COURSE SPECIFICATION

(General pathology)

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate PhD degree of Pathology.
(2) Department offering the programme:	Pathology department
(3) Department responsible for teaching the course:	Pathology department
(4) Part of the programme:	Second part
(5) Date of approval by the Department`s council	26/7/2016
(6) Date of last approval of programme specification by Faculty council	9/8/2016
(7) Course title:	General pathology
(8) Course code:	PATH 605 GP
(9) Total hours:	10 credit hours lectures 7 credits practical
(10) Total teaching hours:	150 hours lectures 210 hours practical

(B) Professional information

(1) Course Aims: The broad aims of the course are as follows:

1-Advanced and detailed teaching for the general basic pathological processes, pathogenesis, and morphology.

2-To prepare our candidates to acquire competencies, practical skills and applications relevant to further pathology practice including good knowledge of principles of laboratory processing,and staining techniques,

(2) Intended Learning Outcomes (ILOs):

Intended learning outcomes (ILOs); Are four main categories: knowledge & understanding to be gained, intellectual qualities, professional/practical and transferable skills.

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

A- Knowledge and Understanding

A1: Recognize pathology of acute and chronic inflammation,

A2: Identify chemical mediators of inflammation,systemic effects of inflammation as well as consequences of excessive or defective inflammation

A3:Define cellular response to stress and adaptation

A4:Describe causes ,mechanisms and morphology of cell injury

A5:List examples of cell injury

A6:Discuss intracellular accumulations, pathological calcification, cellular aging,and subcellular response to injury

A7:Explain control of normal cell proliferation

A8: Recognize Mechanisms for regeneration, Repair by fibrosis, Extracellular matrix and cell matrix interaction,and Cutaneous wound healing

A9: Define Hyperemia ,congestion,and edema

A10: Explain Hemostasis,thrombosis,and embolism

A11:Describe Infarction ,gangrene, Hemorrhage ,shock, and DIC

A12:Identify General features of the immune system

A13: Recognize Hypersensitivity reactions, Autoimmune diseases , and Immunologic deficiency syndromes

A14: Understand Biology of the tumor growth and Molecular basis of cancer

A15: List Carcinogenic agents

A16: Discuss Tumor immunity, Clinical features of tumor, and Epidemiology of cancer

A17: Define Mutations and Cytogenetic disorders

A18: Recognize Mendalian disorders, Multifactorial inheritance, Single gene disorder with nonclassic inheritance

A19: Discuss Diagnosis of genetic diseases

A20: Recognize diseases related to Occupational exposures

A21: Identify diseases due to Nutritional deficiency

A22: Understand pathology of Obesity

A23: Explain relation between diet and systemic diseases

B- Intellectual skills

B1:Interpret the gross abnormalities in various tissue specimens

B2: Analyze various gross and microscopic data resulting from the general pathological process.

C- Professional/practical skills

C1: Perform independent Dissection of most surgical specimens mainly complex ones.

C2:..Describe the gross pathological features of different surgical specimens

C3:..Apply basic safety precautions to be taken in the anatomic pathology laboratory, including universal precautions against infectious agents and the role of the pathologist in institutional infection control

C4:..Show proficiency in tissue selection

C5: interpretation of routine, as well as intraoperative frozen sections, special histochemical, and immunohistochemical procedures.

C6: Interpretation of cytology specimens

C7: Detect technical defects in slide preparation and how to correct them

D- Communication & Transferable skills

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

D2: Respect ethical relationship with staff and colleagues

D3: Present attitudes that will maximize their educational experiences via continuous search in data base

D4: Work in inter-professional teams.

D6: Adopt the legal issues relating to surgical pathology and cytopathology reporting

D7: Developing safe practice

(3) Course schedule

2 modules

Module 1 :5 credit hours lectures = 75 hours

Subjects	Lectures
1. Cell Injury, Cell Death, and Adaptations	22.5
2. Acute and Chronic Inflammation	15
3. Tissue Repair: Regeneration, Healing, and Fibrosis	7.5
4. Hemodynamic Disorders, Thrombosis, and Shock	7.5
5. Diseases of the Immune System	22.5
Total	75 hours

Module 1 :4 credit hours practical = 120 hours

Subjects	Teaching hours
Dissection of different specimens ,tissue Selection ,and safety precautions	60
Gross description of specimens	60
Total	120 hours

Module 2: 5 credit hours lectures= 75 hours

Subjects	Lectures
1. Neoplasia	**30**
2. Genetic and Pediatric Diseases	**15**
3. Environmental and Nutritional Diseases	**15**
4. General Pathology of Infectious Diseases	**15**
Total	**75 hours**

Module 2: 3 credit hours practical = 90 hours

Subjects	Teaching hours
Interpretation of routine stained sections	30
Interpretation of cytology, frozen and histochemical stained sections	30
Detection of technical decfects	30
Total	90 hours

(4) COURSE CONTENT SPECIFICATIONS

1-Cell Injury, Cell Death, and Adaptations

- cellular response to stress and adaptation
- Causes and mechanism of cell injury
- Morphology of cell injury
- Examples of cell injury
- Intracellular accumulation and pathological calcification
- Cellular aging
- Subcellular response to injury

2- Acute and Chronic Inflammation

- Pathology of acute inflammation
- Pathology of chronic inflammation
- Chemical mediators of inflammation
- Systemic effects of inflammation
- Consequences of excessive or defective inflammation

3-Tissue repair

- Control of normal cell proliferation
- Mechanisms for regeneration
- Extracellular matrix and cell matrix interaction
- Repair by fibrosis
- Cutaneous wound healing

4-Hemodynamic Disorders, Thrombosis, and Shock

- Hyperemia ,congestion,and edema
- Hemostasis,thrombosis,and embolism
- Infarction and gangrene
- Hemorrhage and shock
- DIC

5-Diseases of the Immune System

- General features of the immune system
- Hypersensitivity reactions
- Autoimmune diseases
- Immunologic deficiency syndromes

6-Neoplasia

- Biology of the tumor growth
- Molecular basis of cancer
- Carcinogenic agents
- Tumor immunity
- Clinical features of tumor
- Epidemiology of cancer

7-Genetic and Pediatric Diseases

- Mutations
- Mendalian disorders
- Multifactorial inheritance
- Cytogenetic disorders
- Single gene disorder with nonclassic inheritance
- Diagnosis of genetic diseases

8-Environmental and Nutritional Diseases

- Occupational exposures
- Nutritional deficiency
- Obesity
- Diet and systemic disease
- Chemoprevention of cancer

9-General Pathology of Infectious Diseases

- General principles of microbial pathogenesis
- Bacterial infections
- Viral infections
- Fungal infections
- Parasitic infestations

(5)Teaching methods:

1: Lectures & Seminars

2: Conferences

3: Training on examination of pathology slides

4: Training in pathology lab. In Mansoura university medical centers.

(6)Assessment methods:

- **Written exam:** 80 marks
- **OSPE exam:** 50 marks
- **Structured oral exam: 50** marks
- **MCQ EXAM:** 20 marks

Other assessment without marks:

1-Attendance Criteria: Minimum acceptance attendance in each course is 75%

2- Log book should be fulfilled and signed by Head of the department

(7)References of the course:

6.1: Hand books: Course notes: Book authorized by department

6.2: Text books: Rubbin's text book of pathology, Ackerman's surgical pathology, Sternberg's surgical pathology & Soft tissue tumors

6.3: Websites:

– http://www.pathmax.com

- United States and Canadian Academy of Pathology (USCAP): http://www.uscap.org/

- The Royal Collage of pathologists: http://www.rcpath.org/

(8)Facilities and resources mandatory for course completion:

□ Lecture halls and data show

□ Pathology labs. in various Mansoura university medical centers□

□ Pathology Archives of slides and tissue for problematic cases

□ Extensive library and other learning resources

□ Computer laboratories with a wide range of software

□ Internet with a wide range of learning support material

Course coordinator: **Dr. Reham Nagib**

Head of the department: **Prof. Dr. Khaled Zalata**