Jordan University of Science and Technology

Faculty of Medicine

(INTRODUCTORYCOURSE)

COURSE TITLE :	**CLINICAL SKILLS AND COMMUNICATION COURSE**
COURSE CODE :	**MED 409.**
CREDIT HOURS :	**4.5 CREDIT HOURS**
SEQUENCE :	**4th YEAR, 6 weeks**
COURSE COORDINATOR:	**Dr. Wasim Khasawneh**
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Course Description:

The introductory course is part of a transition stage to bridge basic and clinical medical sciences. These two stages are integrated in preparing medical students to be medical graduates. Clinical life is unique in many aspects which necessitates special training to provide students with competencies vital for clinical practice.

The Introductory course marks the beginning of the “clinical life” which is different from basic sciences era. The followings are some of the unique characters of clinical training and later on clinical practice:

1- Students will start interacting with patients and their families
2- History taking and inferential thinking based on patient’s symptomatology
3- Development of clinical sense and observation skills in addition to performing physical examination and eliciting signs
4- Development of synaptic thinking and interpretation of clinical data
5- Development of communication skills with teaching staff, peers, seniors, hospital staff…etc.
6- Development of presentation and counselling abilities
7- Use of new teaching resources e.g. clinical rounds, group discussions, imaging and laboratory data…etc.

Course Learning Outcomes

1- Introducing basic clinical skills (History and physical examination)
2- System-oriented introduction to symptoms and signs
3- Constructing of provisional diagnosis and differential diagnoses
4- Providing students with skills needed for communicating with patients, their families, teaching and health-care staff
5- Defining rules of professionalism and medical ethics
6- Development of team-work, and group discussions skills

By the end of the introductory course; students are expected to master the following competencies:

1- Obtaining General history and performing general physical examination

2- Performing System-oriented History taking Physical Examination pertinent to following systems:

   General physical examination including head and neck examination, taking vital signs, Respiratory, Cardiovascular, Gastroenterology, Surgical conditions of the abdomen, Neurological history and physical examination, Introduction to musculoskeletal clinical examination, history and physical examination in special population (pediatrics), and Infectious control.

3- Performing clinical skills with high standards of professionalism and medical ethics

4- Constructing provisional diagnosis and differential diagnosis by integration of clinical data

COURSE SCHEME:

The introductory course is designed to train students in a stepwise manner where each step prepares the student to make smooth transition through the course. The course according to the method of training is divided to:

1- Lectures, discussions and moderated videos: which will take place in the morning from 8-10 daily (Al-Zahrawi auditorium" red hall"),

2- Simulated Clinical Sessions and Clinical Rounds: Students will be divided into small groups with a teaching physician assigned to each group, to provide adequate theoretical and hands on teaching experience.
Students will review the assigned theoretical material with the assigned staff, and then will translate that knowledge into practical sessions on actual patients. Students are expected to write a full history and physical examination on weekly basis, hand it to the staff, who will review it and give the appropriate comments.

a. From 10:30 – 12:00, students are requested to take history and perform physical examination, unless otherwise requested by the teaching staff

b. From 12:00 – 1:00, break

c. From 1:00 – 3:00, meeting teaching staff in your dedicated room

6. Each Thursday, students will pass a quiz (either physical exam, written exam or both), the mark of which will be part of the total final mark.

Recommended Textbooks and Atlases:

Book (Resources)
1- Macleod's Clinical Examination, 14th Edition

Learning Objectives

(A) Lectures objectives

1	**General medicine**	**<u>History taking</u>** • Obtain a detailed history of the pertinent and necessary information regarding the patient presentation • Provide an accurate description of the relevant symptoms and events in the presenting illness and relate symptoms of other systems to the patient presentation • Interpret the information obtained in terms of a disorder of the function and structure and then in terms of pathology. • Present the patient history and generate a problem list or differential diagnosis • Summarize the history emphasizing the most relevant points **<u>General examination</u>** 1. Detect signs of underlying disease reflected on the general appearance of the patient and exposed parts of his body including: hands, face, skin, skin appendages, and legs 2. Understand the pathophysiology of common abnormal findings seen in general examination such as pallor, jaundice, and cyanosis Whenever the student is doing physical examination for any patient, he should observe the following: 1. Greet the patient, introduce yourself, and take permission from the patient 2. Stand on the right side of the patient 3. Patient must be properly undressed, gowned, and positioned according to the part to be examined 4. Patient privacy has to be respected 5. Inform and explain to the patient each step in your examination 6. Avoid exhaustion of the patient 7. Make sure a female nurse is present whenever you are examining a female patient 8. You see only what you look for and you recognize what you know
2	**Cardiovascular system**	**<u>Examination of the Cardiovascular system</u>** 1. Take history from a patient or simulated patient with a common cardiovascular problem such as chest pain, dyspnea, or palpitation 2. Observe for signs of cardiovascular disease by general inspection of the patient such as position of the patient, tachypnea, cyanosis,

		pallor, body built, and diaphoresis 3. Examine the hands for signs of cardiovascular disease such as clubbing, splinter hemorrhages, Oslers nodules, Janeway macules, palmar erythema, nicotine staining, and tendon xanthomas 4. Assess arterial pulse commenting on rate, rhythm, volume, character, state of artery wall, and radio femoral delay 5. Examine face looking for malar rash, xanthelasma, and corneal arcus 6. Measure jugular venous pressure and identify differences between arterial and venous pulsations in the neck 7. Inspect the precordium and anterior chest wall for deformities, scars, dilated veins, pulsations, and gynecomastia 8. Identify apex beat and comment on location and character • Palpate precordium for thrills, left parasternal heave or lift, and palpable sounds • Identify important areas for auscultation in the precordium including apical, tricuspid, pulmonary, aortic, and second aortic area • Listen for first and second heart sounds using the stethoscope and know how they are produced and how to differentiate between them • Identify the timing, character, mechanism of production, and how to listen for third and fourth heart sounds • Understand how to listen, time, describe, and grade murmurs • Understand the mechanism of production, how and where to listen for pericardial rub • Look for other signs of congestive heart failure such as basal lung crepitations, hepatomegaly, sacral and lower limb pitting edema • Describe the types of glia cells and their functions. • Describe the elements of the blood-brain barrier and the blood-CSF barrier. • Describe the structure of the choroid plexus
3	**Respiratory system**	1. Take history from a patient or simulated patient with a common respiratory problem such as shortness of breath, cough, or hemoptysis 2. Examine the upper respiratory tract looking for: i. Nasal discharge and redness ii. Patency of each nostril iii. Tenderness over paranasal sinuses iv. Tonsils and pharynx

		3. Examine the chest from the front in the following sequence: **a. Inspection**: i. Observe the rate, rhythm, depth, mode of breathing (thoracic or diaphragmatic) and effort of breathing ii. Listen for obvious abnormal sounds with breathing such as wheezes or stridor iii. Observe for use of accessory muscles and retractions iv. Look for deformities (pectus carinatum, pectus excavatum), or increase in anteroposterior diameter v. Ask the patient to take deep breath and observe for asymmetry vi. Look for any scars or skin lesions **b. Palpation** a. Check the tracheal position using the tip of the right index finger b. Locate the apex beat c. Palpate for any local tenderness d. Palpate any bulges, deformities, or skin lesions seen by inspection e. Assess chest expansion using both hands while patient is taking deep breath and observe for asymmetry f. Check for tactile vocal fremitus using the ball of the hand on symmetrical areas on both sides of the chest and including the axillary regions feeling vibrations of transmitted sound while the patient saying 44 in Arabic (this step can be skipped because checking the vocal resonance using the stethoscope will give better information) **c. Percussion** a. Start by percussing directly over the clavicles b. Using both hands percuss symmetrical areas on

		both sides of the chest moving from infraclavicular region in the intercostal spaces along midclavicular line and over lateral chest wall from 4th to 7th intercostal spaces looking for asymmetry or abnormal percussion note (dullness, stony dullness, and hyperresonance) c. Check for hepatic and cardiac dullness d. Auscultation i. Using the bell of the stethoscope for auscultation is better than the diaphragm ii. During auscultation ask the patient to breath deeply and fairly rapidly through the mouth iii. Auscultate alternately over symmetrical areas on both sides of the chest and compare findings starting from supraclavicular areas down to 6th intercostal space and alongside lateral walls iv. Avoid auscultation within 2-3 cm from midline as the stethoscope may pick up sounds transmitted directly from the trachea or major bronchi v. Listen for breath sounds and observe whether they are normal (vesicular) or abnormal (bronchial) vi. Listen for additional sounds such as crepitations (note their timing in the respiratory cycle and whether they are cleared by coughing), rhonchi, and pleural rub) vii. Repeat auscultation while patient saying 44 in Arabic to check for vocal resonance vii. Check for whispering pectoriloquy and egophony if signs of consolidation are found **<u>Examination of the posterior aspect of the chest</u>** Examination of the posterior aspect of the chest follows the same sequence: 1. Inspection a. Look for deformities (kyphoscoliosis) b. Ask the patient to take deep breath and observe for asymmetry in chest movement c. Look for scars and skin lesions 2. Palpation a. Identify areas of tenderness or deformities b. Palpate any skin lesions seen in inspection c. Check chest expansion using both hands while the patient is

		taking deep breath looking for asymmetry in movement d. Quantitative assessment of chest expansion is done by using a tape measure at the level of the nipples while the arms are raised above the head to eliminate scapular movement and ask the patient to take deep breath and take measurement and then ask him to exhale fully and see the difference e. Check for tactile vocal fremitus 3. Percussion a. Start percussion over trapezii and go down until you find diaphragmatic dullness b. Omit percussion over scapulae and areas close to the midline c. Check for diaphragmatic excursion by percussing down until you reach the diaphragmatic dullness, then ask the patient to take deep inspiration and hold breath, percuss down until you reach dullness and then ask patient to exhale completely and hold breath and percuss up until you reach dullness and notice the difference 4. Auscultation a. Auscultate over symmetrical areas starting from supraclavicular areas and go down comparing both sides and listening for abnormalities in breath sounds or presence of additional sounds b. Avoid auscultation close to midline c. Check for vocal resonance •
4	**Nervous system**	For the proper examination of the nervous system the following equipment are needed: 1. Reflex hammer 2. Tuning fork 3. A Snellen eye chart 4. Pen light 5. Ophthalmoscope 6. Wooden handled cotton swabs 7. Paper clips 1. Take history from patient or simulated patient with a common neurological problem such as headache, loss of consciousness, or weakness 2. Examination of the mental status and cranial nerves a. Mental status Assess level of consciousness, behavior, mood, and orientation b. Cranial nerves

		Observe for: i. ptosis (III) ii. facial asymmetry (VII) iii. hoarseness of voice (X) iv. articulation of words (V,VII, X, XII) v. abnormal eye position (III, IV, VI) vi. abnormal or asymmetrical pupils (II, III) Then examine individual nerves: I. Olfactory for sense of smell II. Optic examine: a. fundi b. visual fields c. visual acuity d. pupillary reaction to light e. pupillary reaction to accommodation III. Oculomotor a. observe for ptosis b. test extraocular movements c. pupillary reaction to light IV. Trochlear test for extraocular movements V. Trigeminal a. test motor part temporal and masseter muscles b. test 3 divisions for pain sensation c. test for corneal reflex VI. Abducent test for extraocular movement VII. Facial a. test motor part b. corneal reflex c. taste sensation VIII. Acoustic a. test hearing b. test lateralization (Weber test) c. compare bone and air conduction d. Check vestibular function IX, X Glossopharyngeal and Vagus a. observe speech (nasal or hoarse) b. check swallowing c. palatal movement d. gag reflex XI. Accessory Check motor power of trapezii and sternomastoids XII. Hypoglossal a. articulation b. tongue movements •

5	**Pediatrics**	Course description in pediatrics <u>Day 1: History in pediatrics/to able to</u> a. Elicit the details of Perinatal history • Mother age • Parity • Previous pregnancy • Maternal diabetes • Maternal fever • Rupture of membrane • Apgar score • Neonatal admission b. Take different components of the family history • Father age • Mother age • Consanguinity • Genetic disease • Early death in family c. Draw a pedigree of a family with proband with a genetic disease • Write plan for children vaccination according to Jordanian national program. • Age of vaccination • Individual vaccine given at each visit • Summarize the difference between the Jordanian national programmed the program-adopted by the UNRWA and that of the American Academy of Pediatrics. <u>Day 2: History in Pediatrics. /to be able to</u> a. To ask questions that elicits components of the nutritional history. • Breast-feeding • Bottle feeding • Frequency • Weight gain • Weaning • Supplements • Urination and stooping b. To calculate the caloric requirement of different age groups • Caloric value in bottle-feeding • Caloric value in breast-feeding • Different way to increase calories • Differences in needs between premature and term infant.

		c. Elicit the details of the growth history. • Birth weight • Head circumference • Height • Growth percentile <u>Day 3: physical examination in pediatrics/to be able to</u> a. Get the growth parameter for different age groups b. Use growth curve for different age group and different sexes • Use height centile curves • Use head circumference centile curve • correlate the different values and percentiles of growth parameters to each other and to evaluate the nutritional status of a child c. Do developmental assessment in four aspects of developmental milestones • Gross motor, fine motor & vision, Hearing & Language, and social. • To assess hearing in different age groups. Do distraction test • To assess vision in different age groups. Red reflex, Fixation d. To perform different components of the examination of the neurological system in different age groups. • Tone • Power • Tendon reflex • General activity and alertness • Primitive reflexes <u>DAY 4: Physical examination in pediatrics / to be able to</u> a. To perform different components of the general examination of the newborn. • Head and neck • Cardiovascular • Respiratory • Gastroenteritis • Hip exam • Femoral pulses • Genitalia • Anal potency b. Perform different component of Pediatrics physical

		examination • Cardiac • Respiratory • Gastroenterology <u>DAY 5: revision of history and physical examination</u> a. performance of full history taking and physical examination b. Write up of full history and physical examination •