



Anatomy Course Specification for Master Degree in Pulmonology

Program on which the course is given : Master Degree in Pulmonology

Department offering the program: The Chest Department.

Major or minor element of program : First Part (Basic Sciences)

Department offering the course: Anatomy department.

Academic year 2016-2017

Credit points: one point.

Course code: CHEST 801

Course coordinators: Chest Department:

Anatomy Department:

I. Aim of the course:

To enable the student to describe and locate detail anatomy of the chest and to apply the chest anatomy in clinical practice.

II. Intended learning outcomes:

1. Knowledge and understanding:

By the end of the course the candidate should;

- a) Describe anatomy of chest wall.
- b) Define anatomy of the pleura.
- c) Describe and draw detailed anatomy of the lung and tracheobronchial tree.
- d) Describe anatomy of the mediastinum.

2. Intellectual skills:

By the end of the course the candidate should be able to;

- a) Integrate between chest anatomy and clinical manifestations.
- b) Diagram tracheobronchial tree and pulmonary lobes and segments.
- c) Distinguish the relation between different mediastinal structures.

3. Professional and practical skills: By the end of the course the candidates should be able to;

- a) Implement chest anatomy in clinical practice.

- b) Illustrate tracheobronchial anatomy during bronchoscopy.
- c) Interpret the clinical manifestation according to the anatomical site of the lesion.

III. Course contents:

- 1. Chest wall:-
 - a. Skeleton of the chest (Sternum, ribs and thoracic vertebrae).
 - b. Muscles, nerves, arterial system, venous drainage and lymphatic drainage).
 - c. Movement of respiration.
 - d. Diaphragm.
 - e. Thoracic inlet (boundries and content).
- 2. Pleura:-
 - a. Parietal and visceral pleurae.
 - b. Pleural nerve supply, arterial supply, venous drainage and lymphatic drainage.
 - c. Pleural surface anatomy.
- 3. Lung:-
 - a. Tracheobronchial tree anatomy.
 - b. Lung lobes and segments.
 - c. Pulmonary nerve supply, arterial supply, venous drainage and lymphatic drainage.
 - d. Surface anatomy of the lung.
- 4. Mediastinum:-
 - a. Vessels of the thorax.
 - b. Nerves of the thorax.
 - c. Mediastinal lymph node, thoracic duct and lymphatic drainage.
 - d. Oesophagus.
 - e. Pericardium and heart.
- 5. Clinical applications (radiographs, paracentesis, thoracotomy,ect).
- 6. Development of respiratory system and diaphragm.

IV. Teaching methods:

- Group learning lectures: 10 lectures (1 / week for 10 weeks) will be given through the academic year.
- Practical sessions in anatomy lab.: 5 sessions (1 / week for 5 weeks). will be given through the academic year.



Internal Medicine Course Specification for Master Degree in Pulmonology

Program on which the course is given : Master Degree in Pulmonology

Department offering the program: The Chest Department.

Major or minor element of program : First Part (Basic Sciences)

Department offering the course: Internal Medicine department.

Academic year 2016-2017

Credit points: Three point.

Course code: CHEST 811

Course coordinators: Chest Department:

Internal Medicine department:

I. Aim of the course:

To enable the student to define and associate internal medicine diseases with respiratory disorders in clinical practice.

II. Intended learning outcomes:

1. Knowledge and understanding:

By the end of the course the candidate should;

- a) Describe different internal medicine diseases according to the correcurum.
- b) Recognize different internal medicine diseases.
- c) Relate Some respiratory lesions to internal medicine diseases.
- d) Read and recognize abnormalities in differrent investigations in internal medicine diseases.

2. Intellectual skills:

By the end of the course the candidate should be able to;

- a) Demonstrate different internal medicine diseases according to the correcurum.
- b) Differentiate between respiratory lesion due to local respiratory disease and respiratory lesion as a part of general disease.
- c) Prescribe initial treatment to different internal medicine diseases.

3. Professional and practical skills: By the end of the course the candidates should be able to;

- a) Diagnose different internal medicine diseases according to the correcurum.
- b) Integrate general examination with local examination of the chest.
- c) Interpret clinical manifestation with laboratory and radiological investigations.

III. Course contents:

Cardiology
Clinical presentation of a cardiac case
Hypertension
Ischemic heart disease
Heart failure
Infective endocarditis
Rheumatic fever
Cardiac arrhythmias
Pulmonary embolism

Hepatology & Gastroenterology
Acute G.I.T hemorrhage
Peptic ulcer & GERD
Inflammatory bowel diseases
Colonic polyposis and diverticulosis
Non surgical acute abdomen
Acute hepatitis
Liver cirrhosis
Liver cell failure
Ascites
Jaundice
Drugs and the liver

Hematology
Anemia (classification and management of the common types)
Coagulation disorders (causes , diagnosis and general management)
Bleeding disorders (causes , diagnosis and general management)
Clinical presentation and diagnosis of the common hematological malignancies (lymphomas and leukemias)
Indications and complications of blood and blood products transfusion

Infectious diseases

CNS infections
An approach to antimicrobial therapy
Tuberculosis
Viral infections , (varicella zoster , EBV , cytomegalovirus)

IV. Teaching methods:

- Group learning lectures: 30 lectures (3 / week for 10 weeks) will be given through the academic year.
- Practical sessions in patients' ward: 30 sessions (3 / week for 10 weeks). will be given through the academic year.

V. Teaching and learning facilities:

Lecture halls.

Audio-visual aids (data-show, slide projection).

in patients' ward.

List of references

- Course notes supplied by the teaching staff.
- Essential books (text books)

Harrison's Principles of Internal
 Medicine,.....

VI. Assessment:

Attendance criteria:

The prerequisite for entry the final examination is 75% attendance of the lectures.

Assessment tools:

Final examination:

- One written examination to assess knowledge and understanding including MCQs (one hour).

- One oral examination to assess knowledge and understanding (minimum two examiners one of them from chest department).
- One clinical examination to assess practical knowledge and skills (minimum two examiners one of them from chest department).

Assessment schedule:

The final assessment will be held at the end of the academic year during the first part master degree final exam.

Weighing of assessment:

- Final-term written examination 40 %
- Oral examination 30 %
- Clinical examination 30 %

Course directors:

Chest Department

Internal Medicine Department



Microbiology Course Specification for Master Degree in Pulmonology

Program on which the course is given : Master Degree in Pulmonology

Department offering the program: The Chest Department.

Major or minor element of program : First Part (Basic Sciences)

Department offering the course: Microbiology department.

Academic year 2016-2017

Credit points: one point.

Course code: CHEST 806

Course coordinators: Chest Department:

Microbiology Department:

I. Aim of the course:

To enable the student to describe the detailed features of respiratory pathogenic micro-organisms .

II. Intended learning outcomes:

1. Knowledge and understanding:

By the end of the course the candidate should;

- a) Describe the detailed features of respiratory pathogenic micro-organisms.
- b) Define the different chemotherapies and chemoprophylaxis.
- c) Describe the immunological responses and autoimmune diseases.

2. Intellectual skills:

By the end of the course the candidate should be able to;

- a) Distinguish between different respiratory pathogenic micro-organisms.
- b) Integrate between microbiology and clinical manifestations.

3. Professional and practical skills: By the end of the course the candidates should be able to;

- a) Implement microbiology in clinical practice.
- b) Implement immunology in clinical practice.

III. Course contents:

General introduction , bacterial morphology & physiology
Chemotherapy & chemoprophylaxis
Bacterial pathogenesis
Immunity : overview , innate immunity , antigens
Immune response : humoral immunity
Immune response : cell mediated immunity
Protective immunity to microbial diseases
Tumour immunology
Hypersensitivity
Immunological tolerance , autoimmunity & autoimmune diseases
Transplantation immunology
Immunodeficiency disorders
Sterilization and disinfection
Mycology & actinomyces
Gram +ve & -ve cocci (1)
Gram +ve & -ve cocci (2)
General virology
Tuberculosis
Retroviruses
Hepatitis viruses
Herpes viruses & adeno viruses
Nosocomial infections
Diphtheria
Haemophilus , bordetella
Anaerobic infections
Tetanus , Gas gangrene , Botulism
Enterobacteriaca:enteric fever , shigellosis
Brucella
Vibrio cholera , helicobacter , campylobacter
Leprosy
Spirochaetes:treponema pallidum (syphilis)
Rickettsia
Chlamydia , legionella
Picornia , arbo viruses , rhabdo viruses
Oncogenic viruses
Orthomyxo , paramyxo viruses
Applied according to speciality : mycoplasma& ureaplasma & bacillus & brucella & coronaviruses & rotavirus & robo virus & human parvovirus & human papilloma virus

IV. Teaching methods:

- Group learning lectures: 10 lectures (1 / week for 10 weeks) will be given through the academic year.
- Practical sessions in anatomy lab.: 5 sessions (1 / week for 5 weeks). will be given through the academic year.

V. Teaching and learning facilities:

Lecture halls.

Audio-visual aids (data-show, slide projection).

Microbiology lab.

List of references

- Course notes supplied by the teaching staff.
- Essential books (text books)

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VI. Assessment:

Attendance criteria:

The prerequisite for entry the final examination is 75% attendance of the lectures.

Assessment tools:

Final examination:

- One written examination to assess knowledge and understanding including MCQs (one hour).
- One oral examination to assess knowledge and understanding (minimum two examiners one of them from chest department).

Assessment schedule:

The final assessment will be held at the end of the academic year during the first part master degree final exam.

Weighing of assessment:

- Final-term written examination 60 %
- Oral examination 40 %

Course directors:

Chest Department

Microbiology Department



Pathology Course Specification for Master Degree in Pulmonology

Program on which the course is given : Master Degree in Pulmonology

Department offering the program: The Chest Department.

Major or minor element of program : First Part (Basic Sciences)

Department offering the course: Anatomy department.

Academic year 2016-2017

Credit points: one point.

Course code: CHEST 801

Course coordinators: Chest Department:

Anatomy Department:

I. Aim of the course:

To enable the student to describe and locate detail anatomy of the chest and to apply the chest anatomy in clinical practice.

II. Intended learning outcomes:

1. Knowledge and understanding:

By the end of the course the candidate should;

- a) Describe anatomy of chest wall.
- b) Define anatomy of the pleura.
- c) Describe and draw detailed anatomy of the lung and tracheobronchial tree.
- d) Describe anatomy of the mediastinum.

2. Intellectual skills:

By the end of the course the candidate should be able to;

- a) Integrate between chest anatomy and clinical manifestations.
- b) Diagram tracheobronchial tree and pulmonary lobes and segments.
- c) Distinguish the relation between different mediastinal structures.

3. Professional and practical skills: By the end of the course the candidates should be able to;

- a) Implement chest anatomy in clinical practice.

- b) Illustrate tracheobronchial anatomy during bronchoscopy.
- c) Interpret the clinical manifestation according to the anatomical site of the lesion.

III. Course contents:

Cell injury
Inflammation
Healing & repair
Infection
Examples of acute & chronic inflammations
Circulatory disturbances
Growth disturbances & neoplasia
Miscellaneous disorders
Immunopathology
cytology

IV. Teaching methods:

- Group learning lectures: 10 lectures (1 / week for 10 weeks) will be given through the academic year.
- Practical sessions in anatomy lab.: 5 sessions (1 / week for 5 weeks). will be given through the academic year.

V. Teaching and learning facilities:

Lecture halls.

Audio-visual aids (data-show, slide projection).

Anatomy morgue.

List of references

- Course notes supplied by the teaching staff.
- Essential books (text books)

Harsh Mohan - Textbook of Pathology

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VI. Assessment:

Attendance criteria:

The prerequisite for entry the final examination is 75% attendance of the lectures.

Assessment tools:

Final examination:

- One written examination to assess knowledge and understanding including MCQs (one hour).
- One oral examination to assess knowledge and understanding (minimum two examiners one of them from chest department).

Assessment schedule:

The final assessment will be held at the end of the academic year during the first part master degree final exam.

Weighing of assessment:

- Final-term written examination 60 %
- Oral examination 40 %

Course directors:

Chest Department

Anatomy Department



Pharmacology Course Specification for Master Degree in Pulmonology

Program on which the course is given : Master Degree in Pulmonology

Department offering the program: The Chest Department.

Major or minor element of program : First Part (Basic Sciences)

Department offering the course: Pharmacology department.

Academic year 2016-2017

Credit points: one point.

Course code: CHEST 807

Course coordinators: Chest Department:

Pharmacology Department:

I. Aim of the course:

To enable the student to describe the pharmacological properties of the different drugs used in pulmonary medicine.

II. Intended learning outcomes:

1. Knowledge and understanding:

By the end of the course the candidate should;

- a) Describe the pharmacological properties of the different drugs according to the correculum.
- b) Explain the side effects of different drugs on the respiratory system.

2. Intellectual skills:

By the end of the course the candidate should be able to;

- a) Locate the suitable drug according to the patient's diagnosis.
- b) Calculate the drug dose according to the patient's condition.

3. Professional and practical skills:

By the end of the course the candidates should be able to;

- a) Implement pharmacology of drugs in clinical practice.
- b) Diagnose respiratory clinical manifestations insight of drug side effects.

III. Course contents:

General pharmacology
Central nervous system <ul style="list-style-type: none">- Analeptics- Analgesics and antipyretics- Tranquilizers- Sedatives and hypnotics- Antirheumatics
Autonomic nervous system
Cardiovascular system <ul style="list-style-type: none">- Antihypertensives- Antiarrhythmic- Cardiac glycosides
Kidney diuretics
Blood <ul style="list-style-type: none">- Coagulants and anticoagulants- Blood expanders and restoratives- antianaemics
Respiration <ul style="list-style-type: none">- bronchodilators and constrictors- expectorants- antitussives- respiratory gases
Chemotherapy <ul style="list-style-type: none">- antibacterial- antifungal- anti-viral
Antineoplastics
Endocrine <ul style="list-style-type: none">- antidiabetics- corticosteroids
Disinfectants and antiseptics

IV. Teaching methods:

- Group learning lectures: 10 lectures (1 / week for 10 weeks) will be given through the academic year.
- Practical sessions in anatomy lab.: 5 sessions (1 / week for 5 weeks). will be given through the academic year.

V. Teaching and learning facilities:

Lecture halls.

Audio-visual aids (data-show, slide projection).

Pharmacology lab.

List of references

- Course notes supplied by the teaching staff.
- Essential books (text books)

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VI. Assessment:

Attendance criteria:

The prerequisite for entry the final examination is 75% attendance of the lectures.

Assessment tools:

Final examination:

- One written examination to assess knowledge and understanding including MCQs (one hour).
- One oral examination to assess knowledge and understanding (minimum two examiners one of them from chest department).

Assessment schedule:

The final assessment will be held at the end of the academic year during the first part master degree final exam.

Weighing of assessment:

- Final-term written examination 60 %
- Oral examination 40 %

Course directors:

Chest Department

Pharmacology Department



Physiology Course Specification for Master Degree in Pulmonology

Program on which the course is given : Master Degree in Pulmonology

Department offering the program: The Chest Department.

Major or minor element of program : First Part (Basic Sciences)

Department offering the course: Physiology department.

Academic year 2016-2017

Credit points: one point.

Course code: CHEST 804

Course coordinators: Chest Department:

Physiology Department:

I. Aim of the course:

To enable the student to recognize the normal respiratory physiology and its clinical applications.

II. Intended learning outcomes:

1. Knowledge and understanding:

By the end of the course the candidate should;

- a) Recognize the normal respiratory physiology and its clinical applications.
- b) Identify normal pulmonary functions.
- c) Identify normal arterial blood gases.

2. Intellectual skills:

By the end of the course the candidate should be able to;

- a) Integrate between respiratory physiology and clinical manifestations.

3. Professional and practical skills: **By the end of the course the candidates should be able to;**

- a) Implement respiratory physiology in clinical practice.
- b) Interpret normal and abnormal pulmonary functions.

III. Course contents:

Physiology of respiration:

- physical aspects of ventilation pulmonary pressures and physical properties of the lungs
- mechanics of breathing and pulmonary volumes and capacities
- transport of respiratory gases and factors , which affect it
- pulmonary circulation and ventilation perfusion ratio
- regulation of breathing
- dyspnea , hypoxia and cyanosis
- functions of the lung

Cardiovascular:

- cardiac output
- maintenance of normal ABP its regulate
- capillary and coronary circulation
- physiology of renal system
renal control of electrolyte and acid base balance

Endocrine:

- mechanisms of hormone action
- pituitary gland: hypothalamic and feedback control
- suprarenal gland
parathyroid gland and ++ homeostasis

Pain sensation:

blood : Hemostasis:

Autonomic nervous system : autonomic receptors:

IV. Teaching methods:

- Group learning lectures: 10 lectures (1 / week for 10 weeks) will be given through the academic year.
- Practical sessions in physiology: 5 sessions (1 / week for 5 weeks). will be given through the academic year.

V. Teaching and learning facilities:

Lecture halls.

Audio-visual aids (data-show, slide projection).

Physiology lab.

List of references

- Course notes supplied by the teaching staff.
- Essential books (text books)
..... Guyton and Hall Textbook of Medical Physiology
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VI. Assessment:

Attendance criteria:

The prerequisite for entry the final examination is 75% attendance of the lectures.

Assessment tools:

Final examination:

- One written examination to assess knowledge and understanding including MCQs (one hour).
- One oral examination to assess knowledge and understanding (minimum two examiners one of them from chest department).

Assessment schedule:

The final assessment will be held at the end of the academic year during the first part master degree final exam.

Weighing of assessment:

- Final-term written examination 60 %
- Oral examination 40 %

Course directors:

Chest Department

Physiology Department

V. Teaching and learning facilities:

Lecture halls.

Audio-visual aids (data-show, slide projection).

Anatomy morgue.

List of references

- Course notes supplied by the teaching staff.
- Essential books (text books)
.....Grays Anatomy.....
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VI. Assessment:

Attendance criteria:

The prerequisite for entry the final examination is 75% attendance of the lectures.

Assessment tools:

Final examination:

- One written examination to assess knowledge and understanding including MCQs (one hour).
- One oral examination to assess knowledge and understanding (minimum two examiners one of them from chest department).

Assessment schedule:

The final assessment will be held at the end of the academic year during the first part master degree final exam.

Weighing of assessment:

- Final-term written examination 60 %
- Oral examination 40 %

Course directors:

Chest Department

Anatomy Department