



Mansoura Integrated Medical Program for Undergraduates SEM8 Specifications (Fourth Academic Level)

University: Mansoura

Faculty: Medicine

Department offering the course: Cardiovascular Medicine, Chest Medicine, General surgery, Cardiothoracic surgery, Pediatrics, and Obstetrics and Gynecology.

Date of specification approval:

Course information:

- **No. of weeks:** 18
- **Credit hours:** 20 (3 MED + 3 SURG + 7 Pediatrics + 7 Gynecology)

Modules:

- Medicine III (Cardiovascular Medicine and Chest Medicine)
- Surgery III (General surgery and Cardiothoracic surgery)
- Pediatrics (PED II)
- Gynecology (OGYN II)

MED III

Title:	Medicine III
Code:	MED III
No. of weeks:	2.5 weeks
Credit hours:	3 hours (1.5 Cardiovascular Medicine + 1.5 Chest Medicine)
Teaching hours:	19h lectures+ 30h Clinical rounds+ 12 h seminars + 6h Skill Lab+ 1 h assignment

SURG III

Title:	Surgery III
Code:	SURG III
No. of weeks:	2.5 weeks
Credit hours:	3 hours (2.5 General surgery + 0.5 Cardiothoracic surgery)
Teaching hours:	21h lectures+51h Clinical + 7 Incision Academy

PED II

Title:	Pediatrics
Code:	PED II
No. of weeks:	5 weeks
Credit hours:	7
Teaching hours:	47h lectures+ 13h seminars + 30h clinical rounds + 30h CBL + 5h assignment

OGYN II

Title:	Gynecology
Code:	OGYN II
No. of weeks:	5 weeks
Credit hours:	7
Teaching hours:	51h lectures + 10h seminars + 30h clinical rounds + 16h Practical and skill lab + 6h incision academy +18h CBL + 2h assignment

Overall aims of course: by the end of the course the student should be able to:

- Acquire the clinical skills of medical history taking and physical examination to reach the diagnosis and recognize the management of acute and chronic cardiovascular diseases.
- Enable students to acquire knowledge and skills related to the most common chest diseases.
- To provide the student with the appropriate knowledge, skills, and attitude which enable him/her to obtain a detailed history from patients with surgical problems, to carry out a proper clinical examination, choose the suitable investigations and to define the appropriate management plan for breast, groin and scrotum disorders.
- To provide the student with the appropriate knowledge, skills, and attitude which enable him/her to obtain a detailed history from patients with CTS surgical problems, to carry out a proper clinical examination, choose the suitable investigations and to define the appropriate management plan.
- To provide the student with the appropriate knowledge, skills, and attitude which enable him/her to obtain a detailed history from patients with pediatric medical problems related to respiratory system, gastroenterology and hepatology, hematology and oncology, pediatric emergencies, cardiology, infectious diseases, to carry out a proper clinical examination, choose the suitable investigations and to define the appropriate management plan.
- To provide students with knowledge, skills and attitudes necessary to make an essential gynecology framework for the general practitioner including awareness of the common gynecologic emergencies. In addition, students will be acquainted with the main activities of scientific research and community service provided by the department.

Semester learning outcomes (LOs):

Competency Area I: The graduate as a health care provider the graduate should provide quality, safe, patient-centered care, drawing upon his/her integrated knowledge and clinical skills, and adhering to professional values. The graduate should collect and interpret information, make clinical decisions, and carry out diagnostic and therapeutic interventions - with an understanding of the limits of his/her expertise-considering the patient's circumstances and preferences as well as the availability of resources.	
NARS	Semester LOs
1.1 Take and record a structured, patient centered history.	1.1.1. Identify symptoms of different cardiovascular diseases. 1.1.2. Analyze symptoms of different cardiovascular diseases. 1.1.3. Differentiate between cardiac and non-cardiac patients. 1.1.4. Take and record a structural, patient centered history of the commonest chest diseases (B.A., COPD, Pneumonia, Pulmonary & Extrapulmonary tuberculosis, Suppurative lung disease, diffuse parenchymatous lung disease, ARDS, Sleep disordered breathing, lung cancer and pleural disease). 1.1.5. Take and record a structured, patient centered history for Breast, Hernias and scrotal disorders. 1.1.6. Take and record a structured, patient centered history for CTS such as lung cancer and TB. 1.1.7. Construct patient centered history for pediatric medical disorders. 1.1.8. Construct patient centered history for different gynecologic situations throughout female life cycle.
1.2 Adopt an empathic and holistic approach to the patients and their problems.	1.2.1. Adopt an empathic and holistic approach to the patients and their problems during dealing with the patient. 1.2.2. Break bad news for the parents having child with childhood malignancies, congenial heart diseases, chronic respiratory problems, and GIT diseases. 1.2.3. Apply proper counselling in gynecology for infertility and sexual problems.

1.3 Assess the mental state of the patient	1.3.1. Assess the mental state in pediatric as a part of evaluating the development of patients.
1.4 Perform appropriately-timed full physical examination of patients, appropriate to the age, gender, and clinical presentation of the patient while being culturally sensitive.	1.4.1. General examination of patients with cardiovascular symptoms. 1.4.2. Examine neck veins. 1.4.3. Examine peripheral pulse 1.4.4. Examine LL & generalized edema. 1.4.5. Perform local cardiac examination (inspection & palpation, percussion & auscultation). 1.4.6. Perform general examination (regarding chest cases). 1.4.7. Perform local chest examination. 1.4.8. Measure pulse rate, respiratory rate and blood pressure. 1.4.9. Perform general examination for patient with Breast, hernia and scrotal disorders. 1.4.10. Perform local examination for patient with breast diseases. 1.4.11. Perform local examination for patient with hernias. 1.4.12. Perform local examination for scrotal disease. 1.4.13. Perform general examination for patient with CTS diseases. 1.4.14. Perform local examination for the heart. 1.4.15. Perform local chest exam. 1.4.16. Perform appropriately timed full general and local examination of infants and children. 1.4.17. Perform full physical examination of women (Skill lab). 1.4.18. Perform complete local gynecologic examination. 1.4.19. Examine the breast.

<p>1.5 Prioritize issues to be addressed in a patient encounter.</p>	<p>1.5.1 Identify priorities in patients with cardiovascular emergencies like acute coronary syndrome, acute heart failure, arrhythmia, cardiac tamponade and hypertension emergencies</p> <p>1.5.2. Prioritize in patient with chest emergency “Acute severe asthma, COPD exacerbation, ARDS, Respiratory failure”.</p> <p>1.5.3 Prioritize issues regarding urgent conditions of breast, hernia, scrotum.</p> <p>1.5.4 Prioritize issues regarding urgent conditions such as pneumo thorax and disaster injuries.</p> <p>1.5.5 Prioritize urgent condition in pediatric disorders.</p> <p>1.5.6 Recognize complex cases related to different gynecologic cases.</p> <p>1.5.7 Apply the differential diagnosis in different complex gynecologic cases.</p>
<p>1.6 Select the appropriate investigations and interpret their results taking into consideration cost/ effectiveness factors.</p>	<p>1.6.1 Select the appropriate investigations in different cardiovascular cases.</p> <p>1.6.2 Select investigation for (B.A., COPD, Pneumonia, Pulmonary & Extrapulmonary tuberculosis, Suppurative lung disease, diffuse parenchymatous lung disease, ARDS, Sleep disordered breathing, lung cancer and pleural disease).</p> <p>1.6.3 Interpret chest x ray, ABG, PFT.</p> <p>1.6.4 Select appropriate investigations for breast diseases.</p> <p>1.6.5 Choose the appropriate investigations for a case with hernia.</p> <p>1.6.6 Select suitable investigations for a case of scrotal disease (swelling, varicocele ...).</p> <p>1.6.7 Select appropriate investigations for the cardiothoracic diseases and injuries.</p>

	<p>1.6.8 Select appropriate investigations for infants and children with different pediatric disorders.</p> <p>1.6.9 Interpret x-ray imaging in patient with CHD.</p> <p>1.6.10 Interpret radiologic and laboratory findings for a case with bronchial asthma, wheezy chest, pleural diseases and bronchiolitis.</p> <p>1.6.11 Interpret radiologic and laboratory findings for gastrointestinal disorders as neonatal cholestasis, hepatitis and liver cell failure.</p> <p>1.6.12 Interpret radiologic and laboratory findings for infants and children with hematological and oncological disorders.</p> <p>1.6.13 Interpret laboratory findings for infants and children with infectious diseases.</p> <p>1.6.14 Interpret laboratory findings for infants and children with pediatric emergencies.</p> <p>1.6.15 Select basic laboratory investigations for gynecologic problem at hand.</p> <p>1.6.16 Interpret investigations for infertile couple.</p> <p>1.6.17 Determine the suitable investigations for suspected genital malignancies.</p> <p>1.6.18 Select the proper investigations for abnormal uterine bleeding.</p>
<p>1.7 Recognize and respond to the complexity, uncertainty, and ambiguity inherent in medical practice.</p>	<p>1.7.1. Recognize the differential diagnosis of chest pain, dyspnea, syncope and palpitation.</p> <p>1.7.2. Recognize clinical features of OSA & nicotine dependence.</p> <p>1.7.3. Recognize differential diagnosis of (cough, expectoration, chest pain, dyspnea, haemoptysis and wheezes).</p> <p>1.7.4. Recognize difference between chronic bronchitis and emphysema.</p> <p>1.7.5. Recognize difference between COPD & BA.</p>

	<p>1.7.6. Differentiate between various types of breast swellings and nipple discharge.</p> <p>1.7.7. Recognize different presentations of hernias</p> <p>1.7.8. Identify the differential diagnosis of Inguinal, inguinoscrotal and Scrotal swellings</p> <p>1.7.9. Differentiate between chest and cardiac cause of chest pain and dyspnea to reach a differential for both chest pain and dyspnea</p> <p>1.7.10. Identify emergent cases with complex uncertain or ambiguous nature in gynecology.</p>
<p>1.8 Apply knowledge of the clinical and biomedical sciences relevant to the clinical problem at hand.</p>	<p>1.8.1. Relate the clinical presentation of different cardiovascular diseases like heart failure, ischemic heart diseases, arrhythmia and infective endocarditis with the underlying pathophysiology.</p> <p>1.8.2. Define (B.A., COPD, Pneumonia, Suppurative lung disease, diffuse parenchymatous lung disease, ARDS, Sleep disordered breathing, lung cancer and pleural disease)</p> <p>1.8.3. Compare between intrinsic & extrinsic BA.</p> <p>1.8.4. Differentiate between type I and type II respiratory failure</p> <p>1.8.5. Correlate the clinical picture of pneumonia with the pathophysiology</p> <p>1.8.6. Integrate the clinical picture of BA and COPD with the pathophysiology.</p> <p>1.8.7. Correlate anatomy with diseases of breast, groin and scrotum</p>

	<p>1.8.8. correlate the surgical anatomy of the heart with differential diseases.</p> <p>1.8.9. Correlate the applied anatomy of the lung with pulmonary diseases.</p> <p>1.8.10. Correlate anatomy and function of respiratory system (upper and lower respiratory tract) with respiratory problems in pediatrics.</p> <p>1.8.11. Correlate anatomy of cardiovascular system in children with congenital heart disease.</p> <p>1.8.12. Correlate normal anatomy of gastrointestinal system in children with GIT disorders in pediatrics.</p> <p>1.8.13. Determine deviation from physiologic changes during puberty and menopause.</p> <p>1.8.14. Correlate the anatomy of female genital system with different gynecologic presentations.</p> <p>1.8.15. Relate clinical findings to both normal and abnormal uterine bleeding.</p> <p>1.8.16. Justify the histologic changes related to menstrual irregularities.</p> <p>1.8.17. Relate the physiologic changes in female genital system with different cyclic events.</p>
<p>1.9 Retrieve, analyze, and evaluate relevant and current data from literature, using information technologies and library resources, in order to help solve a clinical problem based on evidence (EBM)</p>	<p>1.9.1 Use information technologies and library resources.</p>
<p>1.10 Integrate the results of history, physical examination and laboratory test findings into a meaningful diagnostic formulation</p>	<p>1.10.1 Integrate the results of history, physical and laboratory test findings examination and investigations to reach the preliminary diagnosis of cardiovascular diseases and the differential diagnosis.</p>

	<p>1.10.2 Integrate the results of history, general and local chest examination and laboratory tests finding to reach diagnosis of chest case.</p> <p>1.10.3 Integrate the results of history, physical examination and laboratory test to reach diagnosis of breast disorder.</p> <p>1.10.4 Integrate the results of history, physical examination and laboratory test to reach diagnosis of patient with hernia.</p> <p>1.10.5 Integrate the results of history, physical examination and laboratory test to reach diagnosis of scrotal disease</p> <p>1.10.6 Integrate the results of history, physical examination and laboratory test to reach diagnosis of cardiothoracic problem</p> <p>1.10.7 Integrate the results of history, physical examination and laboratory test to reach a differential diagnosis of CTS diseases.</p> <p>1.10.8 Integrate the results of history, physical examination and laboratory test to reach to preliminary diagnosis of different pediatric disorders</p> <p>1.10.9 Reach a provisional diagnosis after integration of history, physical examination and laboratory test findings in different gynecologic cases.</p>
<p>1.11 Perform diagnostic and intervention procedures in a skillful and safe manner, adapting to unanticipated findings or changing clinical circumstances.</p>	<p>1.11.1 Perform ECG.</p> <p>1.11.2 Interpret ECG.</p> <p>1.11.3 Use a nebulizer for administration of inhalation therapy.</p> <p>1.11.4 Take smears from suspected cases with malignancy (skill lab).</p> <p>1.11.5 Perform IUD insertion and removal (skill lab).</p> <p>1.11.6 Take swabs for different diagnostic purposes.</p> <p>1.11.7 Perform female bladder catheterization (skill lab)</p>

	1.11.8 Perform local gynecologic examination (skill lab).
1.12 Adopt strategies and apply measures that promote patient safety	<p>1.12.1 Adopt strategies and apply measures that promote patient safety during surgery (preoperative preparation).</p> <p>1.12.2 Discuss strategies that promote patient safety during management of coma.</p> <p>1.12.3 Identify strategies that promote patient safety during management of metabolic emergencies.</p> <p>1.12.4 Discuss strategies that promote patient safety during management of seriously ill child.</p> <p>1.12.5 Improve communication skills to ensure patient safety.</p> <p>1.12.6 Apply measures that prevent infection during various procedures.</p>
1.13 Establish patient-centered management plans in partnership with the patient, his/her family and other health professionals as appropriate, using Evidence Based Medicine in management decisions.	<p>1.13.1. Design different management plans in different cardiovascular diseases like acute & chronic coronary syndrome, valvular heart diseases, acute and chronic heart failure, arrhythmia and pericardial diseases.</p> <p>1.13.2. Construct management plan for airway diseases (COPD, BA).</p> <p>1.13.3. Design management plan for infectious lung disease “pneumonia, TB, Suppurative lung disease”.</p> <p>1.13.4. Outline management plan for OSA, lung cancer, DPLD</p> <p>1.13.5. Establish management plan for ARDS, Respiratory failure & pleural diseases.</p> <p>1.13.6. Describe different types of surgeries for breast diseases benign and malignant.</p> <p>1.13.7. Construct a management plan for breast cancer during pregnancy</p>

	<p>1.13.8. Establish management plan for non-complicated hernias</p> <p>1.13.9. design management plan in a case of complicated hernias</p> <p>1.13.10. Describe types of ventral hernia repair</p> <p>1.13.11. Define surgical management of varicocele</p> <p>1.13.12. Discuss management of hydrocele, haematocel, and pyocele</p> <p>1.13.13. Illustrate principles and types of operations for groin hernia</p> <p>1.13.14. Describe different types of surgeries for CTS diseases</p> <p>1.13.15. Establish patient-centered management plans in partnership with the patient, his/her family as appropriate, using updated pediatric guidelines in management decisions in different pediatric disorders</p> <p>1.13.16. Create evidence-based management plans for different gynecologic situations</p> <p>1.13.17. Manage case with blood loss</p> <p>1.13.18. Propose management for cases with acute PID</p> <p>1.13.19. Assess and manage cases with complicated ovarian cyst</p> <p>1.13.20. Plan for cases severe vaginal bleeding</p> <p>1.13.21. Evaluate cases with urine retention caused by gynecologic conditions.</p> <p>1.13.22. Construct a plan to correct electrolyte in relevant to the patient's conditions.</p>
<p>1.14 Respect patients' rights and involve them and /or their families / carers in management decisions.</p>	<p>1.14.1. Respect patients' rights and involve them and /or their families / careers in management plan for pediatric disorders (informed decision).</p>

	1.14.2. Take an informed consent in different gynecologic situations
1.15 Provide the appropriate care in cases of emergency, including cardio-pulmonary resuscitation, immediate life support measures and basic first aid procedures	1.15.1 Provide the appropriate care in cases of emergency, including cardio-pulmonary resuscitation, immediate life support measures and basic first aid procedures for pediatric patients.
1.16 Apply the appropriate pharmacological and nonpharmacological approaches to alleviate pain and provide palliative care for seriously ill people, aiming to relieve their suffering and improve their life.	1.16.1 Select appropriate pharmacological and non-pharmacological approaches to alleviate dysmenorrhea by its different types.
1.17. Contribute to the care of patients and their families at the end of life, including management of symptoms, practical issues of law and certification.	1.17.1. Construct management plans in end stage heart failure

Competency Area II: The graduate as a health promoter the graduate should advocate for the development of community and individual measures which promote the state of well-being, he/she should empower individuals and communities to engage in healthy behaviors, and put his/her knowledge and skills to prevent diseases, reduce deaths and promote quality life style. The graduate should be able to:

NARS	Semester LOs
2.2 Recognize the economic, psychological, social, and cultural factors that interfere with wellbeing.	2.2.1. Recognize the economic, psychological, social, and cultural factors that interfere with wellbeing in pediatric health
2.3 Discuss the role of nutrition and physical activity in health.	2.3.1 Discuss the role of nutrition and physical activity in cardiovascular health. 2.3.2 Discuss the role of nutrition in infant and child health. 2.3.3. Explain the importance of nutrition before conception. 2.3.4 Describe the nutritional requirements during perioperative period. 2.3.5 Determine physical activities during perioperative period.
2.4 Identify the major health risks in his/her community, including demographic, occupational and environmental risks; endemic diseases, and prevalent chronic diseases.	2.4.1 Identify risk factors for ischemic heart diseases 2.4.2 Recognize risk factors for heart failure. 2.4.3 List risk factors for hypertension 2.4.4 Identify risk factors for arrhythmia.

	<p>2.4.5 Identify risk factor for bronchial asthma.</p> <p>2.4.6 Identify risk factor for COPD.</p> <p>2.4.7 Identify risk factor for Pneumonia.</p> <p>2.4.8 Recognize risk factor for Pulmonary & Extrapulmonary tuberculosis.</p> <p>2.4.9 Identify risk factor for Sleep disordered breathing.</p> <p>2.4.10 Identify risk factors for lung cancer.</p> <p>2.4.11 Identify risk factors for breast cancer.</p> <p>2.4.12 Recognize risk factors for hernias.</p> <p>2.4.13 Identify the risk factors of testicular cancer.</p> <p>2.4.14 Identify risk factors that affect cardiovascular system as rheumatic fever and congenital heart disease.</p> <p>2.4.15 Identify risk factors that affect gastrointestinal system</p> <p>2.4.16 Recognize the risk factors that affect hematologic system</p> <p>2.4.17 Identify different carcinogenic substances and drugs.</p> <p>2.4.18 Indicate occupations that may affect fertility.</p> <p>2.4.19 Relate prevalent chronic diseases, specially D.M., liver disease, hypertension and heart disease, to different female clinical problems.</p>
<p>2.5 Describe the principles of disease prevention, and empower communities, specific groups or individuals by raising their awareness and building their capacity.</p>	<p>2.5.1 Describe preventive methods for cardiovascular diseases.</p> <p>2.5.2. Demonstrate principles of smoking cessation & vaccination & TB prevention.</p> <p>2.5.3 Describe importance of breast self-examination</p> <p>2.5.4 describe smoking risks.</p> <p>2.5.5 Describe role of vaccination in the principles of disease prevention, through available respiratory vaccinations for respiratory infections as</p>

	<p>influenza or respiratory syncytial virus (RSV) vaccines.</p> <p>2.5.6 Describe techniques of increase parents' awareness as regards proper asthma control.</p> <p>2.5.7. Describe the prevention of anemia in females.</p> <p>2.5.8 Describe how to avoid genital infections and related infertility.</p> <p>2.5.9 Explain cancer prevention, through detailed history personal special habits as smoking or family history: cancer family syndrome in associated cancer related to viral infection as HPV and cancer cx</p>
<p>2.6 Recognize the epidemiology of common diseases within his/her community and apply the systematic approaches useful in reducing the incidence and prevalence of those diseases.</p>	<p>2.6.1 Discuss epidemiology, prevalence and incidence of cardiovascular diseases.</p> <p>2.6.2. Recognize the epidemiology of pneumonia, bronchiolitis or bronchial asthma.</p> <p>2.6.3. Recognize the epidemiology of congenital cyanotic and a cyanotic heart disease)</p> <p>2.6.4 Recognize the epidemiology of acute and chronic hepatitis. chronic liver disease, and neonatal cholestasis.</p> <p>2.6.5 Recognize the epidemiology of anemia, acute leukemia, chronic hemolytic anemia, bleeding tendency.</p> <p>2.6.6 Recognize the epidemiology of tuberculosis, fever of unknown cause.</p> <p>2.6.7 Recognize the causes for increased nulliparous infertility in Egypt.</p> <p>2.6.8 Outline measures used to reduce infertility iatrogenic related problems.</p> <p>2.6.9 Outline the causes for prevalence of anemia in Egyptian women.</p>
<p>2.7 Provide care for specific groups including pregnant women, newborns and infants, adolescents and the elderly.</p>	<p>2.7.1 Construct management plan of cardiovascular diseases in specific groups as pregnant women and the elderly.</p> <p>2.7.2. Construct specific management plan for TB with specific</p>

	<p>conditions (pregnancy, liver disease, kidney disease).</p> <p>2.7.3. Describe care of pregnant lady with breast cancer.</p> <p>2.7.4 Discuss care of patient with chest trauma.</p> <p>2.7.5 Describe care of pregnant lady with valve replacement.</p> <p>2.7.6. Discuss care of patient with chest trauma in children.</p> <p>2.7.7 Explain the management plan for children with CHDs.</p> <p>2.7.8 Assess growth parameters.</p> <p>2.7.9 Prepare care protocol for newly married couples.</p> <p>2.7.10 Discuss importance of cervical cancer screening program</p> <p>2.7.11 Discuss care program for elder women with incontinence.</p> <p>2.7.12 List the suitable contraception for different age groups.</p>
2.8 Identify vulnerable individuals that may be suffering from abuse or neglect and take the proper actions to safeguard their welfare	2.8.1. Identify vulnerable children that may be suffering from abuse or neglect and identify the proper actions to safeguard their welfare. For cases with foreign body inhalation.
2.9 Adopt suitable measures for infection control.	<p>2.9.1. Demonstrate suitable measures for infection control during dealing with the patient.</p> <p>2.9.2 Apply antiseptic measures during vaginal examination.</p> <p>2.9.3 Outline standard measures to prevent surgical site infections.</p>

Competency Area III: The graduate as a professional the graduate should adhere to the professional and ethical codes, standards of practice, and laws governing practice. The graduate should be able to:	
NARS	Semester LOs
3.1 Exhibit appropriate professional behaviors and relationships in all aspects of practice, demonstrating honesty, integrity, commitment, compassion, and respect.	<p>3.1.1 Exhibit appropriate professional behaviors and relationships during history taking and clinical examination.</p> <p>3.1.2 Demonstrate professional behavior during practice.</p>
3.3 Respect the different cultural beliefs and values in the community they serve.	3.3.1. Respect the different cultural beliefs and values in the community with history and clinical examination.

3.4 Treat all patients equally, and avoid stigmatizing any category regardless of their social, cultural or ethnic backgrounds, or their disabilities.	3.4.1. Deal with all patients with surgical disorders equally, and avoid stigmatizing any category regardless of their social, cultural or ethnic backgrounds, or their disabilities.
3.5 Ensure confidentiality and privacy of patients' information	3.5.1 Ensure confidentiality and privacy of patients' information in history taking, clinical examination and treatment. 3.5.2 Apply legal standard measures for examination of women.
3.6 Recognize basics of medico-legal aspects of practice, malpractice and avoid common medical errors.	3.6.1. Recognize basics of medico-legal aspects of practice, malpractice and avoid common medical errors in surgical practice (e.g.: pregnancy test, liver function before surgery). 3.6.2 Recognize basics of malpractice and avoid common medical errors in practice when prescribing medications for neonates, infants and children. 3.6.3 Recognize common medical errors and malpractice in management of infertile couple. 3.6.4. Summarize medicolegal aspects for women examination.
3.8 Refer patients to the appropriate health facility at the appropriate stage.	3.8.1 Determine the principles of referring cardiac patients to the appropriate health facility at the appropriate stage. 3.8.2. Determine indicated cases and the suitable time for referral to appropriate health facility.

Competency Area IV: The graduate as a scholar and scientist the graduate should build his / her clinical practice on a base of knowledge of scientific principles and methods of basic medical and social sciences, applying this knowledge into clinical care, and using it as a foundation for clinical reasoning, care provision, further professional development and research. The graduate should be able to:

NARS	Semester LOs
4.2 Explain the molecular, biochemical, and cellular mechanisms that are important in maintaining the body's homeostasis.	4.2.1. Explain the molecular, biochemical, and cellular mechanisms that are important in respiration and gas exchange, cardiovascular function. 4.2.2. Explain the molecular, biochemical, and cellular

	<p>mechanisms that are important in hematologic and oncologic disorders.</p> <p>4.2.3 Explain the biochemical mechanisms that are important in pediatric emergencies.</p>
<p>4.3. Recognize and describe main developmental changes in humans and the effect of growth, development and aging on the individual and his family.</p>	<p>4.3.1. Recognize and describe main developmental changes in infants and children and the effect of growth, development on the individual and his family.</p> <p>4.3.2. Correlate early development of female genital and urinary system with different genital malformations.</p>
<p>4.4 Explain normal human behavior and apply theoretical frameworks of psychology to interpret the varied responses of individuals, groups and societies to disease.</p>	<p>4.4.1. explain the psychologic changes during menstrual cycle</p>
<p>4.5. Identify various causes (genetic, developmental, metabolic, toxic, microbiologic, autoimmune, neoplastic, degenerative, and traumatic) of illness/disease and explain the ways in which they operate on the body (pathogenesis).</p>	<p>4.5.1 Identify various causes of cardiac diseases</p> <p>4.5.2 Explain the pathogenesis of cardiac diseases.</p> <p>4.5.3 Identify causes of respiratory failure and ARDS.</p> <p>4.5.4 Describe causes of pneumonia & TB & Suppurative lung disease.</p> <p>4.5.5 Outline causes of transudative & exudative pleural effusion, dry pleurisy pneumothorax.</p> <p>4.5.6 Recognize causes of lung cancer</p> <p>4.5.7 Demonstrate causes of DPLD.</p> <p>4.5.8 Classify pathogenesis of various benign breast diseases</p> <p>4.5.9 Discuss aetiology and pathogenesis of breast cancer</p> <p>4.5.10 Define predisposing and exciting causes of hernias (groin, ventral)</p> <p>4.5.11 Recognize aetiology of varicocele</p> <p>4.5.12 Define types and causes of hydrocele</p> <p>4.5.13 Describe aetiology and pathogenesis of testicular tumours</p> <p>4.5.14 Discuss aetiology and pathogenesis of epididymitis.</p>

	<p>4.5.15 Discuss the aetiology, pathogenesis, predisposing factors and types of benign and malignant pleural and lung tumors</p> <p>4.5.16 Describe causes of congenital cyanotic and a cyanotic heart disease</p> <p>4.5.17 Explain pathogenesis of heart failure and infective endocarditis</p> <p>4.5.18 Discuss pathogenesis of rheumatic valvular heart disease and systemic hypertension</p> <p>4.5.19 Define causes of acute and chronic hepatitis</p> <p>4.5.20 Recognize aetiology of neonatal cholestasis</p> <p>4.5.21 Define causes of vomiting, abdominal pain, and constipation</p> <p>4.5.22 Describe aetiology and pathogenesis of chronic liver diseases, ascites, and cirrhosis</p> <p>4.5.23 Identify causes of chronic and persistent diarrhea</p> <p>4.5.24 Recognize the causes of hepatosplenomegaly</p> <p>4.5.25 Discuss causes of gastroenteritis and dehydration</p> <p>4.5.26 Describe aetiology and pathogenesis of acute leukemia</p> <p>4.5.27 Explain the aetiology and pathogenesis of chronic hemolytic anemia</p> <p>4.5.28 Explain the aetiology and pathogenesis of bleeding tendency</p> <p>4.5.29 Explain the aetiology and pathogenesis of lymphoma</p> <p>4.5.30 Identify the aetiology and pathogenesis of pediatric emergencies</p> <p>4.5.31 Explain the aetiology and pathogenesis of fever of unknown cause</p> <p>4.5.32 Explain the pathogenesis of abnormal uterine bleeding</p>
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	<p>4.5.33 Summarize the pathogenesis of infertility</p> <p>4.5.34 Discuss the pathogenesis of female genital displacement</p> <p>4.5.35 Summarize the pathogenesis of urinary incontinence</p>
<p>4.6 Describe altered structure and function of the body and its major organ systems that are seen in various diseases and conditions.</p>	<p>4.6 .1 Describe the pathological aspects in various cardiovascular diseases.</p> <p>4.6.2 Describe pathological features of (COPD, lung cancer, BA, bronchiectasis & Lung abscess, TB)</p> <p>4.6.3 Recognize morphological types of bronchiectasis.</p> <p>4.6.4 Discuss clinical pictures of benign breast disorders</p> <p>4.6.5 Describe clinical picture and complications of breast cancer</p> <p>4.6.6 Differentiate the appearance of various types of hernias (groin, ventral)</p> <p>4.6.7 Discuss pathology of benign breast conditions</p> <p>4.6.8 Explain pathology of malignant breast tumours</p> <p>4.6.9 Differentiate the clinical picture of varicocele</p> <p>4.6.10 Describe clinical pictures and pathology of hydrocele</p> <p>4.6.11 Describe clinical picture of testicular tumours</p> <p>4.6.12 Discuss manifestations and pathology of epididymitis.</p> <p>4.6.13 Discuss clinical pictures of benign malignant lung tumors and T.B</p> <p>4.6.14 Explain rheumatic heart disease and ischemic heart disease.</p> <p>4.6.15 Describe altered structure and function of the body and its major organ systems that are seen in various diseases and conditions in pediatrics disorders.</p>

	4.6.16 Determine altered structure and function of female body systems in different gynecologic conditions.
4.7 Describe drug actions: therapeutics and pharmacokinetics; side effects and interactions, including multiple treatments, long term conditions and non-prescribed medication; and effects on the population.	<p>4.7.1 Describe drugs action used for treatment of TB, COPD, BA & pneumonia.</p> <p>4.7.2 Identify action and side effects of medical treatment for benign and malignant breast diseases</p> <p>4.7.3 Identify action and side effects of anticoagulants</p> <p>4.7.4 Identify anti TB side effects.</p> <p>4.7.5 Describe drug actions: therapeutics and side effects and interactions, including multiple treatments, long term conditions of neonatal cholestasis, vomiting, abdominal pain, constipation, acute and chronic hepatitis, chronic liver diseases, ascites, cirrhosis.</p> <p>4.7.6 Describe drug actions: therapeutics and side effects and interactions, including multiple treatments, long term conditions persistent diarrhea, gastroenteritis and dehydration</p> <p>4.7.7 Describe drug actions: therapeutics and side effects and interactions, including multiple treatments, long term conditions of anemia, acute leukemia, chronic hemolytic anemia, bleeding tendency, and lymphoma.</p> <p>4.7.8 Describe drug actions: therapeutics and side effects and interactions, including multiple treatments, long term conditions of respiratory failure, circulatory failure and shock, coma, and metabolic emergencies.</p> <p>4.7.9 Describe drug actions: therapeutics and side effects and interactions, including</p>

	<p>multiple treatments, long term conditions of tuberculosis in children.</p> <p>4.7.10 Describe drug actions: therapeutics and side effects and interactions, including multiple treatments, long term conditions congenital cyanotic and a cyanotic heart disease, heart failure, rheumatic fever and infective endocarditis, rheumatic valvular heart disease and systemic hypertension.</p> <p>4.7.11 Choose suitable treatment plan for different gynecologic situations.</p>
<p>4.8 Demonstrate basic sciences specific practical skills and procedures relevant to future practice, recognizing their scientific basis, and interpret common diagnostic modalities, including: imaging, electrocardiograms, laboratory assays, pathologic studies, and functional assessment tests</p>	<p>4.8.1. Demonstrate usage of inhaler devices.</p> <p>4.8.2. Interpret the results of mammogram and ultrasound investigations for a case with breast disease (benign and malignant).</p> <p>4.8.3 Interpret the chest X ray for a case with bronchogenic carcinoma mesothelioma, rheumatic & ischemic heart diseases.</p> <p>4.8.4 Demonstrate of different pathological alterations in tissue sections under the microscope related to gynecology</p> <p>4.8.5 Demonstrate the different ultrasonic findings for female genital diseases</p> <p>4.8.6 Interpret H.S.G.</p> <p>4.8.7 demonstrate and interpret findings of genital tract Doppler studies</p> <p>4.8.8 Demonstrate findings in different investigatory tools related to gynecology: USS, laparoscopy, hysteroscopy, colposcopy and X-ray.</p>

Competency Area V: The graduate as a member of the health team and part of the health care system The graduate should work and collaborate effectively with physicians and other colleagues in the health care professions, demonstrating an awareness of and a respect for their roles in delivering safe & effective patient- and population-centered care. He/she should be committed to his/her role as a part of health care

system, respecting its hierarchy and rules and using his/her administrative and leadership skills to add value to the system. The graduate should be able to:

NARS	Semester LOs
<p>5.1 Recognize the important role played by other health care professionals in patients' management.</p>	<p>5.1.1 Recognize the multidisciplinary approach for treatment of cardiovascular disease like in infective endocarditis.</p> <p>5.1.2. Recognize the multidisciplinary approach for treatment of breast cancer.</p> <p>5.1.3 Recognize the multidisciplinary approach for treatment of branchogenic carcinoma & meathelima.</p> <p>5.1.4 Recognize the team approach during basic life support</p> <p>5.1.5 Recognize the multidisciplinary approach for treatment of children with metabolic emergencies</p> <p>5.1.6 Recognize the multidisciplinary approach for treatment of seriously ill child</p> <p>5.1.7 Recognize the multidisciplinary approach for investigation and treatment of children with fever of unknown cause</p> <p>5.1.8 Recognize the multidisciplinary approach for treatment pleural effusion or pneumothorax. -- emergency treatment of croup.</p> <p>5.1.9 Recognize the important role played by other health care professionals in patients' management</p>
<p>5.2. Respect colleagues and other health care professionals and work cooperatively with them, negotiating overlapping and shared responsibilities and engaging in shared decision-making for effective patient management.</p>	<p>5.2.1. Respect teamwork rule and shared responsibility in care and decision making for effective management of different pediatric disorders.</p>
<p>5.4. Apply leadership skills to enhance team functioning, the learning environment, and/or the health care delivery system.</p>	<p>5.4.1 Apply leadership skills to enhance team functioning, the learning environment, and/or the health care delivery system for effective management of different pediatric disorders.</p>

	5.4.2 Lead a team within clinical learning contexts through group discussion Take history from patients, Preparation of power point by each group for specific topics
5.5. Communicate effectively using a written health record, electronic medical record, or other digital technology.	5.5.1 Write a case report. 5.5.2. Write a case report for a case with chest problem. 5.5.3 Demonstrate referral forms in different clinical situations 5.5.4 Demonstrate digital electronic system in MUH Demonstrate patient's registration, data input, electronic files, surveys, operative details, morbidity and mortality.

Competency Area VI: The graduate as a lifelong learner and researcher the graduate should demonstrate a lifelong commitment to excellence in practice through continuous learning and professional development. He should reflect on his own performance, and plan for his own development making use of all possible learning resources. The graduate should have an inquisitive mind and adopt sound scientific research methodology to deal with practice uncertainty and knowledge gaps and to contribute to the development of his profession as well as for the purpose of his own academic development. The graduate should be able to:

NARS	Semester LOs
6.1. Regularly reflect on and assess his/her performance using various performance indicators and information sources.	6.1.1 Demonstrate self-directed learning activities
6.3. Identify opportunities and use various resources for learning.	6.3.1. Maximize knowledge acquisition in pediatric cases (benefit from lectures, practical, library resources and internet resources, and self-learning)
6.5 Recognize practice uncertainty and knowledge gaps in clinical and other professional encounters and generate focused questions that address them.	6.5.1. Recognize atypical presentations of different pediatric cases during practical activities. 6.5.2 Generate focused questions that address practice uncertainty and knowledge gaps in the management of different pediatric disorders.

Courses Learning outcomes (LOs):

MED III

Competency Area I: The graduate as a health care provider the graduate should provide quality, safe, patient-centered care, drawing upon his/her integrated knowledge and clinical skills, and adhering to professional values. The graduate should collect and interpret information, make clinical decisions, and carry out diagnostic and therapeutic interventions - with an understanding of the limits of his/her expertise-considering the patient's circumstances and preferences as well as the availability of resources.

NARS	Course LOs
1.1 Take and record a structured, patient centered history.	1.1.1. Identify symptoms of different cardiovascular diseases. 1.1.2. Analyze symptoms of different cardiovascular diseases. 1.1.3. Differentiate between cardiac and non-cardiac patients. 1.1.4. Take and record a structural, patient centered history of the commonest chest diseases (B.A., COPD, Pneumonia, Pulmonary & Extrapulmonary tuberculosis, Suppurative lung disease, diffuse parenchymatous lung disease, ARDS, Sleep disordered breathing, lung cancer and pleural disease).
1.4 Perform appropriately-timed full physical examination of patients, appropriate to the age, gender, and clinical presentation of the patient while being culturally sensitive.	1.4.1. General examination of patients with cardiovascular symptoms. 1.4.2. Examine neck veins. 1.4.3. Examine peripheral pulse 1.4.4. Examine LL & generalized edema. 1.4.5. Perform local cardiac examination (inspection & palpation, percussion & auscultation). 1.4.6. Perform general examination (regarding chest cases). 1.4.7. Perform local chest examination. 1.4.8. Measure pulse rate, respiratory rate and blood pressure.

<p>1.5 Prioritize issues to be addressed in a patient encounter.</p>	<p>1.5.1 Identify priorities in patients with cardiovascular emergencies like acute coronary syndrome, acute heart failure, arrhythmia, cardiac tamponade and hypertension emergencies</p> <p>1.5.2. Prioritize in patient with chest emergency “Acute severe asthma, COPD exacerbation, ARDS, Respiratory failure”.</p>
<p>1.6 Select the appropriate investigations and interpret their results taking into consideration cost/ effectiveness factors.</p>	<p>1.6.1 Select the appropriate investigations in different cardiovascular cases.</p> <p>1.6.2 Select investigation for (B.A., COPD, Pneumonia, Pulmonary & Extrapulmonary tuberculosis, Suppurative lung disease, diffuse parenchymatous lung disease, ARDS, Sleep disordered breathing, lung cancer and pleural disease).</p> <p>1.6.3 Interpret chest x ray, ABG, PFT.</p>
<p>1.7 Recognize and respond to the complexity, uncertainty, and ambiguity inherent in medical practice.</p>	<p>1.7.1 Recognize the differential diagnosis of chest pain, dyspnea, syncope and palpitation.</p> <p>1.7.2 Recognize clinical features of OSA & nicotine dependence.</p> <p>1.7.3 Recognize differential diagnosis of (cough, expectoration, chest pain, dyspnea, haemoptysis and wheezes).</p> <p>1.7.4 Recognize difference between chronic bronchitis and emphysema.</p> <p>1.7.5 Recognize difference between COPD & BA.</p>
<p>1.8 Apply knowledge of the clinical and biomedical sciences relevant to the clinical problem at hand.</p>	<p>1.8.1. Relate the clinical presentation of different cardiovascular diseases like heart failure, ischemic heart diseases, arrhythmia and infective endocarditis with the underlying pathophysiology.</p>

	<p>1.8.2. Define (B.A., COPD, Pneumonia, Suppurative lung disease, diffuse parenchymatous lung disease, ARDS, Sleep disordered breathing, lung cancer and pleural disease)</p> <p>1.8.3. Compare between intrinsic & extrinsic BA.</p> <p>1.8.4. Differentiate between type I and type II respiratory failure</p> <p>1.8.5. Correlate the clinical picture of pneumonia with the pathophysiology</p> <p>1.8.6. Integrate the clinical picture of BA and COPD with the pathophysiology.</p>
<p>1.10 Integrate the results of history, physical examination and laboratory test findings into a meaningful diagnostic formulation</p>	<p>1.10.1 Integrate the results of history, physical and laboratory test findings examination and investigations to reach the preliminary diagnosis of cardiovascular diseases and the differential diagnosis.</p> <p>1.10.2 Integrate the results of history, general and local chest examination and laboratory tests finding to reach diagnosis of chest case.</p>
<p>1.11 Perform diagnostic and intervention procedures in a skillful and safe manner, adapting to unanticipated findings or changing clinical circumstances.</p>	<p>1.11.1 Perform ECG.</p> <p>1.11.2 Interpret ECG.</p> <p>1.11.3 Use a nebulizer for administration of inhalation therapy.</p>
<p>1.13 Establish patient-centered management plans in partnership with the patient, his/her family and other health professionals as appropriate, using Evidence Based Medicine in management decisions.</p>	<p>1.13.1. Design different management plans in different cardiovascular diseases like acute & chronic coronary syndrome, valvular heart diseases, acute and chronic heart failure, arrhythmia and pericardial diseases.</p> <p>1.13.2. Construct management plan for airway diseases (COPD, BA).</p> <p>1.13.3. Design management plan for infectious lung disease</p>

	<p>“pneumonia, TB, Suppurative lung disease”.</p> <p>1.13.4. Outline management plan for OSA, lung cancer, DPLD</p> <p>1.13.5. Establish management plan for ARDS, Respiratory failure & pleural diseases.</p>
1.18. Contribute to the care of patients and their families at the end of life, including management of symptoms, practical issues of law and certification.	1.17.1. Construct management plans in end stage heart failure

Competency Area II: The graduate as a health promoter the graduate should advocate for the development of community and individual measures which promote the state of well-being, he/she should empower individuals and communities to engage in healthy behaviors, and put his/her knowledge and skills to prevent diseases, reduce deaths and promote quality life style. The graduate should be able to:

NARS	Course LOs
2.3 Discuss the role of nutrition and physical activity in health.	2.3.1 Discuss the role of nutrition and physical activity in cardiovascular health.
2.4 Identify the major health risks in his/her community, including demographic, occupational and environmental risks; endemic diseases, and prevalent chronic diseases.	2.4.1 Identify risk factors for ischemic heart diseases 2.4.2 Recognize risk factors for heart failure. 2.4.3 List risk factors for hypertension 2.4.4 Identify risk factors for arrhythmia. 2.4.5 Identify risk factor for bronchial asthma. 2.4.6 Identify risk factor for COPD. 2.4.7 Identify risk factor for Pneumonia. 2.4.8 Recognize risk factor for Pulmonary & Extrapulmonary tuberculosis. 2.4.9 Identify risk factor for Sleep disordered breathing. 2.4.10 Identify risk factors for lung cancer.
2.5 Describe the principles of disease prevention, and empower communities, specific groups or individuals by raising their awareness and building their capacity.	2.5.1 Describe preventive methods for cardiovascular diseases. 2.5.2 Demonstrate principles of smoking cessation & vaccination & TB prevention
2.6 Recognize the epidemiology of common diseases within his/her community and apply the systematic approaches useful in reducing the incidence and prevalence of those diseases.	2.6.1 Discuss epidemiology, prevalence and incidence of cardiovascular diseases.
2.7 Provide care for specific groups including pregnant women, newborns and infants, adolescents and the elderly.	2.7.1 Construct management plan of cardiovascular diseases in specific groups as pregnant women and the elderly.

	2.7.2. Construct specific management plan for TB with specific conditions (pregnancy, liver disease, kidney disease).
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Competency Area III: The graduate as a professional the graduate should adhere to the professional and ethical codes, standards of practice, and laws governing practice. The graduate should be able to:	
NARS	Course Los
3.1 Exhibit appropriate professional behaviors and relationships in all aspects of practice, demonstrating honesty, integrity, commitment, compassion, and respect.	3.1.1 Exhibit appropriate professional behaviors and relationships during history taking and clinical examination.
3.8 Refer patients to the appropriate health facility at the appropriate stage.	3.8.1 Determine the principles of referring cardiac patients to the appropriate health facility at the appropriate stage.

Competency Area IV: The graduate as a scholar and scientist the graduate should build his / her clinical practice on a base of knowledge of scientific principles and methods of basic medical and social sciences, applying this knowledge into clinical care, and using it as a foundation for clinical reasoning, care provision, further professional development and research. The graduate should be able to:	
NARS	Course Los
4.5. Identify various causes (genetic, developmental, metabolic, toxic, microbiologic, autoimmune, neoplastic, degenerative, and traumatic) of illness/disease and explain the ways in which they operate on the body (pathogenesis).	4.5.1 Identify various causes of cardiac diseases 4.5.2 Explain the pathogenesis of cardiac diseases. 4.5.3 Identify causes of respiratory failure and ARDS. 4.5.4 Describe causes of pneumonia & TB & Suppurative lung disease. 4.5.5 Outline causes of transudative & exudative pleural effusion, dry pleurisy pneumothorax. 4.5.6 Recognize causes of lung cancer 4.5.7 Demonstrate causes of DPLD.
4.6 Describe altered structure and function of the body and its major organ systems that are seen in various diseases and conditions.	4.6 .1 Describe the pathological aspects in various cardiovascular diseases. 4.6.2 Describe pathological features of (COPD, lung cancer, BA, bronchiectasis & Lung abscess, TB) 4.6.3 Recognize morphological types of bronchiectasis.
4.7 Describe drug actions: therapeutics and pharmacokinetics; side effects and interactions, including multiple treatments, long term conditions and non-prescribed medication; and effects on the population.	4.7.1 Describe drugs action used for treatment of TB, COPD, BA & pneumonia.
4.8 Demonstrate basic sciences specific practical skills and procedures relevant to future practice, recognizing their scientific basis, and interpret common diagnostic modalities, including: imaging, electrocardiograms, laboratory assays, pathologic studies, and functional assessment tests	4.8.1. Demonstrate usage of inhaler devices.

Competency Area V: The graduate as a member of the health team and part of the health care system The graduate should work and collaborate effectively with physicians and other colleagues in the health care professions, demonstrating an awareness of and a respect for their roles in delivering safe & effective patient- and population-centered care. He/she should be committed to his/her role as a part of health care system, respecting its hierarchy and rules and using his/her administrative and leadership skills to add value to the system. The graduate should be able to:

NARS	Course LOs
5.1 Recognize the important role played by other health care professionals in patients' management.	5.1.1 Recognize the multidisciplinary approach for treatment of cardiovascular disease like in infective endocarditis.
5.5. Communicate effectively using a written health record, electronic medical record, or other digital technology.	5.5.1 Write a case report. 5.5.2. Write a case report for a case with chest problem.

SURG III

Competency Area I: The graduate as a health care provider the graduate should provide quality, safe, patient-centered care, drawing upon his/her integrated knowledge and clinical skills, and adhering to professional values. The graduate should collect and interpret information, make clinical decisions, and carry out diagnostic and therapeutic interventions - with an understanding of the limits of his/her expertise-considering the patient's circumstances and preferences as well as the availability of resources.

NARS	Course LOs
1.1 Take and record a structured, patient centered history.	1.1.1. Take and record a structured, patient centered history for Breast, Hernias and scrotal disorders. 1.1.2. Take and record a structured, patient centered history for CTS such as lung cancer and TB.
1.2 Adopt an empathic and holistic approach to the patients and their problems.	1.2.1. Adopt an empathic and holistic approach to the patients and their problems during dealing with the patient.
1.4 Perform appropriately-timed full physical examination of patients, appropriate to the age, gender, and clinical presentation of the patient while being culturally sensitive.	1.4.1. Perform general examination for patient with Breast, hernia and scrotal disorders. 1.4.2. Perform local examination for patient with breast diseases. 1.4.3. Perform local examination for patient with hernias. 1.4.4. Perform local examination for scrotal disease. 1.4.5. Perform general examination for patient with CTS diseases. 1.4.6. Perform local examination for the heart.

	1.4.7. Perform local chest exam.
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<p>1.5 Prioritize issues to be addressed in a patient encounter.</p>	<p>1.5.1 Prioritize issues regarding urgent conditions of breast, hernia, scrotum. 1.5.2 Prioritize issues regarding urgent conditions such as pneumo thorax and disaster injuries.</p>
<p>1.6 Select the appropriate investigations and interpret their results taking into consideration cost/effectiveness factors.</p>	<p>1.6.1 Select appropriate investigations for breast diseases. 1.6.2 Choose the appropriate investigations for a case with hernia. 1.6.3 Select suitable investigations for a case of scrotal disease (swelling, varicocele ...). 1.6.4 Select appropriate investigations for the cardiothoracic diseases and injuries.</p>
<p>1.7 Recognize and respond to the complexity, uncertainty, and ambiguity inherent in medical practice.</p>	<p>1.7.1. Differentiate between various types of breast swellings and nipple discharge. 1.7.2. Recognize different presentations of hernias 1.7.3. Identify the differential diagnosis of Inguinal, inguinoscrotal and Scrotal swellings 1.7.4. Differentiate between chest and cardiac cause of chest pain and dyspnea to reach a differential for both chest pain and dyspnea.</p>
<p>1.8 Apply knowledge of the clinical and biomedical sciences relevant to the clinical problem at hand.</p>	<p>1.8.1. Correlate anatomy with diseases of breast, groin and scrotum 1.8.2. Correlate the surgical anatomy of the heart with differential diseases. 1.8.3. Correlate the applied anatomy of the lung with pulmonary diseases.</p>
<p>1.10 Integrate the results of history, physical examination and laboratory test findings into a meaningful diagnostic formulation</p>	<p>1.10.1 Integrate the results of history, physical examination and laboratory test to reach diagnosis of breast disorder. 1.10.2 Integrate the results of history, physical examination and laboratory test to reach diagnosis of patient with hernia.</p>

	<p>1.10.3 Integrate the results of history, physical examination and laboratory test to reach diagnosis of scrotal disease</p> <p>1.10.4 Integrate the results of history, physical examination and laboratory test to reach diagnosis of cardiothoracic problem</p> <p>1.10.5 Integrate the results of history, physical examination and laboratory test to reach a differential diagnosis of CTS diseases.</p>
1.12 Adopt strategies and apply measures that promote patient safety	1.12.1 Adopt strategies and apply measures that promote patient safety during surgery (preoperative preparation).
1.13 Establish patient-centered management plans in partnership with the patient, his/her family and other health professionals as appropriate, using Evidence Based Medicine in management decisions.	<p>1.13.1. Describe different types of surgeries for breast diseases benign and malignant.</p> <p>1.13.2. Construct a management plan for breast cancer during pregnancy</p> <p>1.13.3. Establish management plan for non-complicated hernias</p> <p>1.13.4. design management plan in a case of complicated hernias</p> <p>1.13.5. Describe types of ventral hernia repair</p> <p>1.13.6. Define surgical management of varicocele</p> <p>1.13.7. Discuss management of hydrocele, haematocel, and pyocele</p> <p>1.13.8. Illustrate principles and types of operations for groin hernia</p> <p>1.13.9. Describe different types of surgeries for CTS diseases.</p>

Competency Area II: The graduate as a health promoter the graduate should advocate for the development of community and individual measures which promote the state of well-being, he/she should empower individuals and communities to engage in healthy behaviors, and put his/her knowledge and skills to prevent diseases, reduce deaths and promote quality life style. The graduate should be able to:

NARS	Course LOs
2.4 Identify the major health risks in his/her community, including demographic, occupational and environmental risks; endemic diseases, and prevalent chronic diseases.	2.4.1 Identify risk factors for ischemic heart diseases 2.4.2 Identify risk factors for lung cancer. 2.4.3 Identify risk factors for breast cancer. 2.4.4 Recognize risk factors for hernias. 2.4.5 Identify the risk factors of testicular cancer.
2.5 Describe the principles of disease prevention, and empower communities, specific groups or individuals by raising their awareness and building their capacity.	2.5.1 Describe importance of breast self-examination 2.5.2 Describe smoking risks.
2.7 Provide care for specific groups including pregnant women, newborns and infants, adolescents and the elderly.	2.7.1. Describe care of pregnant lady with breast cancer. 2.7.2 Discuss care of patient with chest trauma. 2.7.3 Describe care of pregnant lady with valve replacement. 2.7.4. Discuss care of patient with chest trauma in children. 2.7.7 Explain the management plan for children with CHDs.
2.9 Adopt suitable measures for infection control.	2.9.1. Demonstrate suitable measures for infection control during dealing with the patient.

Competency Area III: The graduate as a professional the graduate should adhere to the professional and ethical codes, standards of practice, and laws governing practice. The graduate should be able to:

NARS	Course LOs
3.1 Exhibit appropriate professional behaviors and relationships in all aspects of practice, demonstrating honesty, integrity, commitment, compassion, and respect.	3.1.1 Exhibit appropriate professional behaviors and relationships during history taking and clinical examination.
3.3 Respect the different cultural beliefs and values in the community they serve.	3.3.1. Respect the different cultural beliefs and values in the community with history and clinical examination.
3.4 Treat all patients equally, and avoid stigmatizing any category regardless of their social, cultural or ethnic backgrounds, or their disabilities.	3.4.1. Deal with all patients with surgical disorders equally, and avoid stigmatizing any category regardless of their social, cultural or ethnic backgrounds, or their disabilities.

3.5 Ensure confidentiality and privacy of patients' information	3.5.1 Ensure confidentiality and privacy of patients' information in history taking, clinical examination and treatment.
3.6 Recognize basics of medico-legal aspects of practice, malpractice and avoid common medical errors.	3.6.1. Recognize basics of medico-legal aspects of practice, malpractice and avoid common medical errors in surgical practice (e.g.: pregnancy test, liver function before surgery).
3.8 Refer patients to the appropriate health facility at the appropriate stage.	3.8.1. Determine indicated cases and the suitable time for referral to appropriate health facility.

Competency Area IV: The graduate as a scholar and scientist the graduate should build his / her clinical practice on a base of knowledge of scientific principles and methods of basic medical and social sciences, applying this knowledge into clinical care, and using it as a foundation for clinical reasoning, care provision, further professional development and research. The graduate should be able to:

NARS	Course LOs
4.5. Identify various causes (genetic, developmental, metabolic, toxic, microbiologic, autoimmune, neoplastic, degenerative, and traumatic) of illness/disease and explain the ways in which they operate on the body (pathogenesis).	4.5.1 Classify pathogenesis of various benign breast diseases 4.5.2 Discuss aetiology and pathogenesis of breast cancer 4.5.3 Define predisposing and exciting causes of hernias (groin, ventral) 4.5.4 Recognize aetiology of varicocele 4.5.5 Define types and causes of hydrocele 4.5.6 Describe aetiology and pathogenesis of testicular tumours 4.5.7 Discuss aetiology and pathogenesis of epididymitis. 4.5.8 Discuss the aetiology, pathogenesis, predisposing factors and types of benign and malignant pleural and lung tumors
4.6 Describe altered structure and function of the body and its major organ systems that are seen in various diseases and conditions.	4.6.1 Discuss clinical pictures of benign breast disorders 4.6.2 Describe clinical picture and complications of breast cancer 4.6.3 Differentiate the appearance of various types of hernias (groin, ventral) 4.6.4 Discuss pathology of benign breast conditions

	<p>4.6.5 Explain pathology of malignant breast tumours</p> <p>4.6.6 Differentiate the clinical picture of varicocele</p> <p>4.6.7 Describe clinical pictures and pathology of hydrocele</p> <p>4.6.8 Describe clinical picture of testicular tumours</p> <p>4.6.9 Discuss manifestations and pathology of epididymitis.</p> <p>4.6.10 Discuss clinical pictures of benign malignant lung tumors and T.B</p> <p>4.6.11 Explain rheumatic heart disease and ischemic heart disease.</p>
4.7 Describe drug actions: therapeutics and pharmacokinetics; side effects and interactions, including multiple treatments, long term conditions and non-prescribed medication; and effects on the population.	<p>4.7.1 Identify action and side effects of medical treatment for benign and malignant breast diseases</p> <p>4.7.2 Identify action and side effects of anticoagulants</p> <p>4.7.3 Identify anti TB side effects.</p>
4.8 Demonstrate basic sciences specific practical skills and procedures relevant to future practice, recognizing their scientific basis, and interpret common diagnostic modalities, including: imaging, electrocardiograms, laboratory assays, pathologic studies, and functional assessment tests	<p>4.8.1. Interpret the results of mammogram and ultrasound investigations for a case with breast disease (benign and malignant).</p> <p>4.8.2 Interpret the chest X ray for a case with bronchogenic carcinoma mesothelioma, rheumatic & ischemic heart diseases.</p>

Competency Area V: The graduate as a member of the health team and part of the health care system The graduate should work and collaborate effectively with physicians and other colleagues in the health care professions, demonstrating an awareness of and a respect for their roles in delivering safe & effective patient- and population-centered care. He/she should be committed to his/her role as a part of health care system, respecting its hierarchy and rules and using his/her administrative and leadership skills to add value to the system. The graduate should be able to:

NARS	Course Los
5.1 Recognize the important role played by other health care professionals in patients' management.	<p>5.1.1. Recognize the multidisciplinary approach for treatment of breast cancer.</p> <p>5.1.2 Recognize the multidisciplinary approach for treatment of bronchogenic carcinoma & mesothelioma.</p>

PED II

Competency Area I: The graduate as a health care provider the graduate should provide quality, safe, patient-centered care, drawing upon his/her integrated knowledge and clinical skills, and adhering to professional values. The graduate should collect and interpret information, make clinical decisions, and carry out diagnostic and therapeutic interventions - with an understanding of the limits of his/her expertise-considering the patient's circumstances and preferences as well as the availability of resources.

NARS	Course Los
1.1 Take and record a structured, patient centered history.	1.1.3. Construct patient centered history for pediatric medical disorders.
1.2 Adopt an empathic and holistic approach to the patients and their problems.	1.2.2. Break bad news for the parents having child with childhood malignancies, congenial heart diseases, chronic respiratory problems, and GIT diseases.
1.3 Assess the mental state of the patient	1.3.1. Assess the mental state in pediatric as a part of evaluating the development of patients.
1.4 Perform appropriately-timed full physical examination of patients, appropriate to the age, gender, and clinical presentation of the patient while being culturally sensitive.	1.4.1. Perform appropriately timed full general and local examination of infants and children.

1.5 Prioritize issues to be addressed in a patient encounter.	1.5.1 Prioritize urgent condition in pediatric disorders.
1.6 Select the appropriate investigations and interpret their results taking into consideration cost/effectiveness factors.	<p>1.6.1 Select appropriate investigations for infants and children with different pediatric disorders.</p> <p>1.6.2 Interpret x-ray imaging in patient with CHD.</p> <p>1.6.3 Interpret radiologic and laboratory findings for a case with bronchial asthma, wheezy chest, pleural diseases and bronchiolitis.</p> <p>1.6.4 Interpret radiologic and laboratory findings for gastrointestinal disorders as neonatal cholestasis, hepatitis and liver cell failure.</p> <p>1.6.5 Interpret radiologic and laboratory findings for infants and children with hematological and oncological disorders.</p> <p>1.6.6 Interpret laboratory findings for infants and children with infectious diseases.</p> <p>1.6.7 Interpret laboratory findings for infants and children with pediatric emergencies.</p>
1.8 Apply knowledge of the clinical and biomedical sciences relevant to the clinical problem at hand.	<p>1.8.1. Correlate anatomy and function of respiratory system (upper and lower respiratory tract) with respiratory problems in pediatrics.</p> <p>1.8.2. Correlate anatomy of cardiovascular system in children with congenital heart disease.</p> <p>1.8.3. Correlate normal anatomy of gastrointestinal system in children with GIT disorders in pediatrics.</p>
1.9 Retrieve, analyze, and evaluate relevant and current data from literature, using information technologies and library resources, in order to help solve a clinical problem based on evidence (EBM)	1.9.1 Use information technologies and library resources.

1.10 Integrate the results of history, physical examination and laboratory test findings into a meaningful diagnostic formulation	1.10.6 Integrate the results of history, physical examination and laboratory test to reach to preliminary diagnosis of different pediatric disorders.
1.12 Adopt strategies and apply measures that promote patient safety	1.12.1 Discuss strategies that promote patient safety during management of coma. 1.12.2 Identify strategies that promote patient safety during management of metabolic emergencies. 1.12.3 Discuss strategies that promote patient safety during management of seriously ill child.
1.13 Establish patient-centered management plans in partnership with the patient, his/her family and other health professionals as appropriate, using Evidence Based Medicine in management decisions.	1.13.1. Establish patient-centered management plans in partnership with the patient, his/her family as appropriate, using updated pediatric guidelines in management decisions in different pediatric disorders.
1.14 Respect patients' rights and involve them and /or their families / carers in management decisions.	1.14.1. Respect patients' rights and involve them and /or their families / careers in management plan for pediatric disorders (informed decision).
1.15 Provide the appropriate care in cases of emergency, including cardio-pulmonary resuscitation, immediate life support measures and basic first aid procedures	1.15.1 Provide the appropriate care in cases of emergency, including cardio-pulmonary resuscitation, immediate life support measures and basic first aid procedures for pediatric patients.

Competency Area II: The graduate as a health promoter the graduate should advocate for the development of community and individual measures which promote the state of well-being, he/she should empower individuals and communities to engage in healthy behaviors, and put his/her knowledge and skills to prevent diseases, reduce deaths and promote quality life style. The graduate should be able to:

NARS	Course LOs
2.2 Recognize the economic, psychological, social, and cultural factors that interfere with wellbeing.	2.2.1. Recognize the economic, psychological, social, and cultural factors that interfere with wellbeing in pediatric health
2.3 Discuss the role of nutrition and physical activity in health.	2.3.1 Discuss the role of nutrition in infant and child health.

<p>2.4 Identify the major health risks in his/her community, including demographic, occupational and environmental risks; endemic diseases, and prevalent chronic diseases.</p>	<p>2.4.1 Identify risk factor for bronchial asthma. 2.4.2 Identify risk factors that affect cardiovascular system as rheumatic fever and congenital heart disease. 2.4.3 Identify risk factors that affect gastrointestinal system 2.4.4 Recognize the risk factors that affect hematologic system</p>
<p>2.5 Describe the principles of disease prevention, and empower communities, specific groups or individuals by raising their awareness and building their capacity.</p>	<p>2.5.1 Describe role of vaccination in the principles of disease prevention, through available respiratory vaccinations for respiratory infections as influenza or respiratory syncytial virus (RSV) vaccines. 2.5.2 Describe techniques of increase parents' awareness as regards proper asthma control.</p>
<p>2.6 Recognize the epidemiology of common diseases within his/her community and apply the systematic approaches useful in reducing the incidence and prevalence of those diseases.</p>	<p>2.6.1. Recognize the epidemiology of pneumonia, bronchiolitis or bronchial asthma. 2.6.2. Recognize the epidemiology of congenital cyanotic and a cyanotic heart disease) 2.6.3 Recognize the epidemiology of acute and chronic hepatitis. chronic liver disease, and neonatal cholestasis. 2.6.4 Recognize the epidemiology of anemia, acute leukemia, chronic hemolytic anemia, bleeding tendency. 2.6.5 Recognize the epidemiology of tuberculosis, fever of unknown cause.</p>
<p>2.7 Provide care for specific groups including pregnant women, newborns and infants, adolescents and the elderly.</p>	<p>2.7.1 Assess growth parameters.</p>
<p>2.8 Identify vulnerable individuals that may be suffering from abuse or neglect and take the proper actions to safeguard their welfare</p>	<p>2.8.1. Identify vulnerable children that may be suffering from abuse or neglect and identify the proper actions to safeguard their welfare. For cases with foreign body inhalation.</p>

<p>Competency Area III: The graduate as a professional the graduate should adhere to the professional and ethical codes, standards of practice, and laws governing practice. The graduate should be able to:</p>	
<p>NARS</p>	<p>Course LOs</p>
<p>3.1 Exhibit appropriate professional behaviors and relationships in all aspects of practice, demonstrating honesty, integrity, commitment, compassion, and respect.</p>	<p>3.1.1 Exhibit appropriate professional behaviors and relationships during history taking and clinical examination.</p>
<p>3.5 Ensure confidentiality and privacy of patients' information</p>	<p>3.5.1 Ensure confidentiality and privacy of patients' information in history taking, clinical examination and treatment.</p>

3.6 Recognize basics of medico-legal aspects of practice, malpractice and avoid common medical errors.	3.6.1. Recognize basics of malpractice and avoid common medical errors in practice when prescribing medications for neonates, infants and children.
3.8 Refer patients to the appropriate health facility at the appropriate stage.	3.8.1 Determine indicated cases and the suitable time for referral to appropriate health facility.

Competency Area IV: The graduate as a scholar and scientist the graduate should build his / her clinical practice on a base of knowledge of scientific principles and methods of basic medical and social sciences, applying this knowledge into clinical care, and using it as a foundation for clinical reasoning, care provision, further professional development and research. The graduate should be able to:

NARS	Course LOs
4.2 Explain the molecular, biochemical, and cellular mechanisms that are important in maintaining the body's homeostasis.	<p>4.2.1. Explain the molecular, biochemical, and cellular mechanisms that are important in respiration and gas exchange, cardiovascular function.</p> <p>4.2.2. Explain the molecular, biochemical, and cellular mechanisms that are important in hematologic and oncologic disorders.</p> <p>4.2.3 Explain the biochemical mechanisms that are important in pediatric emergencies.</p>
4.3. Recognize and describe main developmental changes in humans and the effect of growth, development and aging on the individual and his family.	4.3.1. Recognize and describe main developmental changes in infants and children and the effect of growth, development on the individual and his family.
4.5. Identify various causes (genetic, developmental, metabolic, toxic, microbiologic, autoimmune, neoplastic, degenerative, and traumatic) of illness/disease and explain the ways in which they operate on the body (pathogenesis).	<p>4.5.1 Describe causes of congenital cyanotic and a cyanotic heart disease</p> <p>4.5.2 Explain pathogenesis of heart failure and infective endocarditis</p> <p>4.5.3 Discuss pathogenesis of rheumatic valvular heart disease</p> <p>4.5.4 Define causes of acute and chronic hepatitis</p> <p>4.5.5 Recognize aetiology of neonatal cholestasis</p>

	<p>4.5.6 Define causes of vomiting, abdominal pain, and constipation</p> <p>4.5.7 Describe aetiology and pathogenesis of chronic liver diseases, ascites, and cirrhosis</p> <p>4.5.8 Identify causes of chronic and persistent diarrhea</p> <p>4.5.9 Recognize e causes of hepatosplenomegaly</p> <p>4.5.10 Discuss causes of gastroenteritis and dehydration</p> <p>4.5.11 Describe aetiology and pathogenesis of acute leukemia</p> <p>4.5.12 Explain the aetiology and pathogenesis of chronic hemolytic anemia</p> <p>4.5.13 Explain the aetiology and pathogenesis of bleeding tendency</p> <p>4.5.14 Explain the aetiology and pathogenesis of lymphoma</p> <p>4.5.15 Identify the aetiology and pathogenesis of pediatric emergencies</p> <p>4.5.16 Explain the aetiology and pathogenesis of fever of unknown cause</p>
<p>4.6 Describe altered structure and function of the body and its major organ systems that are seen in various diseases and conditions.</p>	<p>4.6 .1 Describe altered structure and function of the body and its major organ systems that are seen in various diseases and conditions in pediatrics disorders.</p>
<p>4.7Describe drug actions: therapeutics and pharmacokinetics; side effects and interactions, including multiple treatments, long term conditions and non-prescribed medication; and effects on the population.</p>	<p>4.7.1 Describe drug actions: therapeutics and side effects and interactions, including multiple treatments, long term conditions of neonatal cholestasis, vomiting, abdominal pain, constipation, acute and chronic hepatitis, chronic liver diseases, ascites, cirrhosis.</p> <p>4.7.2 Describe drug actions: therapeutics and side effects and interactions, including multiple treatments, long term</p>

	<p>conditions persistent diarrhea, gastroenteritis and dehydration</p> <p>4.7.3 Describe drug actions: therapeutics and side effects and interactions, including multiple treatments, long term conditions of anemia, acute leukemia, chronic hemolytic anemia, bleeding tendency, and lymphoma.</p> <p>4.7.4 Describe drug actions: therapeutics and side effects and interactions, including multiple treatments, long term conditions of respiratory failure, circulatory failure and shock, coma, and metabolic emergencies.</p> <p>4.7.5 Describe drug actions: therapeutics and side effects and interactions, including multiple treatments, long term conditions of tuberculosis in children.</p> <p>4.7.6 Describe drug actions: therapeutics and side effects and interactions, including multiple treatments, long term conditions congenital cyanotic and a cyanotic heart disease, heart failure, rheumatic fever and infective endocarditis, and rheumatic valvular heart disease.</p>
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Competency Area V: The graduate as a member of the health team and part of the health care system The graduate should work and collaborate effectively with physicians and other colleagues in the health care professions, demonstrating an awareness of and a respect for their roles in delivering safe & effective patient- and population-centered care. He/she should be committed to his/her role as a part of health care system, respecting its hierarchy and rules and using his/her administrative and leadership skills to add value to the system. The graduate should be able to:

NARS	Course LOs
5.1 Recognize the important role played by other health care professionals in patients' management.	5.1.1 Recognize the team approach during basic life support 5.1.2 Recognize the multidisciplinary approach for treatment of children with metabolic emergencies

	<p>5.1.3 Recognize the multidisciplinary approach for treatment of seriously ill child</p> <p>5.1.4 Recognize the multidisciplinary approach for investigation and treatment of children with fever of unknown cause</p> <p>5.1.5 Recognize the multidisciplinary approach for treatment pleural effusion or pneumothorax. -- emergency treatment of croup.</p>
5.2. Respect colleagues and other health care professionals and work cooperatively with them, negotiating overlapping and shared responsibilities and engaging in shared decision-making for effective patient management.	5.2.1. Respect teamwork rule and shared responsibility in care and decision making for effective management of different pediatric disorders.
5.4. Apply leadership skills to enhance team functioning, the learning environment, and/or the health care delivery system.	5.4.3 Apply leadership skills to enhance team functioning, the learning environment, and/or the health care delivery system for effective management of different pediatric disorders.

Competency Area VI: The graduate as a lifelong learner and researcher the graduate should demonstrate a lifelong commitment to excellence in practice through continuous learning and professional development. He should reflect on his own performance, and plan for his own development making use of all possible learning resources. The graduate should have an inquisitive mind and adopt sound scientific research methodology to deal with practice uncertainty and knowledge gaps and to contribute to the development of his profession as well as for the purpose of his own academic development. The graduate should be able to:

NARS	Course LOs
6.3. Identify opportunities and use various resources for learning.	6.3.1. Maximize knowledge acquisition in pediatric cases (benefit from lectures, practical, library resources and internet resources, and self-learning)
6.5Recognize practice uncertainty and knowledge gaps in clinical and other professional encounters and generate focused questions that address them.	<p>6.5.1. Recognize atypical presentations of different pediatric cases during practical activities.</p> <p>6.5.2 Generate focused questions that address practice uncertainty and knowledge gaps in the management of different pediatric disorders.</p>

OGYN II

Competency Area I: The graduate as a health care provider the graduate should provide quality, safe, patient-centered care, drawing upon his/her integrated knowledge and clinical skills, and adhering to professional values. The graduate should collect and interpret information, make clinical decisions, and carry out diagnostic and therapeutic interventions - with an understanding of the limits of his/her expertise-considering the patient's circumstances and preferences as well as the availability of resources.

NARS	Course Los
1.1 Take and record a structured, patient centered history.	1.1.1. Construct patient centered history for different gynecologic situations throughout female life cycle.
1.2 Adopt an empathic and holistic approach to the patients and their problems.	1.2.1. Apply proper counselling in gynecology for infertility and sexual problems.
1.4 Perform appropriately-timed full physical examination of patients, appropriate to the age, gender, and clinical presentation of the patient while being culturally sensitive.	1.4.1. Perform full physical examination of women (Skill lab). 1.4.2. Perform complete local gynecologic examination. 1.4.3. Examine the breast.

1.5 Prioritize issues to be addressed in a patient encounter.	1.5.1 Recognize complex cases related to different gynecologic cases. 1.5.2 Apply the differential diagnosis in different complex gynecologic cases.
1.6 Select the appropriate investigations and interpret their results taking into consideration cost/effectiveness factors.	1.6.1 Select basic laboratory investigations for gynecologic problem at hand. 1.6.2 Interpret investigations for infertile couple. 1.6.3 Determine the suitable investigations for suspected genital malignancies. 1.6.4 Select the proper investigations for abnormal uterine bleeding.
1.7 Recognize and respond to the complexity, uncertainty, and ambiguity inherent in medical practice.	1.7.5. Identify emergent cases with complex uncertain or ambiguous nature in gynecology.
1.8 Apply knowledge of the clinical and biomedical sciences relevant to the clinical problem at hand.	1.8.1. Determine deviation from physiologic changes during puberty and menopause. 1.8.2. Correlate the anatomy of female genital system with different gynecologic presentations. 1.8.3. Relate clinical findings to both normal and abnormal uterine bleeding. 1.8.4. Justify the histologic changes related to menstrual irregularities. 1.8.5. Relate the physiologic changes in female genital system with different cyclic events.
1.10 Integrate the results of history, physical examination and laboratory test findings into a meaningful diagnostic formulation	1.10.1 Reach a provisional diagnosis after integration of history, physical examination and laboratory test findings in different gynecologic cases.
1.11 Perform diagnostic and intervention procedures in a skillful and safe manner, adapting to unanticipated findings or changing clinical circumstances.	1.11.1 Take smears from suspected cases with malignancy (skill lab).

	<p>1.11.2 Perform IUD insertion and removal (skill lab).</p> <p>1.11.3 Take swabs for different diagnostic purposes.</p> <p>1.11.4 Perform female bladder catheterization (skill lab)</p> <p>1.11.5 Perform local gynecologic examination (skill lab).</p>
1.12 Adopt strategies and apply measures that promote patient safety	<p>1.12.1 Improve communication skills to ensure patient safety.</p> <p>1.12.2 Apply measures that prevent infection during various procedures.</p>
1.13 Establish patient-centered management plans in partnership with the patient, his/her family and other health professionals as appropriate, using Evidence Based Medicine in management decisions.	<p>1.13.1. Create evidence-based management plans for different gynecologic situations</p> <p>1.13.2. Manage case with blood loss</p> <p>1.13.3. Propose management for cases with acute PID</p> <p>1.13.4. Assess and manage cases with complicated ovarian cyst</p> <p>1.13.5. Plan for cases severe vaginal bleeding</p> <p>1.13.6. Evaluate cases with urine retention caused by gynecologic conditions.</p> <p>1.13.7. Construct a plan to correct electrolyte in relevant to the patient's conditions.</p>
1.14 Respect patients' rights and involve them and /or their families / carers in management decisions.	1.14.1. Take an informed consent in different gynecologic situations
1.16 Apply the appropriate pharmacological and nonpharmacological approaches to alleviate pain and provide palliative care for seriously ill people, aiming to relieve their suffering and improve their life.	1.16.1 Select appropriate pharmacological and non-pharmacological approaches to alleviate dysmenorrhea by its different types.

Competency Area II: The graduate as a health promoter the graduate should advocate for the development of community and individual measures which promote the state of well-being, he/she should empower individuals and communities to engage in healthy behaviors, and put his/her knowledge and skills to prevent diseases, reduce deaths and promote quality life style. The graduate should be able to:

NARS

Semester LOs

2.3 Discuss the role of nutrition and physical activity in health.	2.3.1 Explain the importance of nutrition before conception. 2.3.2 Describe the nutritional requirements during perioperative period. 2.3.3 Determine physical activities during perioperative period.
2.4 Identify the major health risks in his/her community, including demographic, occupational and environmental risks; endemic diseases, and prevalent chronic diseases.	2.4.1 Identify different carcinogenic substances and drugs. 2.4.2 Indicate occupations that may affect fertility. 2.4.3 Relate prevalent chronic diseases, specially D.M., liver disease, hypertension and heart disease, to different female clinical problems.
2.5 Describe the principles of disease prevention, and empower communities, specific groups or individuals by raising their awareness and building their capacity.	2.5.1 Describe the prevention of anemia in females. 2.5.2 Describe how to avoid genital infections and related infertility. 2.5.3 Explain cancer prevention. through detailed history personal special habits as smoking or family history: cancer family syndrome in associated cancer related to viral infection as HPV and cancer cx
2.6 Recognize the epidemiology of common diseases within his/her community and apply the systematic approaches useful in reducing the incidence and prevalence of those diseases.	2.6.1 Recognize the causes for increased nulliparous infertility in Egypt. 2.6.2 Outline measures used to reduce infertility iatrogenic related problems. 2.6.3 Outline the causes for prevalence of anemia in Egyptian women.
2.7 Provide care for specific groups including pregnant women, newborns and infants, adolescents and the elderly.	2.7.1 Prepare care protocol for newly married couples. 2.7.2 Discuss importance of cervical cancer screening program 2.7.3 Discuss care program for elder women with incontinence. 2.7.4 List the suitable contraception for different age groups.
2.9 Adopt suitable measures for infection control.	2.9.1 Apply antiseptic measures during vaginal examination. 2.9.2 Outline standard measures to prevent surgical site infections.

Competency Area III: The graduate as a professional the graduate should adhere to the professional and ethical codes, standards of practice, and laws governing practice. The graduate should be able to:

NARS

Course LOs

3.1 Exhibit appropriate professional behaviors and relationships in all aspects of practice, demonstrating honesty, integrity, commitment, compassion, and respect.	3.1.1 Demonstrate professional behavior during practice.
3.5 Ensure confidentiality and privacy of patients' information	3.5.1 Apply legal standard measures for examination of women.
3.6 Recognize basics of medico-legal aspects of practice, malpractice and avoid common medical errors.	3.6.1 Recognize common medical errors and malpractice in management of infertile couple. 3.6.2 Summarize medicolegal aspects for women examination.
3.8 Refer patients to the appropriate health facility at the appropriate stage.	3.8.1 Determine indicated cases and the suitable time for referral to appropriate health facility.

Competency Area IV: The graduate as a scholar and scientist the graduate should build his / her clinical practice on a base of knowledge of scientific principles and methods of basic medical and social sciences, applying this knowledge into clinical care, and using it as a foundation for clinical reasoning, care provision, further professional development and research. The graduate should be able to:

NARS	Course LOs
4.3. Recognize and describe main developmental changes in humans and the effect of growth, development and aging on the individual and his family.	4.3.1. Correlate early development of female genital and urinary system with different genital malformations.
4.4 Explain normal human behavior and apply theoretical frameworks of psychology to interpret the varied responses of individuals, groups and societies to disease.	4.4.1. explain the psychologic changes during menstrual cycle
4.5. Identify various causes (genetic, developmental, metabolic, toxic, microbiologic, autoimmune, neoplastic, degenerative, and traumatic) of illness/disease and explain the ways in which they operate on the body (pathogenesis).	4.5.1 Explain the pathogenesis of abnormal uterine bleeding 4.5.2 Summarize the pathogenesis of infertility 4.5.3 Discuss the pathogenesis of female genital displacement 4.5.4 Summarize the pathogenesis of urinary incontinence
4.6 Describe altered structure and function of the body and its major organ systems that are seen in various diseases and conditions.	4.6 .1 Determine altered structure and function of female body systems in different gynecologic conditions.
4.7 Describe drug actions: therapeutics and pharmacokinetics; side effects and interactions, including multiple treatments, long term conditions and non-prescribed medication; and effects on the population.	4.7.1 Choose suitable treatment plan for different gynecologic situations.
4.8 Demonstrate basic sciences specific practical skills and procedures relevant to future practice, recognizing their scientific basis, and interpret common diagnostic modalities, including: imaging, electrocardiograms, laboratory assays, pathologic studies, and functional assessment tests	4.8.1 Demonstrate of different pathological alterations in tissue sections under the microscope related to gynecology

	<p>4.8.2 Demonstrate the different ultrasonic findings for female genital diseases</p> <p>4.8.3 Interpret H.S.G.</p> <p>4.8.4 demonstrate and interpret findings of genital tract Doppler studies</p> <p>4.8.5 Demonstrate findings in different investigatory tools related to gynecology: USS, laparoscopy, hysteroscopy, colposcopy and X-ray.</p>
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Competency Area V: The graduate as a member of the health team and part of the health care system The graduate should work and collaborate effectively with physicians and other colleagues in the health care professions, demonstrating an awareness of and a respect for their roles in delivering safe & effective patient- and population-centered care. He/she should be committed to his/her role as a part of health care system, respecting its hierarchy and rules and using his/her administrative and leadership skills to add value to the system. The graduate should be able to:

NARS	Course LOs
5.1 Recognize the important role played by other health care professionals in patients' management.	5.1.1 Recognize the important role played by other health care professionals in patients' management
5.4. Apply leadership skills to enhance team functioning, the learning environment, and/or the health care delivery system.	5.4.4 Lead a team within clinical learning contexts through group discussion Take history from patients, Preparation of power point by each group for specific topics
5.5. Communicate effectively using a written health record, electronic medical record, or other digital technology.	5.5.1 Demonstrate referral forms in different clinical situations 5.5.2 Demonstrate digital electronic system in MUH Demonstrate patient's registration, data input, electronic files, surveys, operative details, morbidity and mortality.

Competency Area VI: The graduate as a lifelong learner and researcher the graduate should demonstrate a lifelong commitment to excellence in practice through continuous learning and professional development. He should reflect on his own performance, and plan for his own development making use of all possible learning resources. The graduate should have an inquisitive mind and adopt sound scientific research methodology to deal with practice uncertainty and knowledge gaps and to contribute to the development of his profession as well as for the purpose of his own academic development. The graduate should be able to:

NARS	Course LOs
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6.1. Regularly reflect on and assess his/her performance using various performance indicators and information sources.

6.1.1 Demonstrate self-directed learning activities

3- Contents

MED III

	Topic	Lectures	Clinical h	Skill lab	Seminars	assignment
Cardiovascular medicine	Clinical evaluation and therapy of hypertension	1.5				<u>1</u>
	Valvular heart diseases	1.5				
	Infective endocarditis.	1.5				
	Ischemic heart diseases.	1.5				
	Chronic & acute Heart Failure	2				
	Pericardial diseases	1.5				
	History Taking of a cardiovascular Case: cardiovascular symptoms		3			
	General Examination of a cardiovascular Case: neck veins, pulse, blood pressure & LL edema.		3			
	General Examination of a cardiovascular Case: neck veins, pulse, blood pressure & LL edema.		3			
	Local cardiac Examination Inspection-Palpation-Percussion& Auscultation		3			
	Local cardiac Examination Inspection-Palpation-Percussion& Auscultation		3			
	Clinical approach to patient presented by chest pain.				1.5	
	Clinical approach to patient presented by dyspnea.				1.5	
	Clinical approach to patient presented by palpitation.				1.5	
	Clinical approach to patient presented by syncope.				<u>1.5</u>	
How to perform and interpret a normal ECG				1.5		
	How to interpret ECG for IHD			1.5		
	How to interpret ECG for arrhythmia(tachycardia).			1.5		
	How to interpret ECG for IHD (bradycardia).			1.5		
Chest medicine	Bronchial asthma	1.5				
	COPD	1.5				
	Suppurative lung diseases	1.5				
	pneumonia	2				
	Pulmonary TB & extrapulmonary TB	1.5				
	Respiratory Failure and ARDS	1.5				
	History Taking of a chest case		3			

	ABG -Type I and II RF -Respiratory Acidosis -Respiratory Alkalosis Clinical decision making (case 1)					
	General examination of chest case using Nebulizers Inhalation Therapy Clinical decision making (case 2)		3			
	Local examination (inspection & palpation) Clinical decision making (case 3 and case 4)		3			
	Local examination (percussion & auscultation) Clinical decision making (case 5 and case 6)		3			
	Clinical decision making (case 7) CXR (abnormal findings 1) CXR (abnormal findings 2)		3			
	Clinical Approach for Lung Cancer Case				1.5	
	Clinical Approach For ILD				1.5	
	Pleural Diseases				1.5	
	Sleep Disorder Breathing				1.5	
	Differential diagnosis of: cough & expectoration chest pain/haemoptysis wheezes/dyspnea					
	differential diagnosis of lung shadow: Nodule- GGO-cavitary lesion- mass reticular shadow- scar lines					
Total		19	30	6	12	1

SURG III

	Topic	Lectures	Clinical	IA
General Surgery	Surgical Anatomy of the breast.	1	3	
	Benign breast diseases , mastalgia , nipple discharge	2	6	
	Breast cancer	3	10	
	Anatomy and surgical importance.	1	3	
	Inguinal. And Femoral hernie	2	3	
	Ventral hernies, (Incisional hernie,	2	6	

	recurrent hernie, burst abdomen.)			
	Varicocele and hydrocele.	1	6	
	Diseases of testis and epididymis.	2	4	
	D.D of inguino-scrotal swelling	1	4	
	Lumpectomy general principles			1
	Lumpectomy upper outer quadrant			1
	Modified radical mastectomy			1
	Open inguinal /femoral hernia repair			1
	Open paraumbilical hernia repair			1
	Chest drain			1
	Hydrocelectomy			1
Cardiothoracic Surgery	Surgical Anatomy of the heart	1		
	Rheumatic heart diseases	1/2	1	
	Ischemic heart diseases	1/2	1	
	Congenital heart disease	1	1	
	Chest pulmonary resection	2	2	
		1	1	
Total		21	51	7

PED II

	Topic	Lectures	Clinical	Seminars	CBL	Assignment
Respiratory	Chest examination	-	2		1	5
	Pneumonia	1	2		1	
	Laryngitis, epiglottitis, tracheitis and bronchitis		-	1	1	
	Bronchial asthma	2		1	1	
	Foreign body aspiration	1	-		1	
	Acute bronchiolitis and wheezy infant	1	2		1	
	Pleural diseases (effusion and pneumothorax)	1			1	
	Chest radiology	1				
Gastrointestinal diseases and Hepatology	Abdominal examination	-	2		1	
	Vomiting, abdominal pain, constipation	1	-		1	
	Gastroenteritis and dehydration	2	-		1	
	Chronic and persistent diarrhea	1	-		1	
	Acute hepatitis	1	-		1	
	Chronic hepatitis	1	-			
	Cirrhosis and ascites	2				
	Neonatal cholestasis		2	1		
	Chronic liver disease	-	2	1		
Introduction to anemia (iron	1	-		1		

	deficiency, megaloblastic anemia)					
	Acute and chronic hemolytic anemia	1	2		1	
	Aplastic anemia	1	-		1	
	Platelet disorders	1	-		1	
	Blood vessels disorders and vasculitis	1	-		1	
	Coagulation disorders		-	1		
	Clinical approach to bleeding disorders	-	2			
	Acute and chronic leukemia	2	2			
	Lymphoma and lymphadenopathy	2				
	Data interpretation hematology	2		2	1	
Pediatric emergencies	Respiratory failure	2		1	1	
	Circulatory failure & shock	1		1	1	
	Recognition of the seriously ill child	2			1	
	Coma	1			1	
	Pediatric basic life support (skill lab)		4			
	Metabolic emergencies	1			1	
Cardiovascular	Mode of presentation of pediatric heart diseases	1	-		1	
	Cardiovascular examination	-	2		1	
	Congenital acyanotic heart diseases	2	2		1	
	Congenital cyanotic heart diseases	2	2		1	
	Acute rheumatic fever, rheumatic heart disease	2	2		1	
	Heart failure, myocarditis, cardiomyopathy	2	-			
	Infective endocarditis, Kawasaki disease		-	1		
	Pediatric cardiovascular radiology	2	-			
Infectious diseases	Common viral infections	1	-	1	1	
	Common bacterial infections	1	-	1		
	Childhood tuberculosis	1	-	1	1	
Total		47	30	13	30	5

OGYN II

	Topics	Lecture	Practical	Clinical	Seminars	CBL	Incision Academy	Assignment
1.	Anatomy	2	4				6	2
2.	Embryology	2						
3.	Physiology	1						
4.	Reproductive endocrinology	1	2	1.5	1			

5.	Puberty	1	2	1.5	1	2		
6.	Menopause	2	2	1.5	1	2		
7.	Abnormal uterine bleeding	2	4	6	1	2		
8.	Amenorrhea	2	3	3		2		
9.	Genital descent	2	4	3		2		
10.	RVF+ Inversion	2	2	1.5				
11.	Urinary and fecal incontinence	2	2	1.5				
12.	Lower genital infections	2	4	1.5	1			
13.	PID	2	2	1.5	1			
14.	STDs	2	2	1.5	1	2		
15.	Leiomyoma	2	3	3	1			
16.	Endometriosis & adenomyosis	2	4	1.5		2		
17.	Premalignant lesions of GT	2	4	1.5				
18.	Endometrial carcinoma	2	2					
19.	Cervical carcinoma	2	2			2		
20.	Ovarian 1	2	2		1			
21.	Ovarian 2	2	2					
22.	Subfertility	2	5			2		
23.	Contraception 1	2	2					
24.	Contraception 2	2	3		1			
25.	PCO	2	2					
26.	Gyn surgery and therapeutics	2						
27.	GTD	2						
Teaching Hours		51	16	30	10	18	6	2

GYN II CBL:

- 1- Amenorrhea
- 2- Abnormal puberty
- 3- Menopausal syndrome
- 4- Sexually transmitted diseases
- 5- Abnormal uterine bleeding for benign and malignant condition
- 6- Chronic pelvic pain& endometriosis
- 7- Pelvic organ prolapse
- 8- Contact bleeding due to cervical cancer
- 9- Sub fertility due to anovulation

1. Teaching and learning methods:

MEDIII

- 2.1 Lectures (12 lectures)
- 2.2 Clinical rounds (10 rounds)
- 2.3 Seminars (8 seminar)
- 2.4 Skill Lab. (2skill lab)
- 2.5 Assignment (1)

SURGI

- 3.1 Lectures (21 lectures)
- 3.2 Clinical (17 rounds)
- 3.3 Incision academy (7)

PED II

- 3.1 Lectures (47 lectures)
- 3.2. Seminars (13 seminar)
- 3.3 Clinical rounds (10 clinical session)
- 3.4 Assignment (5)
- 3.5 Case Based Learning (15 cases)

OGYN II

- 3.1 Lectures (27 lectures)
- 3.2 Clinical (10 rounds)
- 3.3 Seminars (10)
- 3.4 Practical (8)
- 3.5 Assignment (6)
- 3.6 Case Based Learning (9)
- 3.7 Incision Academy (6)

2. Student assessment methods:

المستوى الرابع – الفصل الثامن

التأهيل النهائي	الدرجات			المقررات الدراسية				
	التحريرى %٤٠	العنى (OSCE) %٣٠	أعمال السنة %٣٠	Name	Weeks	Credit Hours	Code	المستوى الرابع – الفصل الثامن
٧٥	٣٥	٢٠	٢٠	Surgery (III)	٣	٣	SURGI	
٧٥	٣٥	٢٠	٢٠	Medicine (III)	٣	٣	MEDI	
١٧٥	٧٥	٥٠	٥٠	Peds (II)	٦	٧	PEDI	
١٧٥	٧٥	٥٠	٥٠	OGYN (II)	٦	٧	OGYN II	
٥٠٠					١٨	٢٠	المجموع	

نهائى		عملى	تقييم مستمر		الدرجة 500	المقرر	
اختبار essay	اختبار MCQs	OSCE/OSPE	اختبار MCQs	نشاط			
20 درجة	15 درجة	20 درجة	15 درجة	5 درجة	75	Surgery (III)	SURGI
20 درجة	15 درجة	20 درجة	15 درجة	5 درجة	75	Medicine (III)	MEDI
40	35	50	45 درجة	5 درجة	175	Pediatrics II	PEDI

		درجة					
40	35	50	40 درجة	10 درجة	175	Gynecology II	OGYN II

3. Facilities required for teaching and learning:

- 8.1 On line Platform
- 8.2 Small group halls
- 8.3 Skill Lab facilities
- 8.4 Audiovisual aids
- 8.5 Outpatient Clinic
- 8.6 Inpatient Wards
- 8.7 Incision academy account

4. List of references:

- **Course notes tailored by the professors**
- **Essential books (textbooks):**

Medicine	<ul style="list-style-type: none"> • Loscalzo J. Harrison's Cardiovascular Medicine. Ed. Joseph Loscalzo. McGraw Hill, 2016 https://accesscardiology.mhmedical.com/content.aspx?bookid=1951&sectionid=144082894. Oxford specialist handbooks in cardiology collection. https://oxfordmedicine.com/browse?t0=OXMEDO_SERIES%3Aoxford_specialist_handbooks • Seaton A, Seaton D and Leitch AG (eds): Crofton and Douglas's Respiratory Diseases. Fifth edition (Textbook), Blackwell Science Ltd, 2018. • Metlay JP, Waterer GW, Long AC, Anzueto A, Brozek J, Crothers K, Cooley LA, Dean NC, Fine MJ, Flanders SA, Griffin MR, Metersky ML, Musher DM, Restrepo MI, and Whitney CG, on behalf of the American Thoracic Society and Infectious Diseases Society of America: Diagnosis and Treatment of Adults with Community-acquired Pneumonia. Am J Respir Crit Care Med Vol 200, Iss 7, pp e45–e67, Oct 1, 2019. DOI: 10.1164/rccm.201908-1581ST • GINA (Global Initiative for Asthma): GINA science committee, 2021. Website www.ginasthma.org. • GOLD (Global Initiative for Chronic Obstructive Lung Diseases): Global strategy for the diagnosis, management, and Prevention of chronic obstructive pulmonary disease, Updated 2021. Website www.goldcopd.org.
Surgery	<ul style="list-style-type: none"> ▪ Norman Williams, P. Ronan O'Connell. Bailey's and Love's short practice of surgery. Andrew McCaskie , 27th edition, 2018 ▪ Gerard M Doherty. CURRENT SURGICAL Diagnosis & Treatment.,14th edition ,2019 ▪ George Hanna. Essential Surgical Practice..Alfred Cuschieri. 5th Edition, 2015 ▪ Michael J. Zinner, Stanley W. Ashley, O. Joe Hines. Maingot's Abdominal Operations. 13th edition,2018
PED	<ul style="list-style-type: none"> A. Marcdante, K. J., & Kliegman, R. (2019). Nelson essentials of pediatrics (Eighth edition.). Philadelphia, PA: Elsevier B. Robert C. Tasker, Carlo L. Acerini, Edward Holloway, Asma Shah, Pete Lillitos. Oxford Handbook of Paediatrics (Oxford Medical Handbooks) 3rd Edition by. Oxford University Press 2013 C. Tom Lissauer and Will Carroll. Illustrated Textbook of Pediatrics 5th edition. Elsevier 2017

OGYN	<ul style="list-style-type: none"> • Gary F Cunningham, Kenneth J. Leveno, Steven L. Bloom, Jodi S. Dashe, Barbara L. Hoffman, Brian M. Casey, Catherine Y. Spong. William's Gynecology. 4th Edition, USA. McGraw Hill / Medical, 2020 • Louise C. Kenny, Jenny E. Myers. 2017, Gynaecology by Ten teachers. 20th Edition, USA Taylor and Francis
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- *Maher Shams Eldeen Elsegaey*
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