**MED COURSE 341**

**10 Credit hours**

Med Course 341 is the first clinical course for the medical students. It is a 10 credit hours course of theoretical part (lectures) and clinical part (bedside teaching). The main objective of the course is mastering history taking: learning the technique of how do physical exam and know the physical sings of patients. The course was taught over 28 week’s period.

**TEACHING PART OF THE COURSE**

**THEORETICAL PART**:   There shall be three lectures per week covering all the general medicine aspect such as cardiology, rheumatology, pulmonology, endocrinology, nephrology, gastroenterology, hematology/oncology, infectious diseases and neurology given over 84 lectures during 28 weeks.

**CLINICAL BEDSIDE TEACHING**:   There shall two clinical sessions per week. The teaching consists mainly of basic history taking, basic technique of different system examinations and definition and identification of physical sings.

**ATTENDANCE**

Attendance is continuously monitored and kept to see whether students will meet the required percentage of attendance set by the University.

As early as possible, any student noticed to have poor attendance would be given warning letters to call their attention and given them a chance to improve. As a rule, students should have attended at least 75% of the total 92 lectures and 56 sessions of the bedside clinical teaching of the course to be allowed to sit in the final exam. Names of students who will have less than 75% attendance will be submitted to the Vice Dean – Academic Affairs Office and will not be included in the exam until the University gives their approval.

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**CONTRIBUTING TEACHING STAFF / HOSPITALS**

Students were distributed in two different hospitals, King Khalid University Hospital and Riyadh Medical Complex for their bedside clinical teaching. Consultants from KKUH rotates between the two hospitals to do the teaching.

**RECOMMENDED REFERENCES**

A.               Textbook of Medicine

Any one of the following excellent books:

1.     Clinical Medicine – A textbook for Medical students and doctors.

P.J Kumar and M.L. Clark “Latest Edition”

               2. Textbook of Medicine – by Souhami and Moxham – Latest Edition

               3. Davidson’s Principles and Practices of Medicine – C.R. Edward and Ian, A.D

                   Bonchir – Latest Edition.

B.               Physical Examination

Any one of the following books:

1.     A guide to physical examination and history taking, by Barbara Bates – Latest

Edition.

2.     Macleod’s Clinical Examination by John Munro and C. Edwards.

3.     Clinical Examination – 2nd Edition by Nicholas Talley and Simon O’Connor.

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**EXAMINATIONS**

**CONTINUOUS ASSESSMENT EXAM**  is 40% from the total 100% marks.

-                     This is the first exam done after the students finished the first half of the course and it

Consists of Written Exam (20%) and Clinical – Long Case Exam (20%)

**FINAL EXAMINATION**  is 60% from the total 100% marks.

-                     This will be the second exam after the students finished the 28 weeks of teaching and

Just like the first exam it consists of written exam (30%) and clinical – long case exam

(30%)

**WRITTEN EXAM** – IS COMPOSED OF 45 QUESTIONS OF TRUE OR FALSE ANS 15 QUESTIONS OF SINGLE BEST , each question is required to have five stems, setting the questions in a standard form, 5 statements a to e. There shall be 1 mark to be awarded for each correct statement answered in True or False questions (i.e. 1 x 5 = 5) and 5 full marks on every correct answer in the Single Best questions. There is no negative marking in the written exam. Students are advice to answer all the questions and make sure to submit the answer sheets with out any empty space.

**CLINICAL EXAM**  -  Students will be marked on his/her ability to take history and perform a physical examination of all the systems taking into consideration that this is their first clinical exam. On both occasions, examiners do not expect the students to know the diagnosis or differential diagnosis of patients. Students are not expected yet to know the management approach.

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**MED COURSE 341 LECTURS**

THE FOLLOWING ARE LECTURES GIVEN ON THE FIRST SEMESTER:

**A.              CARDIOLOGY**

1.     Hypertension/hypertensive Heart Disease

2.     Hyperlipidemia – Diagnosis and Management

3.     Investigation of Heart Disease

4.     Angina Pectoris

5.     Acute Myocardial Infarction

6.     Chronic Valvular Heart Disease – 1

7.     Chronic Valvular Heart Disease  - 11

8.     Infective Endocarditis

9.     Cardiac Arrhythmias

10.                         Heart Failure

11.                         Cardiomyopathies

12.                         Pericardial Disorders

**B.              PULMONOLOGY**

1.     Pleural Effusion

2.     Pulmonary Embolism

3.     Interstitial Lung Disease (Allergic Alveolitis)

4.     Respiratory Emergencies

5.     Pneumonia

6.     Investigation of Lung Disease

7.     C.O.P.D.

8.     Bronchial Asthma

9.     Respiratory Failure

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**C.              INFECTIOUS DISEASES**

1.     Malaria

2.     Some Viral Infections

3.     Diarrheal Diseases

4.     Prevention and Prophylaxis of Infectious Diseases

5.     Infection in the immuno-compromised host

6.     Typhoid Fever and Brucellosis

7.     Tuberculosis

8.     Bacteremia and Septic Shock

9.     AIDS

10.                         Leishmania / Schistosomiasis

11.                         Fever of Unknown Origin

12.                         Use of Antibiotics

**D.              GASTROENTEROLOGY**

1.     Pancreatic Diseases

2.     Malabsorption and Diarrhea

3.     Peptic Ulcer Diseases

4.     Irritable Bowel Syndrome

5.     Acute Hepatitis and Complications

6.     Chronic Liver Diseases (Chronic Hepatitis, Cirrhosis)

7.     Oesophageal Diseases

8.     Liver Cirrhosis and Complication

9.     Liver Tumours

10.                         Inflammatory Bowel Disease (Specific and Non-specific)

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**MED COURSE 341 LECTURS**

THE FOLLOWING ARE LECTURES GIVEN ON THE SECOND SEMESTER:

**E.               ENDOCRINOLOGY**

1.     Clinical Aspects of Diabetes

2.     Management and Complications of Diabetes

3.     Metabolic Bone Disease

4.     Disorders of the Parathyroid Glands

5.     Obesity

6.     Pituitary Disorders - I

7.     Pituitary Disorders - II

8.     Adrenal Disorders - I

9.     Adrenal Disorders - II

10.                         Hypothyroidism and Other Thyroid Disorders

11.                         Hypothyroidism

12.                         Sexual Disorders

**F.               ONCOLOGY / HAEMATOLOGY**

1.     Anemia - I

2.     Anemia - II

3.     Cancer Treatment

4.     Acute Leukemia

5.     Chronic Leukemia

6.     Myeloproliferative Disorder

7.     Lymphoma - I

8.     Lymphoma - II

9.     Haemostasis - I

10.                         Haemostasis - II

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**G.              NEPHROLOGY**

1.     Acute Glomerulonephritis

2.     Nephrotic Syndrome

3.     Tubulointerstitial Disease

4.     Fluid and Electrolyte Acid Base Balance

5.     Chronic Renal Failure

6.     Dialysis and Immunology of Renal Transplantation

7.     U.T.I. (including renal tuberculosis)

8.     Acute Renal Failure

**H.              NEUROLOGY**

1.     Myelopathy & AbHC diseases

2.     Epilepsy

3.     Myopathies and Myasthenia Gravis

4.     CNS Infections

5.     Peripheral Neuropathies

6.     Extra pyramidal Disorders

7.     Dementia

8.     CNS Demyelination

9.     Headache and Migraine

10.                         Localization in Clinical Neurology

11.                         Cerebrovascular Diseases

**I.                  RHEUMATOLOGY**

1.     SLE and Progressive Systemic Sclerosis

2.     Infective Arthritis and Crystal Induced arthritis

3.     Vasculitis / Myositis

4.     Chronic Arthritis - I

5.     Chronic Arthritis - II

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**THE MEDICAL INTERVIEW**

The main purpose of the medical interview is to obtain information about the patient’s illness in order to reach a diagnosis. Diagnosis means identifying and characterizing the disease that the patient has. It is a mental exercise that depends on three basic components.

a.                 History of illness

b.                 Physical examination

c.                  Diagnostic procedures (Laboratory of radiological, etc.)

Patient history is the most important component as 80% of diagnosis can be made from history alone. Physical examination increases the diagnostic yield by 10% and laboratory investigations by another 10%. Therefore taking a good medical history is essential in providing good patient care.

Clinical manifestation of disease are classified as:

          a.       Symptoms: Abnormal sensations/changes that the patient feel or observe

                   (e.g. pain, weakness, shortness of breath).

          b.       Sings:                   Abnormal findings detected by physician on examination

                   (e.g. high temperature, enlarged liver, heart murmur).

**HISTORY TAKING:**

The objective of taking a medical history is to obtain information about patient illness to make a diagnosis, assess the severity of illness and evaluate its effects on patient’s bodily functions and life. It also serves to establish a relationship between the physician and the patient. The medical history consists of eight components:

1.                 Personal data.

2.                 Chief complaint (presenting illness)

3.                 History of presenting illness

4.                 Past history (medical and surgical)

5.                 Family history

6.                 Social history

7.                 Drugs and allergies

8.                 Review of systems

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**GENERAL GUDELINES:**

Obtaining a good history and physical examination depends largely on patient’s cooperation and confidence in his physician. Students should learn ways to facilitate communication with patients and increase their cooperation during history taking and physical examination. The following are helpful guidelines:

a.                 At the beginning, greet the patient and introduce yourself to him: call the patient by his/her first name (if young, use brother/sister: if old, use uncle/aunt). Ask the patient “how is he feeling now?”

b.                 Put the patient at ease, make sure that he is comfortable, e.g. in posture, light and

Temperature. Draw the curtains around him to ensure privacy. For females, a female attendant or nurse has to be present.

c.                  Show the patient that you are interested in him: by paying attention to his words,

Making sure he is comfortable, answering his needs (e.g. blanket, glass of water , bathroom, etc.). Your posture, words and facial expression should show continuous

Attention to the patient.

d.                 Facilitate communication to promote free flow of information. This id done by

Asking general open-ended questions. Encourage the patient to speak freely about

His problem. Show interest in his statements by nodding your head, saying ÿes”, ähah”, änd then repeating the last phrase of his account.

e.                  Avoid actions or words that reduce communication, e.g. using technical terms

(patients did not study pathology) or interrupting patient’s speech. Avoid actions that suggest to the patient that you are not interested in him, e.g. taking to another person while the patient talks, reading the hospital chart or book or not actively listening to him.

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**TECHNIQUE OF HISTORY TAKING**

For proper history taking, you are advised to use a systematic approach covering the major components of the medical history mentioned above. I advise you to use the following method:

Step  1:       **Introduction**

-    Greet the patient (as above)

-    Introduce yourself “I am (mention your name), I am part of the medical team responsible for your care, and I wish to speak to you about your illness”.

-    Make sure he is comfortable … (as above), put him at ease.

Ask “how are you feeling now?” “where are from, uncle?”

-    To improve communication, you may chat with him about the weather, his city or

Region, etc.

Step  2:       **Personal data**

-    Get the patient’s name (preferably from records), age, sex, nationality, and area of

Residence, occupation.

Step  3:       **Chief complaint (presenting illness)**

-    Ask the patient about the symptom, complaint or problem that brought him to the

Hospital, e.g. “What was the problem that brought you to the hospital? “When did

It starts?” “Were you well before that?” “What was the first thing that you felt?”

Here, encourages the patient to speak freely, and give a full account of his problem.

Do not interrupt except by nodding your head or saying “Yes “, “ah “. “What else “? When the patient finishes his initial description, ask him “are there any other problems “. Repeat until the patient has nothing to add. Avoid suggestions and do not ask leading questions, e.g. “Do you have loin pain?”.

Your objective here is to identify the main symptom or symptoms that the patient has and their duration. This is the chief complaint(s).

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Step  4:       **History of present illness (HPI)**

Here, your objective is to analyze or dissect the main symptom(s) in details, and in

                   A chronological order. Symptoms (e.g. pain) are usually characterized by the

                   Following features:

1.                 Body site (exact are a of body affected)

**2.** Duration – since the beginning of the symptom

**3.** Radiation – to other areas of the body

**4.** Character – describe the symptom (what is it like) and clarify what the patient means by symptom.

**5.** Onset – did it start gradually or suddenly

**6.**  Severity – mid, moderate, sever

  Does it interfere with daily activity or sleep?

  Frequency of the symptom (if intermittent)

  Size (swelling), volume (fluid, sputum, etc.)

7.                 Aggravating factors – factors that make it worse.

Precipitating factors – factors that lead to it.

                             Reliving factors – factors that make it better.

8.                 Course of the symptom since the beginning: did it improve or get worse? If

Multiple attacks, frequency and duration of attacks

9.                 Associated symptoms: these include:

  Positive symptoms within the same system or other systems.

  Negative symptoms of the same system (state that they are absent)

  General symptoms of disease (fatigue, weight loss, anorexia, fever) whether present or absent.

Step  5:       **Past History**

-    Ask about any significant medical problems in the past – since childhood. Hospital

Admissions, trauma, fractures, surgical operations, blood transfusions. Mention diseases/ surgeries and the dates (year).

N.B.: Remember that past medical history includes illnesses that happened in the past and are cured. Chronic diseases that started in the past and are still present (like diabetes mellitus, hypertension, rheumatoid arthritis) are not past medical problems, they are current problems and should be included in history of present illness.

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Step  6:       **Family History**

                   Ask about:

-    Family members and their state of health (parents, brothers and sisters, wife and  Children)

-    Illnesses and deaths in the family

-    Any similar illness family members

Step  7:       **Social History**

                   Ask about:

-    Nature of occupation – recent and old

-    Home surroundings

-    Any problems with work or family members or financial problems

-    Habits: Drinking/smoking

-    History of travel

Step  8:       **Drugs and Allergies**

-    Is the patient using any drugs? Mention names, dosages.

-    Is the allergic to any drugs or substances?

Step  9:       **Review of system**

                   General       :   Anorexia, weight loss, fatigue, fever, sleep disturbance

                   CVS            :   Chest pain, dyspnea, cough, hemoptysis, palpitations, syncope,

                                          Ankle swelling, leg pains.

                   Respiratory :   Chest pain, dyspnea, cough, sputum, hemoptysis, wheezing.

G.I.T.                   :   Nausea, vomiting, dysphagia, heartburn, abdominal pain,

                       Distension, dyspepsia, diarrhea, constipation, jaundice.

Urinary       : History of loin pain, dysuria, hematuria, frequency, polyuria,

                        Hesitancy, difficulty in micturition, urethral discharge.

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Locomotor  :   Joint pain, swelling, muscle pain, weakness, backpain, bone pain.

C.N.S.         :   Headache, dizziness, loss of consciousness, seizures, visual or

Auditory symptoms. Weakness and numbness in any part of the   Body.

Skin            :   Skin lesion, itching

Blood                   :   History of blood loss, bleeding tendency

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**COURSE  PROGRAM**

**MED COURSE 341**

**BEDSIDE CLINICAL TEACHING**

  WEEK 1                     General Exam

WEEK 2                      Abdomen Exam

WEEK 3                        Cardiovascular Exam

**Chest Exam                                     WEEK 4**

WEEK 5                       Musculoskeletal Exam

on wards                 WEEK 6          All Systems

 Sample Questions and  Answers

Questions:

Q1. 45 years old male is hospitalized with severe acute pancreatitis. Because of progressive respiratory difficulty, he is intubated and placed on mechanical ventilation. His weight is 70 kg, blood pressure is 110/70 mmHg, and heart rate is 90/min. His respiratory rate is 18/min. Chest x-ray shows patchy opacities bilaterally, consistent with pulmonary edema. His current ventilator setting are: assist control mode, respiratory rate of 18/min, tidal volume of 450 ml, FiO2 of 40%, and positive end-expiratory pressure (PEEP) of 5 cm H2O. His Blood gas readings are:

pH  7.51, pCO2  22 mmHg, pO2  121 mmHg

Which of the following is the best next step in managing this patient ?

A. Bronchodilator therapy.

B. Decrease FiO2.

C. Decrease respiratory rate.

D. Increase tidal volume.

E. Incentive spirometry.

Q2. A 62-year-old man is having symptoms of shortness of breath. As part of his workup, an arterial blood gas is done and the PCO2 is 60 mm Hg. Which of the following is the most likely cause for the elevated PCO2?

A. Ventilation-perfusion ratio inequality

B. Right-to-left shunt

C. Impaired diffusion

D. Hypoventilation

E. Carbon monoxide poisoning

Q3. A 13-year-old boy has periods when he seems to be unresponsive, associated with blinking of his eyes. These are momentary, and he seems normal thereafter. Which of the following is the most effective treatment?

A. Phenytoin

B. Carbamazepine

C. Phenobarbital

D. Gabapentin

E. Ethosuximide

Q4. A 66-year-old woman is found to have a left-sided pleural effusion on chest x-ray. Analysis of the pleural fluid reveals a ratio of concentration of total protein in pleural fluid to serum of 0.38, a lactate dehydrogenase (LDH) level of 125 IU, and a ratio of LDH concentration in pleural fluid to serum of 0.46. Which of the following disorders is most likely in this patient?

A. Bronchogenic carcinoma

B. Congestive heart failure

C. Pulmonary embolism

D. Sarcoidosis

E. Systemic lupus erythematosus

Q5. After undergoing surgical resection for carcinoma of the stomach, a 62-year-old male develops numbness in his feet. On exam, he has lost proprioception in the lower extremities and has a wide-based gait and positive Romberg sign. A peripheral blood smear shows macrocytosis and hypersegmented polymorphonuclear leukocytes. The neurologic dysfunction is secondary to a deficiency of which vitamin?

A. Folic acid

B. Thiamine

C. Vitamin K

D. Vitamin B12

Q6. On routine physical exam, a young woman is found to have a thyroid nodule. There is no pain, hoarseness, hemoptysis, or local symptoms. Serum TSH is normal. Which of the following is the best next step in evaluation?

A. Ultrasonography

B. Thyroid scan

C. Surgical resection

D. Fine needle aspiration of thyroid

Q7. A 67-year-old male with back pain, nephritic syndrome, and anemia presented to the A/E. Ultrasound shows normal kidney size. His Creatinine is 500. Which diagnosis best fits the scenario?

A. Polycystic kidney disease

B. Chronic GN

C. Multiple myeloma

D. Diabetic nephropathy

E. Analgesic abuse

 Q8. A 76-year-old man from a nursing home is brought into the emergency department after staff notices a decreased level of consciousness. He has Type II diabetes mellitus and is diagnosed with hyperosmolar state. All of the following may be features of hyperosmolar state EXCEPT:

A. Hyponatremia

B. Positive ketones on urine dipstick

C. Positive glucose on urine dipstick

D. Elevated blood glucose level

E. History of decreased fluid intake

 Q9. A 43-year-old male alcoholic is brought into the ED by ambulance. He has been seizing for approximately 20 minutes. Appropriate actions in the next 5 minutes may include all of the following EXCEPT:

A. Endotracheal intubation, if unable to stop the seizure rapidly

B. Administration of IV anticonvulsants

C. Performing a complete set of vital signs

D. Ordering a stat EEG

Q10. A 77-year-old man is seen in your office for assessment one week after experiencing a brief episode of left arm and left facial weakness. Blood pressure in your office is 140/80 mmHg. A CT scan showed no evidence of hemorrhage or space-occupying lesion. An EKG shows normal sinus rhythm. Which one of the following is the most important investigation to order at this time?

A. Magnetic resonance imaging (MRI) of the brain

B. An echocardiogram

C. Cerebral angiography

D. A chest x-ray

E. Carotid artery ultrasound

 Answers:

1 - C

2 - D

3 - E

4 - B

5 - D

6 - D

7 - C

8 - B

9 - D

10 - E