ATTENDANCE CRITERIA:** Faculty bylaws**5-B) Assessment Tools:**

Tool	Purpose (ILOs)
Written examination	To assess knowledge, understanding, intellectual skills
Oral examination	To assess knowledge, understanding, intellectual, general skills
Practical examination	To assess knowledge, understanding, intellectual, practical, general skills

5-C) TIME SCHEDULE: Faculty bylaws

Exam	Week
- Written - oral - practical & clinical	On 15 th week
Assignments & other activities	All over the duration of the course

5-D) Weighting System:

Examination	Marks allocated	% of Total Marks
a- Written	a- 150	50%
b- Practical	b- 90	30%
c- Oral	c- 40	20%
4- Assignments & other		
Total	300	100

- The minimum passing & Passing grades (Faculty bylaws).

FORMATIVE ASSESSMENT:

Student knows his marks after the Formative exams.



5-E) Examinaassions description:

Examination	Description
a- Written b- Practical c- Oral	a- MCQs, shorts assay, long essay, case reports, problem solving..... b- Identify, describe, comment gross and microscopic specimens c- One session, many evaluators
6- Assignments & other activities	e.g. Assignments, projects, seminars, workshops,
Total	

6- List of references:

- 1- Departmental books of General and Special histopathology, available in secretary office.
- 2- Handouts updated, administered by staff members
- 3- Museum notebook.
- 4- Slide boxes

- **NB: All books prepared by Pathology department are revised and updated every year**

6.2- Essential books (text books):

- Kumar V ,Abbas AK ,Fausto N:Robbins and Cotran Pathologic Basis of Disease ,7th ed.;2010, Elsevier Saunders. Available at faculty bookshops & main library.

-- El Bolkainy MN, Nouh MA, El Bolkainy TN: General Pathology of Cancer, 4th ed. NCI, Cairo University, 2013.

6.3- Periodicals, Web sites, ... etc:

<http://www.pathmax.com/> <http://www-medlib.med.utah.edu/WebPath/LABS/LABMENU.html#2>

<http://www.med.uiuc.edu/PathAtlasf/titlePage.html>

<http://www.medscape.com/pathologyhome>

<http://www.gw> hyperlink <http://umc.edu/dept/path/2>
umc.edu/dept/path/2F

7- Facilities required for teaching and learning:

Facilities used for teaching this course include:

- Lecture hall
- Small group class
- Histopathology Laboratory, early detection of cancer unit
- Information technology (Data show & multi-head microscopes)



- &smart board)
- Museum specimens
 - Library containing text books and slide boxes
 - Surgical specimens

Course coordinator: Prof. Dr. Hala A. Agina

Head of Department: Prof Dr. Abd Allatif El-Balshy

Date: 9-2013



Benha University

Faculty of Medicine

Department of Pathology.

Course Specification

Course title: Pathology, second part

(Code): PATH 602

Academic Year (2013 – 2014)

A) Basic Information:

- **Department offering the course: Pathology department**
- **Academic year of (MSc) program:2013-2014**
- **Major or minor elements of the program: Pathology (major).**
- **Academic level: ...Master degree (2nd part)**
- **Date of specification approval: Department council date 9/2013.**
- **Allocated marks: 700 marks**
- **Course duration: 30 weeks of teaching**
- **Teaching hours: 12 hours/week = 570 total teaching hours**

	Hours / week	Total hours
1- Lectures	3.5	150
2- Small group teaching / tutorials	2.5	120
3- Practical	2.5	120
4- thesis	3.5	180
Total	12	570

B) Professional Information:

1- Overall Aim of the Course:

The overall aims of the course are to...

- Update knowledge in surgical pathology, increase skills and develop appropriate professional attitudes



- Conduct an efficacious research according to the needs of the Egyptian community and be prepared for continuous professional development.
- Demonstrate a good working relationships with colleagues and appropriate communication skills.

2- Intended Learning Outcomes (ILOs):

2.a. Knowledge and understanding:

By the end of the course, students should be able to:

- 2.a.1.** Describe the main disease categories that may affect different systems of the body (systemic pathology) as well as the basic mechanisms underlying these disorders (ecology, pathogenesis & natural history).
- 2.a.2.** explain the fate & complications of each particular disease.
- 2.a.3.** Explain the principles of laboratory processing within surgical pathology particularly the principles of specimen dissection, macroscopic description and block selection in neoplastic and non-neoplastic disease.
- 2.a.4.** discuss the basic knowledge of preparation and staining techniques for common specimen types as well as be able to identify principles of special histochemical and immunohistochemical methods and principles of common molecular pathology techniques and know when to resort to them.
- 2.a.5.** describe the microscopic features within tissues as well as the major common pathological processes and patterns of disease.
- 2.a.6.** Describe features of malignancy in sites commonly investigated with cytopathology as well as features of specific non-malignant diagnoses, e.g. infection.

2.b. Intellectual Skills:

By the end of the course, students should be able to:

- 2.b.1.** Categorize and compose a pathology report.
- 2.b.2.** Correlate the pathological finding with clinical, laboratory and x-rays findings to reach the most accurate diagnosis and effective management of the disease.
- 2.b.3.** Formulate research hypothesis & questions.
- 2.b.4.** Frame a question, search the literature, collect, analyze, critically appraise and utilize the obtained information to solve a particular clinical problem according to the principles of evidence-based medicine.
- 2.b.5.** Evaluate risk in handling infective specimens & using dissection tools and equipments.



2..b.8.plan a research study, the principles of research ethics and the structure and function of local research ethics committees and understand the principles of research funding and how to obtain it.

2.a.9. select appropriate statistical methods.

2.c. Practical and Clinical Skills:

By the end of the course, students should be able to:

2.c.1. Handle and process properly tissue specimens sent for pathological examination.

2.c.2. Write adequate pathological request concerning clinical data and main features of gross appearance of the specimen.

2.c.3. Write an accurate pathological report that gives clinicians the information they need.

2.c.4. Perform a research project by the end of training

2.c.5. Apply the requirements of the Egyptian Ministry of Health and regulations of the Medical syndicate, concerning laboratory ethics and practice of the profession.

2.d. General and transferable Skills:

By the end of the course, students should be able to:

2.d.1. Use the sources of biomedical information to remain current with the advances in knowledge & practice.

2.d.2. Express themselves freely and adequately.

2.d.3. Maintain a professional image in manner, dress, speech and interpersonal relationships that is consistent with the medical profession's accepted contemporary standards in the community.

2.d.4. Respect the importance of accuracy and requirement for attention to detail during specimen description and block selection and during surgical reporting and the need for correlation with the clinical situation.

2.d.5. Demonstrate the importance of surgical pathology to clinicians and patients [e.g. timeliness and accuracy of reporting].

2.d.6. Develop the habit of lifelong learning by building on previous undergraduate and general medical training experience -so that relevant knowledge of disease processes is acquired and maintained at a level consistent with the requirements of independent practice in this group of medical specialties



2.d.7. Use computers for producing pathology and cytology reports and laboratory statistics to search databases and to access e-mail and internet services.

3- Course contents:

Subject	Lectures (hrs)	Tutorial / Small group discussion (hrs)	Practical (hrs)	Total (hrs)	% of Total
1- CARDIOVASCULAR	16	8	8	32	100
2-RESPIRATORY	10	10	10	30	
3- GASTROINTESTINAL	16	10	10	36	
4-HEPATOBIILIARY & PANCREATIC	15	10	10	35	
5- URINARY TRACT & KIDNEY	15	10	10	35	
6- MALE GENITAL	7	6	6	19	
7- FEMALE GENITAL & BREAST	15	10	10	35	
8- ENDOCRINE	8	8	8	24	
9- BLOOD & LYMPHORETICULAR	10	10	10	30	
10- SKELETAL SYSTEM & - SOFT TISSUE	10	10	10	30	
12- PERIPHERAL & CENTRAL NERVOUS & eye diseases	10	10	10	30	
13- SKIN	10	10	10	30	
14- immunohistochemistry	8	8	8	24	
Total	150	120	120	390	

4- Teaching and learning methods:

METHODS USED:

- 1- **General lectures:** which start by listening the objectives and are given in either: white board, electronic, slide projector or overhead projector presentation.
- 2- **Small group discussions and case studies** to provide clinical correlation and integration.



3- Practical sessions; the primary purpose of which is **to** provide a visual aid to understand of the mechanisms of disease and to correlate with the clinical manifestations and complications of the disease. Therefore learning concepts rather than only memorizing reports is the main aim of practical lessons.

- **Histopathology slide lab:** are used to examine, recognize and identify prepared histopathologic sections.
- **Museum of pathology:** is providing jars for inspection and interpretation of gross surgical pathology specimens.

4- Tutorials

5- **Thesis:** provide self learning through collection of specimens, application of different specified pathological techniques, correlation of the resulting data and giving recommendations

TEACHING PLAN:

Lectures: Division of students into 1 groups
3.5 hour /week, Time from 9 am to 11 am.

Tutorials: 2.5 hours/ week

Practical classes: 2.5 hours/ week

Time plan:

Item	Time schedule	Teaching hours	Total hours
Lectures	<u>3.5 hours</u> / week;	150	150
Practical	<u>2.5 hours</u> / <u>week</u>	120	120
Tutorial	<u>2.5 hours</u> / <u>week</u>	120	120
Total			

5- Students Assessment methods:

5-A) ATTENDANCE CRITERIA: Faculty bylaws

5-B) Assessment Tools:

Tool	Purpose (ILOs)
Written examination	To assess knowledge, understanding, intellectual skills
Oral examination	To assess knowledge, understanding, intellectual, general skills
Practical examination	To assess knowledge, understanding, intellectual, practical, general skills

**5-C) TIME SCHEDULE:** Faculty bylaws

Exam	Week
2- Second part: - written - oral - practical & clinical	30 th week (at the end of the course) 30 th week 30 th week
3- Thesis	All over the course duration
4- Assignments & other activities	

5-D) Weighting System:

Examination	Marks allocated	% of Total Marks
1- Second part: a- Written b- Practical c- Oral	350 210 140	50% 30% 20%
2- Thesis	To be discussed and accepted	
4- Assignments & other		
Total	700	100

- The minimum passing & Passing grades (Faculty bylaws).

FORMATIVE ASSESSMENT:

Student knows his marks after the Formative exams.

5-E) Examinations description:

Examination	Description
a- Written	. MCQs, shorts assay, long essay, case reports, problem solving.....
b- Practical	Slides 2hrs: histopath., cytology and immuno-stained slides with questions Gross 1 hour: gross samples for cutting & description. Autopsy 2 hours: Performing an autopsy & discussion with examiner
c- Oral	c-One session, many evaluators
3- Thesis:	Discussion by internal and external evaluators
6- Assignments & other activities	e.g. Assignments, projects, seminars, workshops,
Total	

6- List of references:6.1- Basic materials:



- El Bolkainy MN, Nouh MA, El Bolkainy TN: General Pathology of Cancer, 4th ed. NCI, Cairo University, 2013.
- Sternberg's Diagnostic surgical Pathology 4th edition, Lippincott Williams and Wilkins,
 - Kumar V ,Abbas AK ,Fausto N:Robbins and Cotran Pathologic Basis of Disease ,7th ed.;2013, Elsevier Saunders. Available at faculty bookshops & main library.
 - Museum notebook (prepared by staff members and available at dept. secretery).
 - Slide boxes

6.3- Periodicals, Web sites, ... etc:

<http://www.pathmax.com/> <http://www-medlib.med.utah.edu/WebPath/LABS/LABMENU.html#2>

<http://www.med.uiuc.edu/PathAtlasf/titlePage.html>

<http://www.medscape.com/pathologyhome>

<http://www.gw> hyperlink <http://umc.edu/dept/path/2>
umc.edu/dept/path/2F

7- Facilities required for teaching and learning:

Facilities used for teaching this course include:

- Lecture hall
- Small group class
- Histopathology Laboratory, immunohistochemistry unit, early detection of cancer unit
- Information technology (Data show & multi-head microscopes & smart board)
- Museum specimens
- Library containing text books and slide boxes
- Surgical specimens

Course coordinator: Pro. Dr. Hala Adel Agina

Head of Department: Prof Dr. Abd Allatif El-Balshy

Date: 9 /2013



ملحق ١: Academic standard of the program

جامعه بنها
كلية طب بنها
قسم الباثولوجي

وثيقة المعايير الأكاديمية المرجعية لبرنامج الماجستير

Academic Reference Standards for Master Degree in pathology

1- Graduate Attributes:-

Master graduate of pathology should able to:-

- 1.1. Identify the basic principles and methodology in surgical pathology (tissue handling, preservation, gross description, processing, microscopic examination, diagnosis, reporting, discussion of the case with clinical specialties).
- 1.٢. Apply both basic and updated analytical methods in the field of surgical pathology.
- 1.٣. Update his knowledge in different practical pathology fields and be aware of current pathological problems and recent concepts in the field of surgical pathology.
- 1.٤. Conduct an efficacious research according to the needs of the Egyptian community in general and Kalybia governorate specially, and be prepared for continuous professional development.
- 1.٥. Apply the principles and methodologies of scientific research and the use of its various tools.
- 1.٦. Apply specialized pathological knowledge and integrate it with related clinical knowledge.
- 1.٧. Determine clinicopathological problems and propose appropriate solutions for perfect diagnosis for seek of patient.
- 1.٨. Demonstrate proficiency in a significant range of specialized pathological skills by using different methods in assessment of the biopsies e.g. special stains, immunohistochemistry.....
- 1.٩. Demonstrate appropriate communication skills, good working relationships with colleagues and leading team works .
- 1.١٠. Respect confidentiality of patients and interact with an honest manner.
- 1.١١. Make informed pathological decisions in various professional contexts.



- 1.١٢. Use available resources (e.g. microscopes, microtomes, tissue processors, special stains, pathology museum.....)wisely to achieve maximum benefit with regular maintenance.
- 1.١٣. Make self-development and keep continuous learning in different practical pathology fields.

2- Academic standards:

2.1 Knowledge and Understanding:

By the end of the Master program, the graduate should be able to recognize and understand the following:

- 2.1.1. Discussion of the pathology of the main disease categories affecting human body and the principles of variable techniques used in order to reach an accurate diagnosis.
- 2.١.2. Determine the fate & complications of each particular disease and its relation to surrounding environment.
- 2.١.3. Recognition of the principles and ethics of medical research study, how to use appropriate statistical methods.
- 2.١.4. Identification the ethical and legal principles of professional practice in the field of pathology
- 2.١.5. Recognition of the fundamentals of quality in the professional practice in the field of pathology
- 2.١.6. Updated knowledge in surgical pathology.

2.٢ Intellectual Skills:

By the end of the Master program the graduate should be able to recognize and mastering the following:

- 2.٢.1. Development of the habit of lifelong learning and improvement of performance in the field of surgical pathology.
- 2.٢.2. Correlation of the pathological finding with clinical, laboratory and x-rays findings to reach the most accurate diagnosis and effective management of the disease.
- 2.٢.3. Interpretation of data effectively with other members of the pathology department, other departments and with clinicians.
- 2.٢.4. Making a professional decision in various pathological problems with categorization and composition of an accurate pathology report.
- 2.٢.5. Analysis of medical research about specified medical problem (thesis)
- 2.٢.6. Assessment of risk in professional practices in surgical



pathology.

2.2.7. Make differential diagnosis for problematic cases in absence of complete given clinical data.

2.3 Practical & Professional Skills:-

By the end of Master program, the graduate should accept & apply the following skills:

2.3.1. Dealing in professional manner with received tissue specimens throughout all steps from handling and processing until reaching diagnosis.

2.3.2. Writing an accurate pathological report that gives clinicians the information they need.

2.3.3. Evaluation of different staining methods and determine value of different stains and tumor markers in diagnosis of particular disease.

2.4 Communication and transferable skills

By the end of the Master program graduate should be able

2.4.1. Communicating clearly, sensitively and effectively with their colleagues and with the patients and their relatives.

2.4.2. Using the sources of information technology to remain current with the advances in knowledge & practice.

2.4.3. Use the available sources of biomedical information for continuous retrieval of knowledge.

2.4.4. Application of self-evaluation and specification of his medical educational needs (e.g. through tutorials).

2.4.5. Assessment of the performance of undergraduate students in practical lessons.

2.4.6. Demonstrate independent and continuous learning.

2.4.7. Respect team working and do his role well in different situations.

اعتماد مجلس القسم ٢٠١٣/٦

اعتماد مجلس الكلية ٣٥٤ ٢٠١٣/٦/١٦



ملحق 2: المعايير القياسية العامة للدراسات العليا الصادرة عن الهيئة

برامج الماجستير

١ - موصفات الخريج

- خريج برنامج الماجستير فى أى تخصص يجب أن يكون قادرا على :
- ١-١ إجادة تطبيق أساسيات ومنهجيات البحث العلمى واستخدام أدواته المختلفة
 - ٢-١ تطبيق المنهج التحليلى واستخدامه فى مجال التخصص
 - ٣-١ تطبيق المعارف المتخصصة ودمجها مع المعارف ذات العلاقة فى ماسته المهنية
 - ٤-١ إظهار وعيا بالمشاكل الجارية والرؤى الحديثة فى مجال التخصص
 - ٥-١ تحديد المشكلات المهنية وإيجاد حلول لها
 - ٦-١ إتقان نطاق مناسب من المهارات المهنية المتخصصة واستخدام الوسائل التكنولوجية المناسبة بما يخدم ممارسته المهنية
 - ٧-١ التوصل بفاعلية والقدرة على قيادة فرق العمل
 - ٨-١ اتخاذ القرار فى سياقات مهنية مختلفة
 - ٩-١ توظيف الموارد المتاحة بما يحقق أعلى استفادة والحفاظ عليها
 - ١٠-١ إظهار الوعى بدوره فى تنمية المجتمع والحفاظ على البيئة فى ضوء المتغيرات العالمية والاقليمية
 - ١١-١ التصرف بما يعكس الالتزام بالنزهة والمصداقية والالتزام بقواعد المهنة
 - ١٢-١ تنمية ذاته أكاديميا ومهنيا وقادرا على التعلم المستمر

2- المعايير القياسية العامة

١-٢ المعرفة والفهم :

- بأنتهاء دراسة برنامج الماجستير يجب ان يكون الخريج على فهم ودراية بكل من :
- ١-٢-١ النظريات والاساسيات المتعلقة بمجال التعلم وكذا فى المجالات ذات العلاقة
 - ٢-١-٢-٢ التأثير المتبادل بين الممارسة المهنية وانعكاسها على البيئة
 - ٣-١-٢ التطورات العلمية فى مجال التخصص
 - ٤-١-٢ المبادئ الاخلاقية والقانونية للممارسة المهنية فى مجال التخصص
 - ٥-١-٢ مبادئ واساسيات الجودة فى الممارسة المهنية فى مجال التخصص
 - ٦-١-٢ اساسيات واخلاقيات البحث العلمى

٢-٢ المهارات الذهنية :

- بانتهاء دراسة برنامج الماجستير يجب ان يكون الخريج قادرا على :
- ١-٢-٢ تحليل وتقييم المعلومات فى مجال التخصص والقياس عليها لحل المشاكل
 - ٢-٢-٢ حل المشاكل المتخصصة مع عدم توافر بعض المعطيات
 - ٣-٢-٢ الربط بين المعارف المختلفة لحل المشاكل المهنية
 - ٤-٢-٢ اجراء دراسة بحثية او كتابة دراسة علمية منهجية حول مشكلة بحثية
 - ٥-٢-٢ تقييم المخاطر فى الممارسات المهنية فى مجال التخصص
 - ٦-٢-٢ التخطيط لتطوير الاداء فى مجال التخصص
 - ٧-٢-٢ اتخاذ القرارات المهنية فى سياقات مهنية متنوعة
 - ٣-٢ المهارات المهنية

بانتهاء دراسة برنامج الماجستير يجب ان يكون الخريج قادرا على :

- ١-٣-٢ اتقان المهارات المهنية الاساسية والحديثة فى مجال التخصص
- ٢-٣-٢ كتابة وتقييم التقارير المهنية
- ٣-٣-٢ تقييم الطرق والادوات القائمة فى مجال التخصص



- ٢-٤ المهارات العامة والمنتقلة :
- بانتهاة دراسة برنامج الماجستير يجب ان يكون الخريج قادرا على :
- ٢-٤-١ التواصل الفعال بأنواعه المختلفة
- ٢-٤-٢ استخدام تكنولوجيا المعلومات بما يخدم الممارسة المهنية
- ٢-٤-٣ التقييم الذاتى وتحديد احتياجاته التعليمية
- ٢-٤-٤ استخدام المصادر المختلفة لحصول على المعلومات والمعارف
- ٢-٤-٥ وضع قواعد ومؤشرات تقييم اداء الاخرين
- ٢-٤-٦ العمل فى فريق سياقات كهنية مختلفة
- ٢-٤-٧ ادارة الوقت بكفاءة
- ٢-٤-٨ التعلم الذاتى والمستمر

ملحق ٣ مضاهاة المعايير الأكاديمية المتبناة للبرنامج مع المعايير القياسية للدراسات العليا الصادرة عن الهيئة لدرجة الماجستير.

ماجستير مواصفات الخريج بالمعايير الاكاديمية لبرنامج الباثولوجي	مواصفات الخريج بالمعايير القياسية العامة لبرامج الدراسات العليا درجة الماجستير
1.4. Conduct an efficacious research according to the needs of the Egyptian community in general and Kalybia governorate specially, and be prepared for continuous professional development.	١-١ demonstrate excellence in the application of the principle and methodologies of scientific research and the use of its various tools
1.2. Apply both basic and updated analytical methods in the field of surgical pathology.	٢-١ apply analytical methodology in the field of (speciality)
1.1. Identify the basic principles and methodology in surgical pathology (tissue handling, preservation, gross description, processing, microscopic examination, diagnosis, reporting, discussion of the case with clinical specialties). 1.6. Apply specialized pathological knowledge and integrate it with related clinical knowledge.	٣-١ apply specialized knowledge and integrate it with related knowledge in his/her professional practice
1.3. Update his knowledge in different practical pathology fields and be aware of current pathological problems and recent concepts in the field of surgical pathology.	٤-١ show awareness of current problems and new concepts in the field of (speciality)
1.7. Determine clinicopathological problems and propose appropriate solutions for perfect diagnosis for seek of patient.	٥-١ determine professional problems and propose appropriate solutions
1.1. Identify the basic principles and methodology in surgical pathology (tissue handling, preservation, gross description,	٦-١ demonstrate proficiency in a significant range of specialized professional skills, and use appropriate



processing, microscopic examination, diagnosis, reporting, discussion of the case with clinical specialties). 1.8. Demonstrate proficiency in a significant range of specialized pathological skills by using different methods in assessment of the biopsies e.g. special stains, immunohistochemistry.....	technological methods that serve his/her professional practice
1.9. Demonstrate appropriate communication skills, good working relationships with colleagues and leading team works .	٧-١ communicate effectively and lead work teams
1.11. Make informed pathological decisions in various professional contexts.	make informed decisions in various ٨-١ professional contexts
1.12. Use available resources (e.g. microscopes, microtomes, tissue processors, special stains, pathology museum.....)wisely to achieve maximum benefit with regular maintenance.	٩-١ employ available resources wisely to achieve maximum benefit and their preservation
1.4. Conduct an efficacious research according to the needs of the Egyptian community in general and Kalybia governorate specially, and be prepared for continuous professional development.	Show awareness of his/her role in ١٠-١ community development and environmental preservation in light of regional and global changes
1.9. Respect confidentiality of patients and interact with an honest manner.	١١-١ conduct himself/herself in a manner that reflects integrity and sincerity, and follows the ethical codes of practice
1.13. Make self-development and keep continuous learning in different practical pathology fields.	١٢-١ exercise autonomy in academic and professional self development as well as continous learning
المعرفة و الفهم	
2.1 Knowledge and Understanding:	
2.1.1. Discussion of the pathology of the main disease categories affecting human body and the principles of variable techniques used in order to reach an accurate diagnosis.	the concepts and ١-١- fundamentals in the field of (speciality) and in related disciplines
2.1.2. Determine the fate & complications of each particular disease and its relation to surrounding environment.	-٢-١-the mutual influence between professional practice and its impact on environment
2.1.6. Update knowledge in surgical	the scientific development in ٣-١-



pathology.	the area of (specialty)
2.1.4. Identification the ethical and legal principles of professional practice in the field of pathology	the ethical and legal ٤-١- principles of professional practice in the field of (specialty)
2.1.5. Recognition of the fundamentals of quality in the professional practice in the field of pathology	the principles and ٥- fundamentals of quality in professional practice in the field of (specialty)
2.1.3. Recognition of the principles and ethics of medical research study, how to use appropriate statistical methods.	٦-١-the fundamentals and ethics of scientific research
المهارات الذهنية 2.2 Intellectual Skills:	
2.2.3. Interpretation of data effectively with other members of the pathology department, other departments' clinicians.	analyse and evaluate ١-٢- information in the field of (specialty), and apply this information in problem solving
2.2.7. Make differential diagnosis for problematic cases in absence of complete given clinical data.	٢-٢-solve specialized problems in the absence of complete data
2.2.2. Correlation of the pathological finding with clinical, laboratory and x-rays findings to reach the most accurate diagnosis and effective management of the disease.	-٢-link between different knowledge to solve professional problems
2.2.5. Analysis of medical research about specified medical problem (thesis)	conduct a research study ٤-٢- and /or write a scientific study/thesis about specific research problem
2.2.6. Assessment of risk in professional practices in surgical pathology.	2-5- assess risks in professional practices in the field of (specialty)
2.2.1. Development of the habit of lifelong learning and improvement of performance in the field of surgical pathology.	٦-٢-plan for the development of performance in the field of (specialty)
2.2.4. Make a decision in various pathological problems with categorization and composition of an	٧-٢-make professional decisions in a variety of professional context



accurate pathology report.	
ج - مهارات مهنية وعملية : 2.3. Practical Skills:-	
2.3.1. Dealing in professional manner with received tissue specimens throughout all steps from handling and processing until reaching diagnosis.	show proficiency in basic ١-٣- and up to date professional skills in the field of (speciality)
2.3.2. Writing an accurate pathological report that gives clinicians the information they need.	write and evaluate ٢-٣- professional reports
2.3.3. Evaluate different staining methods and determine value of different stains and tumor markers in diagnosis of particular disease.	evaluate established ٣-٣- methods and tools in the field of (speciality)
د. مهارات عامة : 2.4. General and transferable skills:	
2.4.1. Communicating clearly, sensitively and effectively with their colleagues and with the patients and their relatives.	communicate effectively ١-٤- using a variety of communication methods
2.4.2. Using the sources of information technology to remain current with the advances in knowledge & practice.	use information technology ٢-٤- in a manner that serve professional practice
2.4.4. Application of self-evaluation and specification of his medical educational needs (e.g. through tutorials).	٣-٤-exercise autonomy in self-evaluation and the identification of personal learning needs
2.4.3. Use the available sources of biomedical information for continuous retrieval of knowledge.	٤-٤ use various resources for the retrieval of information and knowledge
2.4.5. Assessment of the performance of undergraduate students in practical lessons.	develop standards and ٥-٤- indicators for assessing the performance of others
2.4.7. Respect team working and do his role well in different situations.	work effectively in a team ٦-٤-٢ as leader or member in various professional situations
2.4.6. Demonstrate independent and continuous learning.	demonstrate independent 7-٤-٢ and continuous learning



ملحق ٤: مصفوفة مضاهاة المعايير الأكاديمية لبرنامج ماجستير الباثولوجي مع أهداف ونواتج تعلم البرنامج

أهداف البرنامج	المعايير الأكاديمية لبرنامج ماجستير الباثولوجي (مواصفات الخريج)
1.١.	<p>1.١. Identify the basic principles and methodology in surgical pathology (tissue handling, preservation, gross description, processing, microscopic examination, diagnosis, reporting, discussion of the case with clinical specialties).</p> <p>1.٢. Apply both basic and updated analytical methods in the field of surgical pathology.</p> <p>1.٣. Update his knowledge in different practical pathology fields and be aware of current pathological problems and recent concepts in the field of surgical pathology.</p> <p>1.٦. Apply specialized pathological knowledge and integrate it with related clinical data.</p> <p>1.٧. Determine clinicopathological problems and propose appropriate solutions for perfect diagnosis for seek of patient</p> <p>1.٨. Demonstrate proficiency in a significant range of specialized pathological skills by using different methods in assessment of the biopsies e.g. special stains, immunohistochemistry.....</p> <p>1.١١. Make informed pathological decisions in various professional contexts.</p> <p>1.١٢. Use available resources (e.g. microscopes, microtomes, tissue processors, special stains, pathology museum.....) wisely to achieve maximum benefit with regular maintenance.</p> <p>1.١٣. Make self-development and keep continuous learning in different practical pathology fields.</p>
1.٢.	<p>1.٤. Conduct an efficacious research according to the needs of the Egyptian community in general and Kalybia governorate specially, and be prepared for continuous professional development.</p> <p>1.٥. Apply principles and methodologies of scientific research and the use of its various tools.</p>
1.٣.	1.٩. Demonstrate appropriate communication skills, good working relationships with colleagues and leading team works .
1.٤.	1.١٠. Respect confidentiality of patients and interact with an honest manner.

نواتج تعلم البرنامج									المعايير الأكاديمية للبرنامج
المعرفة والفهم									
2.a.9	2.a.8	2.a.7	2.a.6	2.a.5	2.a.4	2.a.3	2.a.2	2.a.1	
				√	√	√		√	2.١.1. Discussion of the pathology of the main disease categories



									affecting human body and the principles of variable techniques used in order to reach an accurate diagnosis.
							√		2.1.2. Determine the fate & complications of each particular disease and its relation to surrounding environment.
			√						2.1.3. Recognition of the principles and ethics of medical research study, how to use appropriate statistical methods.
		√							2.1.4. Identification the ethical and legal principles of professional practice in the field of pathology
	√								2.1.5. Recognition of the fundamentals of quality in the professional practice in the field of pathology
√									2.1.6. Updated knowledge in surgical pathology.



نواتج تعلم البرنامج									المعايير الأكاديمية للبرنامج
Intellectual skills									
2.a.9	2.a.8	2.a.7	2.a.6	2.a.5	2.a.4	2.a.3	2.a.2	2.a.1	
	√							√	2.٢.1. Development of the habit of lifelong learning and improvement of performance in the field of surgical pathology.
							√		2.٢.2. Correlation of the pathological finding with clinical, laboratory and x-rays findings to reach the most accurate diagnosis and effective management of the disease.
						√			2.٢.3. Interpretation of data effectively with other members of the pathology department, other departments and with clinicians.
				√	√				2.٢.4. Make a professional decision in various pathological problems with categorization and composition of an accurate pathology report.
			√						2.٢.5. Analysis of medical research about specified medical problem (thesis)



		√								2.2.6. Assessment of risk in professional practices in surgical pathology.
√										2.2.7. Make differential diagnosis for problematic cases in absence of complete given clinical data.

نواتج تعلم البرنامج									المعايير الأكاديمية للبرنامج
Practical & Clinical Skills									
2.a.9	2.a.8	2.a.7	2.a.6	2.a.5	2.a.4	2.a.3	2.a.2	2.a.1	
		√		√		√	√	√	2.3.1. Dealing in professional manner with received tissue specimens throughout all steps from handling and processing until reaching diagnosis.
					√				2.3.2. Writing an accurate pathological report that gives clinicians the information they need.
			√						2.3.3. Evaluate different staining methods and determine value of different stains and tumor markers in diagnosis of particular disease.



نواتج تعلم البرنامج									المعايير الأكاديمية للبرنامج
General and transferable skills									
2.a.9	2.a.8	2.a.7	2.a.6	2.a.5	2.a.4	2.a.3	2.a.2	2.a.1	
							√	√	2.4.1. Communicating clearly, sensitively and effectively with their colleagues and with the patients and their relatives.
						√			2.4.2. Using the sources of information technology to remain current with the advances in knowledge & practice.
					√				2.4.3. Use the available sources of biomedical information for continuous retrieval of knowledge
				√					2.4.4. Application of self-evaluation and specification of his medical educational needs (e.g. through tutorials).
		√	√						2.4.5. Assessment of the performance of undergraduate students in practical lessons.
	√								2.4.6. Demonstrate independent and continuous learning.
√									2.4.7. Respect team working and do his role well in different situations.