Tıp Fakültesi

Marmara University - Eastern Mediterranean University

International Joint Medical Program

Year Three

Introduction to Clinical Skills

Course Guidebook

Contents

General information about the 'Introduction to Clinical Skills (ICS)' course program within the MU-EMU International Joint Medical Program curriculum

ICS courses, which take important part in our curriculum, are given in the pre-clinical phase. The basic contents of these multi-component courses are given in the table below.

ICS-1			**ICS-2**			**ICS-3**		
MEDN161 3 credits	MEDN162 3 credits	MEDN163 3 credits	MEDN261 3 credits	MEDN262 3 credits	MEDN263 3 credits	MEDN361 3 credits	MEDN362 3 credits	MEDN363 2 credits
Clinical Skills Laboratory & Introduction to First Aid	Communication Skills & Introduction to Medical Interview	Introduction to Student Research and Computer Skills	Basic Clinical Skills	Human in Medicine	Evidence Based Medicine	Basic Medical Practice	Clinical Skills Laboratory	Student Research Activity
First aid, hand washing, glove wearing, CPR	Effective communication, active listening, group dynamics	Theme: "Explore your universe"	History taking, aspiration, injection, suturing, physical examination	Social concepts, ethics, art and humanities	Theme: "Health and community"	Advanced communication skills, Hospital visit	Physical examination of systems	Theme: "Patients and diseases"

Introduction to Clinical Skills–Year Three (ICS-3) program is a comprehensive curriculum designed to advance the clinical skills and reasoning abilities of third-year medical students. This program is designed to provide early exposure to the knowledge and competencies necessary for effective medical practice. In ICS-3, students will deepen their skills in clinical evaluation, procedural techniques, and patient communication within small group settings, facilitating a more personalized and hands-on learning experience.

A key component of ICS-3 is the Clinical Skills Laboratory (CSL), where students practice a range of essential medical procedures, including physical examinations of the respiratory, cardiovascular, neurologic, and gynecologic systems. Training also covers clinical techniques such as blood pressure measurement and nasogastric tube insertion, building confidence and precision in procedural skills. The ICS-3 curriculum emphasizes both practical expertise and professional demeanor, requiring students to develop ethical attitudes and humanistic values central to medical practice.

Additionally, the program offers an Advanced Communication Skills (ACS) course, equipping students to handle sensitive interactions with patients and families. ACS sessions focus on managing difficult conversations, such as delivering bad news and addressing complex or sensitive issues, preparing students for challenging scenarios they may face in their future medical careers.

The Combining Medical Practice Skills (CMPS) course further enables students to apply their knowledge and skills holistically. Through multidisciplinary case discussions, students learn to synthesize information, consider ethical and social factors, and refine their clinical decision-making. This capstone course integrates communication, examination, and analytical skills, allowing students to approach real-world medical cases with a comprehensive perspective.

The ICS-3 program aims to empower students to develop the competencies, empathy, and collaborative skills that form the foundation of a successful medical career.

1. Basic Medical Practice (ICS-3 BMP)

Advanced Communication Skills (ACS)

In the Advanced Communication Skills Course, you will encounter challenging communication issues, such as delivering bad news, which is inevitable in medical practice. Throughout the course, you will gain insights on how to cope with difficult communication situations that may arise in your medical practice.

This course includes difficult topics, sensitive issues, and challenging patients will be covered, with breaking bad news as one of the main topics of discussion. Please note that these advanced skills build on the basic communication skills you developed during previous years in the ICS program.

Outcomes	Teaching Methods
1. Gives necessary information to acquire the skills needed to deal with difficult patients. 2. Discusses and teaches the skills needed to break bad news. 3. Discusses and teaches the skills needed to cope with difficult patients and sensitive issues.	• Video presentation. • Interactive discussion. • Role-play.

Combining Medical Practice Skills (CMPS)

At the end of the third year of the ICS program, our goal is for you to practice integrating the knowledge and skills you've acquired. To achieve this, you will be presented with a real-life case in the Combining Medical Practice Skills Course, where you'll be expected to address it using your own experiences. We hope you find these programs both enjoyable and beneficial.

These sessions' primary aim is to combine all the skills and knowledge; communication skills, history taking and physical examination, ethical issues, social concepts etc., that took place through the ICS program.

All topics will be taught in small group sessions, primarily as courses. Dedicated study time will be available for you to pursue learning at your own pace or through group work.

Outcomes	Teaching Methods
1. Defines the data necessary to understand a patient and its problem comprehensively. 2. Teaches how to find out the social, biological and ethical problems in the case story. 3. Discusses the physician skills to manage these problems. 4. Explains the parameters of clinical decision making. 5. Explains how to be aware of the needs of a physician in terms of continuous education.	All meetings will be held as multi-disciplinary, case discussion-based sessions in small group practice.

Academic Staff

Asst. Prof. Dr. Bülent Sezgin (Coordinator)

Prof. Dr. Pemra Ünalan (Coordinator)

MEDN361 Basic Medical Practice (ICS-3 BMP) Course Plan for the academic year is as follows.

Committee	Lecture	Lecture time (hours)	Type*	Instructor
Y3C2	Hospital Visit Experience	8	P	Dr. Bülent Sezgin
Y3C3	Advance Communication Skills	8	T	Dr. Bülent Sezgin, Dr. Pemra Ünalan
Y3C3	CMPS1	8	T	Dr. Bülent Sezgin, Dr. Mehmet Akman
Y3C3	CMPS2	8	T	Dr. Bülent Sezgin, Dr. Pemra Ünalan
Y3C4	Hospital Visit Experience	8	P	Dr. Bülent Sezgin

*T: theoretical lecture, P: practical lecture.

MEDN361 Assessment

- 80% CMPS
  - 50% Presentation
  - 50% Patient File
- 10% ACS (Written Exam)
- 10% PV (Hospital Policlinic Visit Experience form)

CMPS Guide and Patient form and Hospital Polyclinic Visit Experience form are as follows.

MEDICAL EVALUATION FORM

Personal Information

Patient Name Surname: Please do not write
Doctor: (You)
Date:

Date of Birth:
Gender: **Marital Status:**
Education Status:

Chief Complaint:

History of Present Illness:

Past medical history:

Family history:

Health Habits:

Psychosocial History:

Review of the Systems:

General Physical Examination

Diagnosis / Treatment / Follow-up applications to the patient .

Discuss what needs to be planned in terms of community health and preventive medicine practices regarding the case.

Evaluate the process you observed regarding the patient's history, family history, diagnosis, treatment and follow-up in terms of the following concepts.

A. **Ethical issues:**

B. **Communication Skills used and communication problems:**

C. **Social Variables regarding to the case**

References :

MU-EMU International Joint Medical Program ICS-3
Hospital Visit Patient File

Patient Name: (Initials)……..…
Date:……

Age: …… Gender: ……

Chief Complain:

History of Complains:

Past Medical History:

Medications: **Habits:**

Social History: **Allergies:**

Family History:

Examination Findings:

Plan:

Student Name: Doctor Name:

Number: Signature:

Problem Statement:

Evidence Based Approach to This Patient: (If you think that different questions should be added to the history taking section, please indicate this in this section. Then discuss evidence based approach to this patient- investigations, recommendations and treatment)

Student Name: Number:

2. Clinical Skills Laboratory (CSL)

The objectives and aims of the Clinical Skills Laboratory (CSL) course within the ICS-3 program are to equip students with essential clinical skills and foster the professional attitudes necessary for patient-centered care. By focusing on the development of core competencies, CSL aims to enable students to conduct thorough physical examinations, perform basic clinical procedures with precision, and apply clinical reasoning effectively. Students will be trained to observe and understand the physical signs associated with different body systems, including respiratory, cardiovascular, neurologic, and gynecologic systems, and to integrate this knowledge within the context of medical practice. Additionally, it provides training in clinical procedures, such as measuring blood pressure and inserting nasogastric tubes. After all theoretical and practical lectures students will be equipped with the knowledge of how to perform physical, respiratory, cardiovascular, neurologic gynecologic, breast, prostate, thyroid examination, and additionally will be able to perform urinary catheterization (male and female), nasogastric tube insertion and PAP smear sampling. At the end of the program students will be evaluated by an OSCE (Objective Structured Clinical Examination).

Academic Staff

Asst. Prof. Dr. Bülent Sezgin (Coordinator)

Prof. Dr. Pemra Ünalan (Coordinator)

Prof. Dr. Serap Çifçili

Prof. Dr. Çiğdem Apaydın Kaya

Assoc. Prof. Dr. Nilüfer Güzoğlu

Assoc. Prof. Dr. Amber Eker Bakkaloğlu

Dr. Barış Sarı

MEDN362 Clinical Skills Laboratory (ICS-3 CSL) Course Plan for the academic year is as follows.

Committee	Lecture	Lecture time per student (hours)	Lecture time (hours)	Type*	Instructor
Y3C1	Respiratory System Examination	4	4	T	Dr. Bülent Sezgin
	Cardiovascular System Examination	4	8	T	Dr. Bülent Sezgin
	Respiratory - Cardiovascular System Physical Examination	2	4	P	Dr. Bülent Sezgin, Dr. Amber Eker Bakkaloğlu, Dr. Barış Sarı
Y3C2	Abdomen examination	4	4	T	Dr. Bülent Sezgin
	Abdomen examination	1	4	P	Dr. Bülent Sezgin, Dr. Amber Eker Bakkaloğlu, Dr. Barış Sarı
Y3C3	Neurological Examination	3	3	T	Dr. Amber Eker Bakkaloğlu
	Neurological Examination	2	6	P	Dr. Amber Eker Bakkaloğlu
Y3C4	Breast-Thyroid-Prostate Examination	4	4	T	Dr. Bülent Sezgin
	Breast-Thyroid-Prostate Examination	2	4	P	Dr. Bülent Sezgin, Dr. Amber Eker Bakkaloğlu, Dr. Barış Sarı
	Put it all together: Review of whole general physical exam	2	8	P	Dr. Bülent Sezgin, Dr. Serap Çifçili
Y3C5	Pelvic examination, urinary catheterization and PAP smear sampling	4	4	T	Dr. Pemra Ünalan
	Pelvic Examination and PAP smear sampling, female catheterization	2	4	P	Dr. Pemra Ünalan, Dr. Amber Eker Bakkaloğlu
	Urinary catheterization, prostate examination, male catheterization	2	4	P	Dr. Bülent Sezgin, Dr. Amber Eker Bakkaloğlu
	Review on models	4	4	P	Dr. Bülent Sezgin, Dr. Amber Eker Bakkaloğlu
	OSCE**	-	8	E	Dr. Bülent Sezgin, Dr. Nilüfer Güzoğlu, Dr. Amber Eker Bakkaloğlu, Dr. Barış Sarı, Dr. Çiğdem Kaya

*T: theoretical lecture; P: practical lecture; E: exam.
** OSCE: Objective Structured Clinical Examination.

MEDN362 (OSCE) Assessment

- 35% Physical examination
- 20% Pelvic and breast examination
- 7.5% Prostate examination

- 7.5% Heart & Breath sounds
- 15% Urinary catheterization (Male & Female)
- 15% NG tube insertion & measuring blood pressure

The checklists for Clinical Skills Laboratory are attached to the following pages.

Respiratory System Examination

Theoretical Lecture	
Session Outcomes	**Teaching Methods**
• Audio visualizes the complete physical examination of the respiratory system. • Discusses fundamental skills required for physical examination of the respiratory system.	• Video presentation. • Tutor Presentation: with wall sheets and manikins. • The essentials of respiratory system examination. • The mechanism of the physiologic breath sounds.

Practical Lecture	
Session Outcomes	**Teaching Methods**
• Demonstrates the respiratory system examination. • Demonstrates the normal and the most encountered pathologic breath sounds.	• Normal and pathologic breath sounds with the simulator. • Examination of respiratory system.

Examination of the Chest and Lungs Checklist

Equipment Needed

- A Stethoscope

General Considerations

- The patient **must** be properly undressed and gowned for this examination.
- Ideally the patient should be sitting on the end of an exam table.
- The examination room **must** be quiet to perform adequate percussion and auscultation.
- Observe the patient for general signs of respiratory disease (finger clubbing, cyanosis, air hunger, etc.).
- Try to visualize the underlying anatomy as you examine the patient.

Inspection

1. Observe the rate, rhythm, depth, and effort of breathing. Note whether the expiratory phase is prolonged.
2. Listen for obvious abnormal sounds with breathing such as wheezes.
3. Observe retractions and use of accessory muscles (sternomastoids, abdominals).
4. Observe the chest for asymmetry, deformity, or increased anterior-posterior (AP) diameter.
5. Confirm that the trachea is near the midline?

Palpation

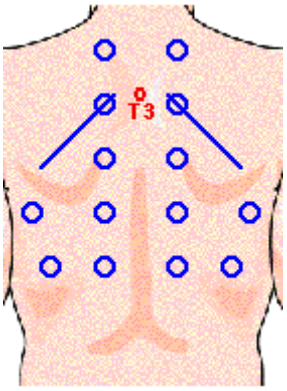
1. Identify any areas of tenderness or deformity by palpating the ribs and sternum.
2. Assess chest expansion and symmetry of the chest by placing your hands on the patient's back, thumbs together at the midline, and ask them to breath deeply.
3. Check for tactile fremitus.

Percussion

Proper Technique

1. Hyperextend the middle finger of one hand and place the distal interphalangeal joint **firmly** against the patient's chest.
2. With the end (not the pad) of the opposite middle finger, use a quick flick of the wrist to strike the first finger.
3. Categorize what you hear as normal, dull, or hyperresonant.
4. Practice your technique until you can consistantly produce a "normal" percussion note on your (presumably normal) partner before you work with patients.

Posterior Chest

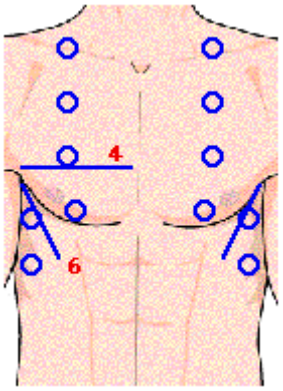


1. Percuss from side to side and top to bottom using the pattern shown in the illustration. Omit the areas covered by the scapulae.
2. Compare one side to the other looking for asymmetry.
3. Note the location and quality of the percussion sounds you hear.
4. Find the level of the diaphragmatic dullness on both sides.

Diaphragmatic Excursion

5. Find the level of the diaphragmatic dullness on both sides.
6. Ask the patient to inspire deeply.
7. The level of dullness (diaphragmatic excursion) should go down 3-5cm **symmetrically**.

Anterior Chest



1. Percuss from side to side and top to bottom using the pattern shown in the illustration.
2. Compare one side to the other looking for asymmetry.
3. Note the location and quality of the percussion sounds you hear.

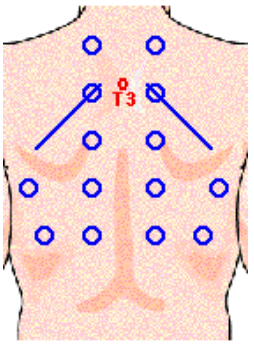
Interpretation

Percussion Notes and Their Meaning	
Stony dull or Dull	Pleural Effusion or Lobar Pneumonia
Normal	Healthy Lung or Bronchitis
Hyperresonant	Emphysema or Pneumothorax

Auscultation

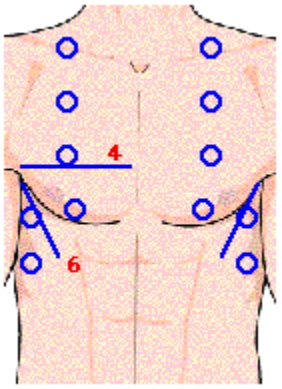
Use the diaphragm of the stethoscope to auscultate breath sounds.

Posterior Chest



1. Auscultate from side to side and top to bottom using the pattern shown in the illustration. Omit the areas covered by the scapulae.
2. Compare one side to the other looking for asymmetry.
3. Note the location and quality of the sounds you hear.

Anterior Chest



1. Auscultate from side to side and top to bottom using the pattern shown in the illustration.
2. Compare one side to the other looking for asymmetry.
3. Note the location and quality of the sounds you hear.

Interpretation

Breath sounds are produced by turbulent air flow. They are categorized by the size of the airways that transmit them to the chest wall (and your stethoscope). The general rule is, the larger the airway, the louder and higher pitched the sound. Vesicular breath sounds are low pitched and normally heard over most lung fields. Tracheal breath sounds are heard over the trachea. Bronchovesicular and bronchial sounds are heard in between. Inspiration is normally longer than expiration (I > E).

Breath sounds are **decreased** when normal lung is displaced by air (emphysema or pneumothorax) or fluid (pleural effusion). Breath sounds **shift from vesicular to bronchial** when there is fluid in the lung itself (pneumonia). Extra sounds that originate in the lungs and airways are referred to as "adventitious" and are always abnormal (but not always significant). (See Table)

Adventitious (Extra) Breath Sounds	
Crackles	These are high pitched, discontinuous sounds similar to the sound produced by rubbing your hair between your fingers. (Also known as **Rales**)
Wheezes	These are generally high pitched and "musical" in quality. **Stridor** is an inspiratory wheeze associated with upper airway obstruction (croup).
Rhonchi	These often have a "snoring" or "gurgling" quality. Any extra sound that is not a crackle or a wheeze is probably a rhonchi.

Voice Transmission Tests

These tests are only used in special situations. This part of the physical exam has largely been replaced by the chest x-ray. All these tests become abnormal when the lungs become filled with fluid (referred to as **consolidation**).

Tactile Fremitus

1. Ask the patient to say "ninety-nine" several times in a normal voice.
2. Palpate using the ball of your hand.
3. You should feel the vibrations transmitted through the airways to the lung.
4. Increased tactile fremitus suggests consolidation of the underlying lung tissues or decreased in effusion or fibrosis or lung collapse.

Bronchophony

1. Ask the patient to say "ninety-nine" several times in a normal voice.
2. Auscultate several symmetrical areas over each lung.
3. The sounds you hear should be muffled and indistinct. Louder, clearer sounds are called bronchophony.

Whispered Pectoriloquy

1. Ask the patient to whisper "ninety-nine" several times.
2. Auscultate several symmetrical areas over each lung.
3. You should hear only faint sounds or nothing at all. If you hear the sounds clearly this is referred to as whispered pectoriloquy.

Egophony

1. Ask the patient to say "ee" continuously.
2. Auscultate several symmetrical areas over each lung.
3. You should hear a muffled "ee" sound. If you hear an "ay" sound this is referred to as "E -> A" or egophony.

Notes

1. For more information refer to *A Guide to Physical Examination and History Taking, Sixth Edition* by Barbara Bates, published by Lippincott.
2. A prolonged expiratory phase (E > I) indicates airway narrowing, as in asthma.
3. AP diameter increases somewhat with age, however, a round or "barrel" chest is often a sign of advanced emphysema.
4. The trachea will deviate to one side in cases of tension pneumothorax.
5. Decreased or asymmetric diaphragmatic excursion may indicate paralysis or emphysema.
6. It has been said that "a peak flow meter is to asthma as a thermometer is to fever." Peak flow measurements are used to gauge severity of asthma attacks and track the disease over time. Ideally new readings are compared to the patient's current "personal best." Readings less than 80% of "best" may indicate a need for additional therapy. Readings less than 50% may indicate an emergency situation.
7. Increased fremitus indicates **fluid in the lung**. Decreased fremitus indicates sound transmission obstructed by chronic obstructive pulmonary disease (COPD), **fluid outside the lung** (pleural effusion), air outside the lung (pneumothorax).

Cardiovascular System Examination

Theoretical Lecture	
Session Outcomes	**Teaching Methods**
• Audio visualizes the complete physical examination of the cardiovascular system. • Discusses the fundamental skills required for physical examination of the cardiovascular system.	• Video presentation. • Tutor Presentation: with wall sheets and manikins. • "The essentials of cardiovascular system examination" • The mechanism of the physiologic heart sounds.

Practical Lecture	
Session Outcomes	**Teaching Methods**
• Identify normal breath sounds, murmurs and pathologic breath sounds including crackles, wheezes, gurgles, and stridor. • Demonstrates how to measure JVP (jugular venous pressure).	• Auscultation: normal and pathologic heart sounds with the simulator and video. • Peripheral arterial pulse examination. • Arterial blood pressure measurement: checklist.

SUMMARY OF LECTURE NOTES OF CARDIOVASCULAR SYSTEM

- General appearance
- PB, pulses, jugular veins
- Percuss, palpate and auscultate the heart
- Evaluation of edema

-How is it done?

- Position client in supine position, stand at client's side and elevate bed
- From head to toe
- Prepare the equipment- stethoscope, penlight, ruler and application stick

A. General Appearance

- Restlessness, can patient lie or sit upright, signs of pain, cyanosis, pallor and presence of dyspnea

B. Head, Neck, Nails and Skin

- *Head*- eyes, earlobe, lips and buccal mucosa

a. Note for:

1. Arcus senilis – a light gray ring around the iris (may indicate cholesterol deposit)

2. Xanthelasma – yellow raised plaqued around the eyelids (duse to lipid deposits)

- ***Skin*- assess foe central and peripheral cyanosis**

a. Central cyanosis- assess the skin, buccal mucosa and nasal mucosa

➢ May indicate severe heart and lung diseases

b. Peripheral cyanosis- check the nailbed, earlobe and lips

➢ Indicates peripheral vasocionstriction (ex: reynauds disease)

- ***Nails***

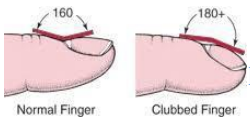
a. Capillary refill

➢ Or blunch test

➢ Check capillary refill

➢ *Normal- 2 seconds*

b. Clubbing of finger



➢ *Normal- 160º*

➢ 180º ↑- associated with prolong oxygen deprivation

➢ Can be due to COPD or chronic anemia

- Measure BP initially in both arm- identify presence of coarctation, aneurysm, occlusive disorders and errors in reading

1. Postural Blood Pressure

➢ Done when extracellular volume depletion and decrease vascular tone is suspected

➢ Position client in supine, sitting and standing

➢ Note the position while taking the blood pressure

➢ Abnormal finding: A drop in blood pressure of more than 10-15 mm Hg systolic and more than 10 mm Hg for diastolic pressure indicates postural hypotension

➢ Hypotension is usually accompanied by 10-20% increase in the heart rate

2. Paradoxical Blood Pressure (Pulsus Paradoxus)

➢ An abnormal ↓of more than 10 mm Hg of the systolic blood pressure during expiration

➢ Associated with: pericardial tamponade, constrictive pericarditis and pulmonary hypertension

C. Pulses

- Note bilateral pulse
- Assess for pulse deficit by counting apical pulse simultaneously with radial pulse
- Note for weakness, thready and if it is bounding

D. Neck

1. Neck Veins

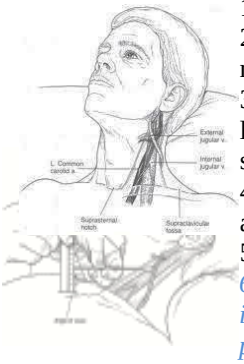
➢ Neck vein distention can be used to estimate CVP (Central Venous Pressure)

➢ The amount of distention reflects pressure and volume changes in the Right Side of the Heart

a. *External jugular Vein*- easy to detect but can be altered by little changes in position

b. *Internal Jugular Vein*- most reliable indication of CVP

➢ **How it is done:**



1. Elevate the head by 15-30º
2. 45-90º for those with increase right atrial pressure
3. Internal jugular vein is just located or lies deep in the sternocleidomastoid
4. Place the ruler on the sternal angle
5. Measure the pulsation
6. *Nº- < 3-4 cm and an ↑ indicates RSCHF and pericardiac tamponade*
7. Contralateral distention indicates obstruction

2. Carotid Artery

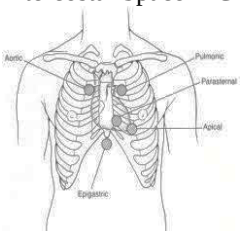
➢ Indicates adequacy of stroke volume and patency of the arteries
➢ Palpate one side at a time- simultaneous palpation stimulates carotid sinuses causing bradycardia and sinus arrest.
➢ Note for Bruits- a blowing sound heard using the diaphragm of the stethoscope.
➢ It indicates narrowing of carotid artery

E. Chest

1. Pericardium

Note for size, symmetry and evidence of any pulsation – record its location in relation to MCL

PMI (Point of Maximal Impulse)- 5th Intercostal Space MCL



➢ It is associated to left ventricular contraction
➢ Prominent in thin and obscure in fat of have large breast
➢ 2 fingerbreadths below the nipple or 2 cm
➢ If deviated- can be due to Right or left Sided Cardiomegaly

Note for presence of heaves or lifts

➢ These are visible pulsation associated to pulmonary hypertension

Thrills

➢ These are rushing vibration palpated in 5 cardiac auscultatory region that may indicate murmur
➢ Represent turbulent blood flow through the heart especially across an abnormal heart valves

2. Heart Sounds

SEQUENCE OF LISTENING:
-apex, axilla, apex with bell – left decubitus position,
-tricuspit (diaphragm- left lowersternal edge),
-left 2nd interspace (pulmonary),
-right 2nd intercostal (aortic), base of the neck, carotid bruits,
-left lower sternal edge (leaning forward),
-lung bases.

Cardiac Auscultatory Site

➢ Aortic- second intercostals space Right of the sternum
➢ Pulmonic area- second intercostals space Left of the sternum
➢ Erb's Point- 3rd intercostals space Left of the sternum
➢ Tricuspid area- 5th intercostal space on the left side of the sternum
➢ Mitral area- 5th intercostals space MCL left side

Notes:

➢ Low pitch- Bell of the stethoscope
➢ High pitch- diaphragm

Normal Heart Sounds:

➢ *First Heart Sound (S_1)*

a. Closure of the AV valves during ventricular contraction
b. Heard best at mitral and tricuspid region
c. It is equivalent to carotid artery pulsation or upstroke of R wave in QRS complex
d. Its intensity varies according to certain pathologic condition such as stenosed AV valves

➢ *Second Heart Sound (S2)*

a. The closure of the semilunar valves during ventricular relaxation
b. It marks the end ventricular systole and onset of diastole (ventricular filling)
c. Best heard in aortic and pulmonic area using the diaphragm

➢ *Physiologic Splitting of S_2*

a. Normal
b. Due to delayed closure of the pulmonic valves
c. Best heard during inspiration
- causes negative pressure in the thoracic cavity→ pulling of blood on the right ventricles→ delayed emptying→ delayed closure of the pulmonic valves as heard as split second heard sound

Abnormal Heart Sounds

➢ ***Pathologic Splitting***

a. Wide splitting of S_2
b. Heard best during inspiration and expiration with an increase during inspiration
c. Associated with bundle branch block→ delayed ventricular impulse transmission→ delayed depolarization→ late closure of pulmonic valves
d. Associated with atrial septal defects
e. Fixed Splitting- due to prolong emptying of the right ventricle
f. Paradoxical Splitting- due to stenosed aortic valve which is heard best during expiration

➢ ***Gallop***

a. Diastolic filling sounds (S_3 and S_4)
b. Due to sudden changes of inflow volume

causing vibration of the valves and the ventricular supporting structures producing low pitch
sound either early (S_3) or late (S_4) as diastole

S_3
a. during passive and rapid filling of the ventricles
b. Early gallop that is heard during early diastole
c. It follow immediately after S_2 and is dull and low pitch sound
d. Nº in children and young adult
e. Older than 30- it is considered a characteristics of left ventricular dysfunction such as CHF, MI and Valvular incompetence

S_4
a. Occurs in the later stage of diastole during atrial contraction and active filling of the ventricles
b. Heard immediately before S_1 and is referred as atrial gallop
c. It is associated with ventricular hypertrophy, ischemia and fibrosis
d. Never heard in the absence of atrial contraction

Quadruple Rhythm
- Is noted when both S_3 and S_4 are audible
- It resembles the sound of a galloping horse

Pericardial Friction Rub
- Is produced by inflammation of the pericardial sac
- It is describe as a scratchy, grating, rasping and much like "squeaky leather" sound
- The roughened parietal and visceral layers of the pericardium against each other during cardiac motion

Murmur
- Is heard as consequence of the turbulent blood flow through the heart and blood vessels
- It is caused by:

a. ↑ rate or velocity of the blood flow
b. Abnormal forward and backward flow in the stenosed or incompetent valves
c. Dilated chamber
d. Flow through abnormal passage between heart chambers (VSD, ASD and TOF)

- ***Systolic murmur***

a. Also called "benign murmur"
b. Often caused by vigorous contraction of myocardium or strong blood flow
c. Common in children and adults younger than 50 and pregnant women

- ***Diaslotic Murmur***

a. A pathologic condition and is produced by the mitral and tricuspid valve stenosis or aortic and pulmonic insufficiency
- Note the characteristics:

a. Loudness
b. Location
c. Pitch- high or low, musical, harsh, blowing or buzzing
d. Place and duration
e. Quality- crescendo, decrescendo or plateau
f. Radiation- sounds radiate to other part of the body (aortic radiates to carotid artery and mitral murmur radiates to axilla)
g. Variation- changes occur with movement

- **Grade the Loudness**

b. Grade I- faint
c. Grade II- Faint heard immediately
d. Grade III- Moderately loud
e. Grade IV- Loud
f. Grade V- Very loud, heard only with stethoscope
g. Grade VI- very loud, heard even without stethoscope

3. Lungs

Tahcypnea

Crackles
- Adventitious sound heard in a fluid filled lungs
- Common in LSCHF and heard well in the base of the lungs

Blood Tinged Sputum
- May indicate acute pulmonary edema accompanied by crackles

Cheyne-Stoke Respiration
- Deep breathing with period of apnea
- Common in patients with heart failure and anemia

4. Abdomen

Ascitis
- due to fluid accumulation in the peritoneal cavity
- can be due to chronic right ventricular failure

Check-list / Measuring Blood Pressure

1	The patient should avoid eating, smoking, caffeine, exercise, and drinking alcohol one-half to one hour before blood pressure measurement.	
2	Have the patient sit quietly for at least 5 min. period of rest with both feet flat on the floor and back supported prior to measurement.	
3	Use mercury manometer or a recently calibrated aneroid manometer with the center of the mecury column or aneroid diall at eye level.	
4	Select appropriate cuff size: The width of the bladder should be 40 % of the arm circumference and the length of the bladder should encircle at least 80% of the arm.	
5	The bell of the stethoscope should be placed above the medial epicondyle and medial to the biceps tendon.	
6	No clothing should be between the blood pressure cuff and the arm.	
7	Place the center of the cuff's bladder over the brachial artery on the upper arm. Secure the blood pressure cuff evenly and snugly around the arm, 1 to ½ inches above the antecubital space (at the elbow).	
8	Use the patient's same arm for blood pressure readings and record arm and cuff size used.	
9	The patient's arm should be supported or allowed to rest on a solid surface so the inner aspect of the bend of the elbow is level with the heart.	
10	Initially perform a palpatory estimate of systolic pressure. Wait 15-30 seconds before taking the auscultatory reading.	
11	Inflate the cuff quickly to 30 mmHg above the palpatory blood pressure.	
12	Deflate bladder at 2-3 mmHg per second.	
13	Record the first of at least two consecutive sounds as the systolic. Diastolic is identified by the last sound heard.	
14	If blood pressure is elevated and the patient had initially waited quietly for five minutes, repeat blood pressure in 1-2 minutes.	
14	Record both measurements and inform the patient.	
15	If blood pressure is elevated but the patient had not initially waited for five minutes, now allow for a five-minute rest. Re-measure blood pressure and record it as the first reading. If this blood pressure is still elevated, repeat the measurement in 1-2 minutes, record it as the second measurement, and inform the patient.	
Institute for Clinical Systems Improvement (ICSI) www.ICSI.org Hypertension diagnosis and treatment		

Abdomen Examination

Theoretical Lecture	
Session Outcomes	**Teaching Methods**
• Audio visualizes the complete physical examination of the abdomen. • Discusses fundamental skills required for physical examination of the abdomen. o Auscultation and assessment of bowel functions o Percussion and palpation: pain, mass, ascites o Evaluation of the liver and the spleen: *hepatomegaly, splenomegaly* o Special examination techniques: *costovertebral angle tenderness*	• Video presentation. • Tutor Presentation: with wall sheets and manikins. • The essentials of abdomen examination.

Practical Lecture	
Session Outcomes	**Teaching Methods**
• Demonstrates the palpation and percussion techniques for the abdominal examination. • Demonstrates how to asses span of liver, how to palpate spleen and kidney and how to examine abdominal ascites.	• Palpation and percussion: assessment of hepatomegaly and splenomegaly; determination of a mass or ascites • Nasogastric tube insertion.

CHECK-LIST / EXAMINATION OF ABDOMEN

1	Explain the procedure; relax the patient	
2	Exposure full abdomen from above the xyphoid process to the symphysis pubis under good light	
3	Patient should not have a full bladder.	
4	Make the patient comfortable in a supine position.	
5	Have the patient keep arms at the sides or folded across the chest.	
6	Before palpation, ask the patient to point to any areas of pain, and examine painful or tender areas last	
7	Monitor your examination by watching the patient's face for signs of discomfort.	
8	Have warm hands, a warm stethoscope, and short fingernails.	
9	Approach slowly and avoid quick, unexpected movements.	
10	From the patient right side, proceed in an orderly fashion: inspection, auscultation, percussion, and palpation of the abdomen.	
11	Assessment of the liver, spleen, kidneys, and aorta.	
12	**Inspection:** the skin (scars, striae, dilated veins, rashes and lesions), umbilicus (location, inflammation, hernia), contour, intestinal peristalsis, aortic pulsation	
13	**Auscultation:** place the diaphragm of your stethoscope gently on the abdomen and listen for bowel sounds, for renal artery stenosis, for bruits over the aorta, iliac arteries and the femoral arteries.	
14	**Percussion:** percuss lightly in all four quadrants to assess the distribution of tympany and dullness.	
15	**Light palpation:** Keeping your hand and forearm on a horizontal plane, with fingers together and flat on the abdominal surface, palpate all quadrants with a gentle motion.	
16	Identify any superficial masses, area of tenderness or increased resistance	
17	**Deep palpation:** Using the palmar surfaces of your fingers, feel in all four quadrants to identify any masses (location, size, shape, consistency, tenderness, pulsations, and mobility)	

CHECK-LIST / EXAMINATION OF LIVER

1	**Percussion:** Starting at a level below the umbilicus (in an area of tympany, not dullness) lightly percuss upward toward the liver.	
2	Ascertain the lower border of liver dullness in the midclavicular line.	
3	To identify the upper border of liver dullness in the midclavicular line, lightly percuss from lung resonance down toward liver dullness.	
4	Measure in centimeters the distance between your two points - the vertical span of liver dullness. (6-12 cm in right midclavicular line)	
5	**Palpation:** place your left hand behind the patient, parallel to and supporting the right 11^{th} and 12^{th} ribs and adjacent soft tissues below.	
6	Place your right hand on the patient's right abdomen lateral to the rectus muscle, with your fingertips well below the lower border of liver dullness.	
7	Ask the patient to take a deep breath, try to feel the liver edge as it comes down to meet your fingertips.	
8	When you feel it, lighten the pressure of your palpating hand slightly so that the liver can slip under your finger pads, and you can feel its anterior surface.	
9	Try to trace the liver edge both laterally and medially, describe the liver edge, and measure its distance from the right costal margin in the midclavicular line.	
10	To assess tenderness of a non-palpable liver, place your left hand flat on the lower right rib cage and then gently strike your hand with the ulnar surface of your right fist.	

(Bates' Guide to Physical Examination and History Taking. 7^{th} ed. 1999)

CHECK-LIST / EXAMINATION OF SPLEEN-DETERMINATION OF SPLENOMEGALY

1	**Percussion:** Spleen enlarges anteriorly, downward and medially replacing the tympany of stomach and colon with the dullness of a solid organ.	
2	Percuss the left lower anterior chest wall between lung resonance above and the costal margin below (area termed Traube's space)	
3	If tympany is prominent especially laterally splenomegaly is not likely.	
4	Percuss the lowest interspace in the left anterior axillary line. This area is usually tympanitic (splenic percussion sign)	
5	Ask the patient to take a deep breath and percuss again. If spleen size is normal, the percussion note usually remains tympanitic.	
6	If either or both of these tests is positive, pay extra attention to palpating the spleen.	
7	**Palpation:** With your left hand, reach over and around the patient to support and press forward the lower left rib cage and adjacent soft tissue.	
8	With your right hand below the left costal margin, press in toward the spleen.	
9	Begin palpation low enough so that you are below a possibly enlarged spleen.	
10	Ask the patient to take a deep breath.	
11	Try to feel the tip or edge of the spleen as it comes down to meet your fingertips.	
12	Note any tenderness, assess the splenic contour, and measure the distance between the spleen's lowest point and the left costal margin.	
13	Repeat the patient lying on the right side with legs flexed at hips and knees.	
14	In this position, gravity may bring the spleen forward and to the right into a palpable location.	

(Bates' Guide to Physical Examination and History Taking. 7th ed. 1999)

CHECK-LIST / NASOGASTRIC TUBE INSERTION

1	Explain the procedure; secure patient's privacy; prepare equipment; wash hands.	
2	Elevate head of bed to highest position; place pillow behind shoulders; work on right side if right-handed, and vice versa.	
3	Examine tubing for rough or sharp edges.	
4	Measure tubing and mark with tape or ink.	
5	Remove patient's eyeglasses or dentures.	
6	Place a towel over chest, have emesis basin available.	
7	Check patency of nostrils with flashlight, select most patent nostril.	
8	Lubricate the distal 10-15 cm of the tube with water-soluble lubricant; avoid filling the holes by lubricant.	
9	Arrange with patient for a signal to indicate a need for a rest during procedure. Give patient tissues and a glass of water.	
10	Have patient hyperextended neck slightly. With curved end pointing downward, slowly and gently insert tube into nostril, directing it downward and toward ear. Do not force; try other nostril if there is resistance. Rotate tube 180 degrees while advancing it to the pharynx.	
11	Allow patient to rest briefly after tube reaches oropharynx.	
12	Have patient flex neck and take big swallows of water, with each swallow advance tube until previously marked point is reached.	
13	Check tube placement; observe for cyanosis, choking, coughing	
14	Verify that tube is correctly insertion. Withdraw a small amount of fluid from the tube and check the pH of the fluid. If the pH $\leq$5 the tube is very likely in the stomach. If the pH$\geq$6 confirm tube replacement with an X-ray.	
15	Clamp or plump tube	
16	Anchor tubing in place, avoiding pressure on external naris.	
17	Return client to position of comfort; explain expected sensations in throat, fluid restrictions, and use of ice or other palliative measures; wash hands.	

Neurological Examination

Theoretical Lecture	
Session Outcomes	**Teaching Methods**
Discusses the essential skills required for the physical examination of the neurologic system.	• Tutor presentation. • The essentials of neurologic examination.

Practical Lecture	
Session Outcomes	**Teaching Methods**
• Demonstrates the examination of; o mental status o cranial nerves o motor system o reflexes o sensory system o coordination o Gait and balance	• Tutor demonstration for each group with wall sheets and voluntary students as patients • Individual practice with group members

MARMARA UNIVERSITY-EASTERN MEDITERRANEAN UNIVERSITY INTERNATIONAL JOINT MEDICINE PROGRAM

ICS 3-NEUROLOGIC EXAMINATION

Inspection: Helps to identify mask face, ptosis, nystagmus, strabismus, fluency of speech, involuntary movements (e.g. Tremor), atrophy, fasciculations, gait pattern, and posture.

Mental Status Exam:

- Orientation: Ask about the time, place, and person
- Short-term memory: Three-word recall test (Registration and recall; give three words 'apple, flag, dress'- ask to repeat-do an attention test- then ask three words)
- Attention: Backward spelling or counting (ask to spell the word 'WORLD' or serial 7's backwardly)
- Language: Check naming (show an object and ask the name), comprehension (give commands), and repetition (ask to repeat 'No, ifs, ands or buts'.

Cranial Nerves:

- Visual acuity (each eye separately, use Snellen chart)
- Visual fields (each eye separately, finger counting in four quadrants, or confrontation test)
- Light reflex (check direct and indirect light reflex)
- Eye movements (Both eyes together. Draw HH)
- Fundoscopy
- Facial sensation (Light touch in three areas of the face bilaterally)
- Facial muscles strength (eyebrow-raising, eye closing, smile-show your teeth)
- Hearing to finger rub
- Uvula, palatal arc symmetry, ask to say 'aaa' –observe palate elevation, Gag reflex
- Trapezius and sternocleidomastoid muscle strength
- Touque inspection and strength

Motor System:

- Check tone and strength and give a score out of 5
- Upper Extremity
    - Proximal (deltoid muscle)
    - Distal (hand grip)
- Lower extremity
    - Proximal (iliopsoas muscle)
    - Distal (foot dorsiflexion and plantar flexion)
- Check if there is any rigidity

Reflexes:

- Biceps
- Brachioradialis
- Triceps
- Patellar
- Achilles
- Plantar responses (report as flexor or extensor)

Sensory System:

- Pinprich or light touch
    - Compare sides in both upper and lower extremities

      (Compare distal proximal in the same extremity in the suspicion of polyneuropathy)

- Proprioception (move extremity from distal joint and ask position)
- Vibration

Coordination:

- Rapid alternating movements
- Coordination in the limbs (finger to nose, heel to shin)

Gait and Balance:

- Casual gait
- Tandem gait (heel and toe walking)
- Romberg test

*Don’t forget to check meningeal irritation signs in a patient with confusion and/or fever

Breast-Thyroid-Prostate Examination

Theoretical Lecture	
Session Outcomes	**Teaching Methods**
Demonstrates the breast, thyroid gland and prostate.	Video presentation.

Practical Lecture	
Session Outcomes	**Teaching Methods**
• Discusses the essential skills required for the physical examination of the breast, thyroid gland and prostate gland. • Lists the characters of a mass or organ that are defined by palpation. • Demonstrates the techniques for their examination.	• Tutor Presentation for each group: with wall sheets and maquettes, and manuals. • Individual practice with maquettes and checklists. • Tutors are observers, and they give feedback according to checklists.

CHECK-LIST /BREAST EXAMINATION-*INSPECTION*

1	The woman should be seated facing the examiner. The examiner should ask the woman to remove her gown to her waist.	
2	Inspection is first accomplished with the patient's arm at her side.	
3	The breasts are inspected for size, shape, symmetry, contour, color and oedema.	
4	The skin of the breast is observed for oedema and erythema.	
5	Inspect the for the presence of dimpling, sign of retraction phenomena	
6	Ask the woman to press her arms against her hips; to bring out dimpling caused by fixation of the breast to the underlying tissues.	
7	Ask her to bend at the waist and allow her breasts to hang free from the chest wall; to bring out any change in the contour of that breast.	
8	Inspect for nipple retraction, fissures and scaling.	

CHECK-LIST /BREAST EXAMINATION-*PALPATION*

1	The axillary examination is performed with the patient seated facing the examiner.	
2	To examine the right axilla, the patient's right forearm is supported by the examiner's right hand.	
3	The tips of the fingers of the examiner's left hand start low in the axilla, and, as the patient's right arm is drawn medially, the examiner advances the left hand higher into the axilla.	
4	The technique of using small, circular motions of the fingers riding over the ribs is used for detecting adenopathy.	
5	After one axilla is examined, the other is evaluated by the examiner's opposite hand.	
6	Ask the patient to lie down and is told that palpation of the breast is next.	
7	The examiner stands at the right side of the patient's bed.	
8	Instruct the patient to place their hands behind their head. A pillow placed beneath the shoulder on the side being examined will facilitate the examination.	
9	The examiner should use both the flat of the hand and the fingertips.	
10	Palpation should be performed methodically by either the "spokes of a wheel" or the "concentric circles" approach.	
11	The spokes of a wheel" method starts at the nipple.	
12	The examiner should start the palpation by moving from the nipple to the 12 o'clock position, then should return to the nipple and move along the 1 o'clock position and continue the palpation around the breasts	
13	The "concentric circles approach" also starts at the nipple, but the examiner moves from the nipple in a continuous circular manner around the breast.	
14	Any lesion or mass found is described according its size, shape, delimitation, consistency and mobility, and as being a certain distance from the nipple in clock time.	
15	The sub-areolar area should be palpated while the patient is lying supine.	
16	Inspect for nipple retraction, fissures, and scaling and palpate for tenderness and discharge.	

CHECK-LIST /PROSTATE GLAND EXAMINATION

1	The patient is told that a rectal examination will now be performed.	
2	The examiner lubricates the right gloved index finger and places the left hand on the patient buttocks	
3	As the left hand spreads the patient's buttocks, the examiner's right index finger is gently placed on the anal verge.	
4	The sphincter should be relaxed by gentle pressure with the palmar surface of the finger.	
5	The patient is instructed to take a deep breath, at which time the right index finger is inserted into the anal canal as the anal sphincter relaxes.	
6	The sphincter should close completely around the examining digit.	
7	The finger should be inserted as far as possible into the rectum, although 10 cm is the probable limit of digital exploration	
8	The left hand can now be moved to the patient's left buttock, while the right index finger examines the rectum	
9	The prostate gland lies anterior to the wall of the rectum. Only the lower apex portion of the gland is palpable.	
10	The size, surface, consistency, sensitivity, and shape of the prostate gland should be assessed.	
11	Inform the patient that you are now going to withdraw your finger.	
12	Gently remove the examining finger and give the patient tissues to wipe himself.	

CHECK-LIST /THYROID GLAND EXAMINATION

1.	Inspect the thyroid gland	
2.	Stand behind the patient & ask them to slightly flex their neck (to relax the sternocleidomastoids)	
3.	Place your hands either side of the neck	
4.	Ask if the patient has any pain in the neck before palpating	
5.	Place the 3 middle fingers of each hand along the midline of the neck below the chin	
6.	Locate the upper edge of the thyroid cartilage (“Adam’s apple”)	
7.	Move inferiorly until you reach the cricoid cartilage / ring	
8.	Palpate the thyroid isthmus using the pads of your fingers (not the tips)	
9.	Palpate each lobe of the thyroid in turn by moving your fingers out laterally from the isthmus	
10.	Ask the patient to swallow some water, whilst you feel for symmetrical elevation of the thyroid lobes (asymmetrical elevation may suggest a unilateral thyroid mass)	
11.	Ask the patient to protrude their tongue once more (if a mass is a thyroglossal cyst, it will rise during tongue protrusion)	

Genitourinary System Examination

Theoretical Lecture	
Session Outcomes	**Teaching Methods**
• Demonstrates the pelvic examination: bimanual and with speculum. • Discusses fundamental skills required for physical examination of the genitourinary system.	• Video presentation. • Tutor Presentation: with wall sheets and manikins. • "The essentials of genitourinary system examination."

Practical Lecture	
Session Outcomes	**Teaching Methods**
• Discusses the skills required for the physical examination of the pelvis. • Demonstrates the examination techniques for the pelvic examination: bimanual and with speculum. • Demonstrates cervical smear sampling skill. • Demonstrates urinary catheterization.	• Tutor demonstration for each group with checklists, pelvic models and labsheets. • Individual practice of; o Female pelvic examination o Cervical smear sampling o Urinary catheterization with models, checklists and having per review and tutor feedback after each application.

CHECK-LIST / PELVIC EXAMINATION WITH SPECULUM AND SMEAR SAMPLING

1	Drape the patient appropriately and then assist her into the lithotomic position	
2	Inspect the patient's external genitalia	
3	Select a speculum of appropriate size and shape	
4	Tell the patient the procedure	
5	Insert two fingers of the other hand just inside the vaginal introitus	
6	Apply pressure downward	
7	With fingers still in place insert the closed speculum at an oblique angle over the fingers and directed at a 45-degree angle downward	
8	Remove fingers rotate the speculum into a horizontal position, maintaining the pressure to the posterior.	
9	Insert it in the length of the vaginal canal	
10	Open the speculum and adjust it until it cups the cervix and brings it into full view	
11	Lock the speculum blades into place.	
12	Place cervical smear brush into the orificium externum of the cervical canal	
13	Rotate the brush 360 degree clockwise to sample cells from squamo-columnar junction	
14	Take off the brush and lay the smear on the slide	
15	To withdraw the speculum; first release the thumb screw while the speculum clears the cervix, and maintain the open position of the speculum with the thumb	
16	Withdraw the speculum slowly by observing the vagina	

CHECK-LIST / BIMANUAL PELVIC EXAMINATION

1	Lubricate the index and middle fingers of one of your gloved hands.	
2	Gradually insert them into the vagina exerting pressure primarily posteriorly.	
3	Palpate the vaginal walls as you insert your fingers	
4	Palpate the cervix	
5	Feel the fornices around the cervix	
6	Place the other hand on the abdomen about midway between the umbilicus and the symphis pubis	
7	While elevating the cervix and uterus with the pelvic hand, press the abdominal hand in and down, trying to grasp the uterus between the two hands	
8	Slides both fingers of the pelvic hand into the anterior fornix to feel the anterior surface of the uterus	
9	If you cannot feel the uterus, slide your pelvic fingers into the posterior fornix to feel the anterior surface of the uterus	
10	Place the abdominal hand on the right or left lower quadrant, your pelvic hand in the ipsilateral fornix	
11	Press the abdominal hand in and down, trying to push the adnexal structures toward pelvic hand, palpate each ovary	
12	Repeat the procedure on the left side	
13	Withdraw your two fingers slightly	

CHECK-LIST / URINARY CATHETERIZATION (FEMALE)

1	Explain procedure	
2	Place a female in a dorsal recumbent position	
3	Drape the patient with a bath blanket for privacy and warmth	
4	Position external light source to focus on perineum and meatus	
5	Work from the side of the bed that puts your dominant hand toward the foot of the bed	
6	Have your assistant stand on the opposite side	
7	Wash perineal area with soap and water	
8	Place the catheterization material between the patient's legs about 45cm from the perineal area	
9	Material bundle should contain a pens, sterile lubricant, antiseptic solution, sterile gas, a tray and a sterile drap to lye under the patient, and should provide a sterile area once opened.	
10	Position collection bag and tubing connector safely either connecting one to the other safely or putting the end part of the tube in a tray.	
11	Place a drap under the patient's buttocks	
12	Use a clean glove to separate the labia and check the visibility of the meatus	
13	Put on sterile gloves	
14	Pour the antiseptic on the sterile absorbent gas	
15	Test the balloon inflation	
16	Lubricate the catheter	
17	Separate the labia with the non-dominant hand	
18	Use forceps to cleanse labia and meatus with absorbent gas	
19	Cleanse from anterior to posterior with one stroke per gas ending with meatus	
20	Once the labia have been cleansed, they must be hold apart with the help of a sterile absorbent gas, until the catheter is inserted	
21	Insert the catheter with dominant hand slowly and gently, slightly downward to follow the natural curve of the urethra until urine flows (total depth 5 to 7.5 cm)	
22	Release labia and hold catheter in place firmly	
23	Inflate the balloon by inserting <10ml fluid with a prefilled syringe	
24	Tug gently on the catheter to be sure it is in place securely	
25	Secure the catheter to the leg or abdomen	
26	Remove the equipment, clean and dry the perineum and return the patient to a comfortable position	
27	Position drainage bag and tubing correctly	

CHECK-LIST / URINARY CATHETERIZATION (MALE)

1	Explain procedure	
2	Place a male in in a supine position with the legs together or slightly apart.	
3	Fold the top linen down to the middle of his tighs and drape him for privacy and warmth.	
4	Work from side of bed that places your dominant hand toward the patient's feet.	
5	Have your assistant stand on the opposite side.	
6	Wash perineal area with soap and water.	
7	Place the catheterization material on the bed beside his knees or on the overbed table positioned across his knees.	
8	Material bundle should include a pens, sterile lubricant, antiseptic solution, sterile gas, a tray and a sterile drap to lye under the patient, and should provide a sterile area once opened.	
9	Position collection bag and tubing connector safely either connecting one to the other safely or putting the end part of the tube in a tray.	
10	Place a sterile drap over the patient's legs just below the penis.	
11	Put on sterile gloves	
12	Pour the antiseptic on the sterile absorbent gas	
13	Test the balloon inflation	
14	Lubricate the catheter	
15	Hold the absorbent gas with the forceps and cleanse the head of penis and meatus with circular strokes from meatus outward.	
16	Once the non-dominant hand holds the penis it is contaminated and must not be returned to the sterile area, all sterile equipment must be handled only with the other hand.	
17	Once the penis has been cleansed, the foreskin must be hold apart with the help of a sterile absorbent gas, until the catheter is inserted	
18	Stretch the penis upright, at a right angle to the abdomen, and direct the catheter straight downward.	
19	If you encounter resistance do not force the catheter, rotate it, wait briefly and ask the patient to take a deep breath, which usually relaxes the urethral sphincters.	
20	Insert the catheter until urine flows (total depth of 18 to 20 cm.)	
21	Inflate the balloon by inserting <10ml fluid with a prefilled syringe.	
22	Tug gently on the catheter to be sure it is in place securely.	
23	Secure the catheter to the leg or abdomen.	
24	Remove the equipment, clean and dry the perineum and return the patient to a comfortable position.	
25	Position drainage bag and tubing correctly.	

COMPREHENSIVE PHYSICAL ASSESSMENT (CHECKLIST) (Head to Toe)

Dr.Bülent SEZGİN

General appearance

1) Note general appearance
2) Level of consciousness
3) Signs of distress
4) Apparent state of health
5) Facial expression

Hand inspection

1) Clubbing
2) Peripheral cyanosis
3) Cigarette staining
4) Splinter haemorrhages
5) Palmar eritema
6) Capillary refill

Vital Signs

1) Take the BP in one arm
2) Take the radial pulse for 15 secs (x4)
3) Count the respiratory rate for 1 minute
4) Body temperature

Head and Face

1) Inspect the skull, scalp, hair
2) Inspect the face shape, size, symmetry, contour
3) Have the patient raise and lower eyebrows, show teeth,smile,puff out cheeks (CN VII)
4) Trigeminal (CN V)
   While palpating the temporal and masseter muscles in turn, ask the patient to clench her teeth

Eyes

1) Inspect external eye

Inspect position and alignment with each other
Inspect the conjunctiva and sclera
Inspect the cornea and lens, using a penlight
Inspect the pupils for size, shape and symmetry

2) Check for **visual acuity** using a Snellen eye card
3) Assess **visual fields**
4) Assess **pupillary reflexes** (light reflex)
   a) To light—ask the patient to look into the distance and shine a bright light obliquely into each pupil in turn.
      i Note direct reaction—pupillary constriction in the same eye
      ii Note indirect reaction—pupillary constriction in the opposite eye
      iii Pupillary light reflex (CN II , III)
   b) Assess **accomodation** – ask the patient to look alternately at a pencil held 10 cm from his eye and into the distance directly behind it. Observe for pupillary constriction with near effort
5) Assess **Extraocular movements**
   a) Ask the patient to follow your finger or pencil as you sweep through the **six cardinal directions of gaze**

Ears

1) Inspect the external ear—auricle or pinna
2) **Assess hearing**

a) Ask the patient to occlude one ear with a finger and then the examiner whispers softly from 50 cm away **(whisper test)**
b) **Check air and bone conduction**
   i) Weber test
   place the tuning fork on top of the patient's head
   Ask where the patient hears it
   ii) Rinne test
   Place the tuning fork on the mastoid bone
   When the patient can no longer hear the sound, quickly place the fork close to the ear canal and ask whether sound can still be heard

Nose

1) Inspect external part of nose: symmetry, deformity, deviations
2) Inspect nasal cavity: Push gently on the tip of the nose to widen the nostrils
3) Use a penlight to view the nasal vestibule
4) Occlude one nostrils and check air flow
5) If patient reported impared sense of smell, test CN I.
6) Palpate the frontal and maxillary sinuses for tenderness

Mouth and Pharynx

1) Inspect the tongue and floor of the mouth
2) Inspect the pharynx

a) Ask the patient **say "aahh"** : soft palate rise and uvula stay midline position)(CN IX,X)
b) Ask patient to **stick out his tongue** , and push his cheeks against you resistance (N.Hypoglosseus)
c) Touch back of tongue with the blade- **gag reflex (CN X)**

Spinal Accessory (CN XI)

a) Ask the patient to shrug both shoulders against your hands
b) Ask the patient to turn her head to each side against your hand

Thyroid Exam

Inspect the neck from the front and the side for:
Size and shape, scars
Ask the patient to take a sip of water and look for upward movement of the gland
Inspect proptosis, lid lag

Palpation:
Positioning yourself behind the patient, start at the midline, move your hands inferiorly to pass over the thyroid cartilage until you feel the cricoid cartilage.
Using the pads of your fingers, gently palpate the isthmus and thyroid lobes
Push one lobe to the other side and gently palpate the other lobe

Lymph Node assessment:

Tilt patients head to the side
Raise patients shoulder up
Cervical, supraclavicular, submandibular and axillar lymph nodes palpation

Thorax

1) Inspection

Inspect the cervical, thoracic and upper lumbar spine
Inspect the shape and movement of the chest wall
Accessory muscle on respiration

2) Palpation

Palpate the spinous processes of each vertebra for tenderness with your thumb
Assess for costovertebral tenderness
Chest Expansion: Place your thumbs at the level of the 10th ribs with your fingers loosely grasping the rib cage and gently slide them medially.
-Ask the patient to inhale deeply and observe whether your thumbs move apart symmetrically.
-Palpate for **tactile fremitus**

a) Use either the ball of your palm or the ulnar surface of your hand for palpation
b) Ask the patient to repeat the words **"ninetynine"**
c) You may palpate one side at a time or use both hands simultaneously to compare sides
d) Palpate on both sides and compare

3) Percussion

a) Ask the patient to keep both arms crossed in front of the chest
("give yourself a hug please!')
b) **Percuss in seven areas** on each side
c) **Diaphragmatic excurtion**

4) Auscultate for breath sounds

a) Instruct the patient to breathe deeply through an open mouth
b) Listen in the same seven areas in which you percussed
Normal breath sounds :(vesicular, bronchial, bronchovesicular
Abnormal breath sounds: Crackles, wheezes, stridor, rub

Breast Examination

Inspection:
size, shape, symmetry,lesions, dimpling, or retraction
Palpation:
Supine position with shoulder support
–Use pads of fingers of dominant hand

Cardiovascular

1) Inspect the neck for **jugular venous pulsations**
a) Turn the patient's head slightly away from the side you are inspecting
b) Raise or lower the bed until you identify the pulsations (looking for biphasic movement)
c) Identify the highest point of pulsation
i) **Meausure the vertical distance** of this point above the sternal angle
2) Inspect the neck for carotid pulsations
3) Palpate the carotid pulsation
4) Auscultate the carotid arteries for bruits with the bell of the stethoscope
(Ask the patient to take a deep breath and hold it to eliminate breath sounds)

The patient should be supine with the upper body raised by elevating the table to about 30°.

Inspect the precordium

a) look for **apical impulse**
b) look for any other movements

5) **Palpate** for precordium

a) Use the palmar surfaces of several fingers,
b) to identify **thrills** to **locate the PMI (point of maximal impuls)**—can switch to one fingertip when located
i) Displace a woman's breast upward or laterally, or ask her to do this for you
ii) Note location of PMI, amplitude and duration
c) Palpate for the RV impulse along the lower left sternal border

6) **Auscultation** of the heart

a) Listen to the heart with the diaphragm of your stethoscope in the R 2nd ICS, L 2nd ICS, L 3rd or 4th ICS, and the lower left sternal border (5th ICS) and at the apex (may also start at the apex and proceed to the base of the heart)

Identify S1 and S2
Distinguish Systoli from Diastoli
Other sounds and murmurs
Listen Six auscultatory areas

Abdomen

1) The patient should be in a supine position with arms at side or folded across the chest
2) The drapes should be arranged to expose the abdoment from above the xyphoid process to the symphysis pubis.
3) **Inspect** the abdomen: contour, distention,umbilicus,caput medusea, pulsations,spider neavi,
4) **Ausculate** the abdomen
   a) Listen for bowel sounds
      i) Listening in one spot is sufficient
   b) Listen for an aortic bruit on the midline just above the naval
5) **Percuss** the abdomen lightly in four quadrants

Identify tender or painful area.
If there is dullness, do **ascites** exam.
(**fluids wave, shifting dullness**)

6) **Palpation: Have patients knees bend**

Palpate the abdomen **lightly** in four quadrants and in the suprapubic and epigastric areas
Use a gentle, light dipping motion
Check for **abdominal hardness,** if there is;
check for
Rovsing's sign : Appendicitis
(Palpate LLQ causes RLQ pain)
Murphy's sign: Cholecystitis
(arrest of deep inspiration on RUQ palpation)
Mc Burney's sign : Appendicitis
(tenderness at Mc Burney point)
Rebound Tenderness: Peritonitis

Palpate the abdomen **deeply** in all four quadrants
Use a firmer dipping motion
Check for **mass**

Liver Examination

1) Percuss for **liver dullness**
   a) Define the lower edge of liver dullness in the mid-clavicular line, starting at a level below the umbilicus
   b) Define the upper edge of liver dullness in MCL, starting in the area of lung resonance
   c) Measure in centimeters with a ruler the vertical span of liver dullness in the MCL

Palpate for the liver edge

a) Place your right hand on the right abdomen lateral to the rectus muscle, beginning more than 3 fingerbreadths below the costal margin
b) Ask the patient to take in a deep breath
c) Palpate upwards trying to feel the descending liver edge, using a rocking motion

(may also use the "hooking technique")

Spleen Examination

1) Percuss for **splenic dullness**

Identify **Traube's space**
(between 6th rib, midaxillary line ,costal margin)
Normally: Tympanic
If dull on inspiration : Spleen enlarged

a) Percuss along the left lower chest wall between the lung resonance above and the costal margin moving laterally
b) Ask the patient to take a deep breath and percuss again in this area

Palpate for a spleen tip

a) Reach over and around the patient with your left hand to support and press forward the lower left rib cage
b) Press inward towards the spleen with your right hand, beginning at least 3 finger breadths below the left costal margin
c) Ask the patient to take in deep breaths, trying to feel the spleen tip as it comes down to meet your fingertips.

Digital Rectal Examination : Optional

GALS : optional

Neurological – The remaining components of the neurological exam are covered here

1) Reflexes
a) Biceps reflex (C5, C6)
b) Triceps reflex (C6, C7)
c) Knee (Patellar) reflex (L2, L3, L4)
d) Ankle (Achilles) reflex (S1)
e) Plantar (Babinski) response (L5, S1)

2) Cerebellar/Coordination
a) Rapid alternating movements
b) Point-to-point movements

3) Gait
a) Ask the patient to walk across the room, then turn and come back
b) Walk heel-to-toe in a straight line
c) Walk on toes then on heels

4) Romberg Test
a) The patient should first stand with feet together and eyes open and then close both eyes for 20-30 secs without support

3. Student Research Activity (SRA)

Within the scope of the ICS-Research component, students are given courses throughout the academic year and each student carries out a research project in a research group with an advisor throughout the academic year (October-May). The aims of this program are:

- Mastering the steps of scientific research
- Literature review
- Managing group work and working with an advisor
- Being able to create a scientific study methodology
- Being able to prepare a research proposal and apply to the ethics committee
- Being able to collect and analyze data
- Preparing and making presentations
- Being able to review and write articles
- Active participation in national and international congressesLiteratür tarama

3rd Year projects (ICS-3 Research)

THEME: Patients and Diseases

Within the scope of this theme, students are expected to work on a specific patient group or a specific disease. At this point, since students are experienced from previous 2 years, they create their own groups and choose their own advisors. They make their work plans with their advisors, apply to ethics committees and carry out their work. Cross-sectional, retrospective, prospective or review studies can be planned in an academic year. Mostly, data is collected from hospitals or laboratory studies are conducted.

Some sample titles from previous years:

- Antibiotic Susceptibility Patterns of Urinary Tract Infection Agents Enterobacteria in Famagusta State Hospital
- Antibiotic Susceptibilities of Various Pathogen Bacteria in TRNC: A Retrospective Analysis
- The prevalence of Metabolic Syndrome among elderly population in Nursing homes in TRNC
- 10-years Cardiovascular Risk assessment among hypertensive Patients in Famagusta, North Cyprus
- Evaluation of factors affecting the health-related Quality of Life of Chronic Renal Failure patients receiving hemodialysis treatment in Northern Cyprus
- Impacts of Vorinostat and Curcumin on Papillary Human Thyroid Cancer Cells; Combination Therapy
- Prevalence of Cognitive Impairment in Famagusta residents over 65 years

- Descriptive Study of The Association between Vitamin D (25OH-3) Levels, Anthropometric Measurement, Metabolic Parameters and HOMA-IR Levels in Patients with Type-II Diabetes Mellitus

MEDN363 Assessment

40% Reports (Including assignments and End-of-year Report)

30% Presentations (Including Oral and Poster presentations)

30% Personal Evaluation (Including Research Mentor's, Coordinator's, Groupmates' and Self Evaluations)

Presentation, Student and Report evaluation forms can be found below.

DOĞU AKDENİZ ÜNİVERSİTESİ - MARMARA ÜNİVERSİTESİ
ULUSLARARASI ORTAK TIP PROGRAMI

KLİNİSYEN BECERİLERİNE GİRİŞ EĞİTİM PROGRAMI
Öğrenci Araştırmaları Bildiri Sunumu Değerlendirme Rehberi

DEĞERLENDİRME ÖLÇÜTLERİ	**DEĞERLENDİRME ARALIĞI**				
ARAŞTIRMA İÇERİĞİ	**Çok yetersiz**	**yetersiz**	**orta**	**iyi**	**Çok iyi**
Başlık, grup numarası, danışman ismi ve grup üyeleri isimlerini içeren **Giriş Slaytı**	1	2	3	4	5
Giriş bölümünde Konu hakkında genel bilgi ve tanımların açıklanması	1	2	3	4	5
Giriş bölümünde konuyla ilgili güncel literatür bilgisi kullanımı, ve benzer çalışmaların gösterilmesi	1	2	3	4	5
Giriş bölümünde araştırma sorusu VEYA temel amacın belirtilmiş olması • Research question(s) VEYA Main aim -> Belirtilmesi zorunludur. • Hypotheses OR Specific objectives -> Var ise belirtilmelidir.	1	2	3	4	5
Yöntem bölümünde araştırma türü, zaman-mekan bilgilerinin belirtilmesi	1	2	3	4	5
Yöntem bölümünde; Çalışma popülasyonu bilgisi VE örneklemin oluşturulma şeklinin açıklanması (study population, sampling method, sample size)	1	2	3	4	5
Yöntem bölümünde; Veri toplama aracının (Anket, vb.) özelliklerinin açıklanması (soru sayısı, kim tarafından hazırlandığı, başka çalışmadan alındıysa referans verilmesi ve izin emailinin gösteril skorlama, vb)	1	2	3	4	5
Yöntem bölümünde; katılımcılara ne şekilde ulaşıldığının belirtilmesi (veri toplamada kullanılan araçlar; google Teams vb)	1	2	3	4	5
Yöntem bölümünde; Veri analizi için kullanılan araçların (SPSS vb) ve analiz metodlarının açık bir şekilde belirtilmiş olması	1	2	3	4	5
Bulguların tablo ve grafiklerle açıklanmış olması, tablo ve grafiklerin değişken tiplerine uygun olması, ham SPS tablosu değil Excel veya uygun bir yazılım ile amaca uygun olarak hazırlanmış olması.	1	2	3	4	5
Bulgularda tanımlayıcı istatistik sonuçlarının verilmesi	1	2	3	4	5
Bulgularda değişkenler arasındaki ilişkilerin istatistik testlerle değerlendirilmiş olması. (Çalışmada hipotez ya d amaç yok ise şart değildir)	1	2	3	4	5
Tartışma bölümünde bulguların yorumlanması ve/veya benzer araştırmalarla karşılaştırılması	1	2	3	4	5
Tartışma bölümünde, (eğer varsa) limitasyonların belirtilmiş olması	1	2	3	4	5
Sonuçlar bölümünde; amaç kısmında verilmiş olan Araştırma sorusu ve amaç ifadelerinin özet şeklinde yanıtlanması	1	2	3	4	5
Kaynaklar bölümünün (herhangi bir yazım stiline uygun olarak) uygun yazılması, ilgili ve güncel kaynaklar kullanılması, metin içlerinde atıf yapılması.	1	2	3	4	5
BİLDİRİ HAZIRLAMA VE SUNMA					
Kullanılan slayt sayısının içeriğin aktarılması için yeterli oluşu	1	2	3	4	5
Slayt sayısının sunum süresi ile uyumluluğu	1	2	3	4	5
Slayt şablonu ve arka plan rengi uygunluğu	1	2	3	4	5
Slaytlardaki harf büyüklüğü, satır sayıları vs. Uygunluğu (max 8-10 satır, 24-30 punto)	1	2	3	4	5
Sunum sonrası sorulardaki başarı durumu ve genel olarak çalışmaya hakim olması	1	2	3	4	5
DEĞERLENDİREN ÖĞRETİM ELEMANI					
TOPLAM PUAN (Toplam puan koordinasyon tarafından hesaplanacaktır.)					

EKLEMEK İSTEDİĞİNİZ YORUMLAR (varsa):

Marmara University - Eastern Mediterranean University International Joint Medical Program
ICS Research course
2023-2024

Form - 2 ARAŞTIRMA SONU ÖĞRENCİ DEĞERLENDİRME FORMU
(DANIŞMAN ÖĞRETİM ÜYESİ TARAFINDAN DOLDURULACAKTIR)

Bu değerlendirme, araştırma etkinliği tamamlandıktan sonra danışman öğretim üyesi tarafından yapılacak ve öğrencinin MEDN163 ders notunu hesaplanmasında kullanılacaktır. Değerlendirmenin aşağıdaki ölçütlere göre, araştırma grubundaki her öğrenci için yapılması gerekmektedir.

Performans Değerlendirme Dereceleri şu şekildedir: 0 = Çok Yetersiz; 1= Yetersiz; 2= Orta; 3= İyi; 4=Çok iyi

Danışman Öğretim üyesinin Adı-Soyadı:

Lütfen, aşağıda listelenmiş olan kriterlere göre danışmanlık yaptığınız grup üyelerinin isimlerini belirterek 0-4 skalasında değerlendiriniz.

Type names here:	Team member 1	Team member 2	Team member 3	Team member 4	Team member 5
Attendance to all online and face-to-face meetings					
Contribution to the determination of topic, literature review, and forming study objectives/research questions/hypotheses					
Contribution to preparation of data collection tools and methods					
Contribution to data collection					
Contribution to data entry and statistical analysis					
Contribution to preparations of presentation and poster					
Contribution to preparation of the research report					
Contribution to teamwork and attitude within the team					
General interest to the study, and feeling responsible about the research project					

	Marmara University - Eastern Mediterranean University International Medical School Introduction to the Clinical Skills Course Form 1 - ARAŞTIRMA RAPORU DEĞERLENDİRME FORMU	**Y3G1**
	Danışman Öğretim üyesinin Adı-Soyadı:	
DEĞERLENDİRME ÖLÇÜTLERİ	**Genel Format Kuralları (15 puan)**	0
	Rapor formatına uygun kapak ve içindekiler sayfaları var mı? (5 puan)	
	Font tipi, başlık ve metin font boyutları, satır aralığı, marjin özellikleri doğru mu? Sayfa numaralandırma yapıldı mı? (5 puan)	
	Kısaltmalar ve grafik-tablo açıklamaları (legend) formata uygun mu? (5 puan)	
	Abstract (10 puan)	0
	Çalışmayı temsil ediyor mu? (2 puan)	
	Kısa bir genel bilgiler kısmı, çalışmanın hedefi/amacı açıkça belirtildi mi? (2 puan)	
	Materyal-Metod anlaşılır şekilde özetlendi mi? (2 puan)	
	Araştırma soruları ya da hipotezlere dair bulgular özetlendi mi? (2 puan)	
	Sonuçlar anlaşılır bir şekilde özetlendi mi? (2 puan)	
	Introduction (15 puan)	0
	Literatür bilgisine dayanan, konuya özel güncel bilgileri de içeren ve araştırmanın önemini ortaya koyan bir arka plan bilgisi sunulmuş mu? (5 puan)	
	Araştırmanın amaçları, Araştırma soruları ve/veya hipotezler net olarak belirtilmiş mi? (5 puan)	
	Araştırmanın başlığı yapılmış olan çalışmayla uygun mu? (5 puan)	
	Material and Methods (20 puan)	0
	Araştırmanın tipi (tanımlayıcı, vaka-kontrol, kohort vs) belirtildi mi ve araştırmanın amacına uygun mu? (5 puan)	
	Evren ve örneklem seçimi ayrıntılı bir şekilde açıklanmış mı? (6 puan)	
	Araştırmada hangi araçlarla ve hangi standartlarda ölçüm yapıldığı ayrıntılı bir şekilde açıklanmış mı? (6 puan)	
	Kullanılan istatistiksel yöntemler açıklanmış mı? (3 puan)	
	Results (15 puan)	0
	Sonuçlar uygun istatistiksel yöntemlerle analiz edilmiş mi? (4 puan)	

Gerekli tanımlayıcı veya karşılaştırma analiz sonuçları doğru ve anlaşılır şekilde aktarıldı mı? (6 puan)	
Tablo ve/veya grafiklerin başlıkları ve düzenlenme biçimleri açıklayıcı ve anlaşılır mı? (3 puan)	
Tablo ve/veya grafiklerden yazı içinde bahsedilerek açıklamaları yazılmış mı? (2 puan)	
Discussion and Conclusion (15 puan)	0
Bulguların kendi içinde tartışıldığı ve/veya başka çalışmalarla karşılaştırıldığı (yani 'tartışma' niteliğine uygun) bir tartışma bölümü var mı? Tartışma literatür bilgisine dayandırılıyor mu? (5 puan)	
Limitasyonlar belirtilmiş mi? (5 puan)	
Sonuçları özetleyen bir conclusion paragrafı verilmiş mi? (5 puan)	
References (7 puan)	0
Metin içinde referanslara atıf yapılmış mı? (3 puan)	
Konuyu dikkate alarak; kaynaklar yeterli ve güncel mi? (2 puan)	
Referanslar yazım kurallarına uygun yazılmış mı? (2 puan)	
Appendices (3 puan)	0
Ölçüm araçlarının tümü (anket ise, onam formu, valide anketler için kullanım izni; anket değil ise veri toplama aracının detayları) Appendix kısmında verilmiş mi? (3 puan)	
TOPLAM (100 Puan)	0

2024-2025 MEDN363 Student Research Activity (ICS-3 Research) course Plan for the Academic Year

Committee	Date	Time	Lecture	Lecture hours	Theoretical (T) or Practical (P)	Instructor
Y3C1	WEEK 2		Student Reserch Activity (SRA) Introduction and Orientation to ICS-3 SRA. Informing about the aims and objectives of the ICS-3 SRA through 2023-24	1	T	Dr. İlke Akçay
			ICS-3 SRA: Feedback from last year	1	T	Dr. İlke Akçay
	WEEK 3		ICS-3 SRA: Theme, Assessment, Timeline and Schedule of the Year	1	T	Dr. İlke Akçay
			ICS-3 SRA: Informing about Ethical Board Application Process	1	T	Dr. İlke Akçay
	WEEK 5		Meeting with mentor	1	P	mentor
Y3C2	WEEK 2		Contents of a Research Proposal	1	T	Dr. İlke Akçay
			Contents of a Research Proposal	1	T	Dr. İlke Akçay
	WEEK 3		Meeting with mentor	1	P	mentor
	WEEK 4		Meeting with mentor	1	P	mentor
	WEEK 5		Meeting with mentor	1	P	mentor
	WEEK 7		Research Proposal Presentations (Gr1 & Gr2)	1	P	Dr. Pemra Ünalan Dr. İlke Akçay
			Research Proposal Presentations (Gr3 & Gr4)	1		Dr. Pemra Ünalan Dr. İlke Akçay
			Research Proposal Presentations (Gr5 & Gr6)	1		Dr. Pemra Ünalan Dr. İlke Akçay
			Research Proposal Presentations (Gr7 & Gr8)	1		Dr. Pemra Ünalan Dr. İlke Akçay
			Research Proposal Presentations (Gr9 & Gr10)	1		Dr. Pemra Ünalan Dr. İlke Akçay
			Research Proposal Presentations: Feedback	1		Dr. Pemra Ünalan Dr. İlke Akçay
	WEEK 7		Meeting with mentor	1	P	mentor
Y3C3	WEEK 2		Meeting with mentor	1	P	mentor
	WEEK 3		Meeting with mentor	1	P	mentor
	WEEK 4		Meeting with mentor	1	P	mentor
	WEEK 5		Critics with groups: Finalizing ethical board applications (Gr1 & Gr2)	1	P	Dr. İlke Akçay
			Critics with groups: Finalizing ethical board applications (Gr3 & Gr4)	1		Dr. İlke Akçay
			Critics with groups: Finalizing ethical board applications (Gr5 & Gr6)	1		Dr. İlke Akçay
			Critics with groups: Finalizing ethical board applications (Gr7 & Gr8)	1		Dr. İlke Akçay

		Critics with groups: Finalizing ethical board applications (Gr9 & Gr10)	1		Dr. İlke Akçay
	WEEK 7	Meeting with mentor	1	P	mentor
Y3C4	WEEK 1	Meeting with mentor	1	P	mentor
	WEEK 3	Meeting with mentor	1	P	mentor
	WEEK 5	Data Analysis Course	1	T	Dr. İlke Akçay
		Data Analysis Course	1	T	Dr. İlke Akçay
		Data Analysis Course	1	T	Dr. İlke Akçay
		Data Analysis Course	1	T	Dr. İlke Akçay
	WEEK 6	Data analysis Practice	1	P	Dr. İlke Akçay
		Data analysis Practice	1	P	Dr. İlke Akçay
		Data analysis Practice			Dr. İlke Akçay
		Data analysis Practice			Dr. İlke Akçay
Y3C5	WEEK 1	Meeting with mentor	1	P	mentor
	WEEK 3	Critics with groups about reporting results (Gr1 & Gr2)	1	P	
		Critics with groups about reporting results (Gr3 & Gr4)	1		
		Critics with groups about reporting results (Gr5 & Gr6)	1		
		Critics with groups about reporting results (Gr7 & Gr8)	1		
		Critics with groups about reporting results (Gr9 & Gr10)	1		
	WEEK 4	Meeting with mentor	1	P	mentor
	WEEK 6	Research Project Presentations	1	P	Dr. Pemra Ünalan Dr. İlke Akçay
		Research Project Presentations	1	P	Dr. Pemra Ünalan Dr. İlke Akçay
		Research Project Presentations	1	P	Dr. Pemra Ünalan Dr. İlke Akçay
		Research Project Presentations	1	P	Dr. Pemra Ünalan Dr. İlke Akçay
		Research Project Presentations	1	P	Dr. Pemra Ünalan Dr. İlke Akçay
		Research Project Presentations	1	P	Dr. Pemra Ünalan Dr. İlke Akçay
		Research Project Presentations	1	P	Dr. Pemra Ünalan Dr. İlke Akçay
		Research Project Presentations	1	P	Dr. Pemra Ünalan Dr. İlke Akçay
	WEEK 7	Feedback session	1	T	Dr. İlke Akçay