

# Para-Medical Program

<b>Specialization</b>	<b>Surgical Technology</b>
<b>Course Number</b>	<b>21102141</b>
<b>Course Title</b>	<b>Fundamentals of nursing</b>
<b>Credit Hours</b>	<b>(3)</b>
<b>Theoretical Hours</b>	<b>(3)</b>
<b>Practical Hours</b>	<b>(0)</b>

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### **Brief Course Description:**

❖ This course serves as a base for the other nursing courses it is designed to Provide the first year student with the basic nursing concepts and principles needed for the practice of nursing. The course emphasizes the student's understanding of the nature of the client needs and the intervention required utilizing the functional health patterns such as activity/ exercise, nutrition and elimination.

### **Course Objectives:**

Upon the completion of the course, the student will be able to:

1. Value primary health care practices as a part of the Associate Degree nursing role
2. Discuss concepts related to functional health patterns and their utilization in providing nursing care for client.
3. Understand the nursing process as a framework for providing nursing care for a client with selected alterations in function health patterns.
4. Describe the principles underlying effective recording and reporting/ documenting of nursing interventions.
5. Recognize the principles underlying all nursing intervention produces related to providing care to client in different care settings.
6. Apply the principles of infection prevention in any clinical setting.
7. Develop an awareness concerning the importance of health promotion for the individual, the family and the community.
8. Understand the continuum of nursing care from assessment of vital signs to more complex physical assessment procedures.

### **Detailed Course Description:**

Unit Number	Unit Name	Unit content	Time Needed
1.	Nursing process.	<ul style="list-style-type: none"> <li>▪ Overview of the nursing process.</li> <li>▪ Characteristics of nursing process.</li> <li>▪ Assessment.                             <ul style="list-style-type: none"> <li>– Collection of data.</li> <li>– Types of data.</li> <li>– Source of data.</li> <li>– Data collection methods.</li> <li>– Organizing data.</li> <li>– Validating data.</li> <li>– Documenting data.</li> </ul> </li> <li>▪ Diagnosis                             <ul style="list-style-type: none"> <li>– Definition.</li> <li>– Types of nursing diagnosis.</li> <li>– Components.</li> <li>– Formulating diagnostic statements.</li> </ul> </li> <li>▪ Planning.                             <ul style="list-style-type: none"> <li>– Types of planning.</li> <li>– Developing nursing care plan.</li> <li>– Guidelines of writing N.C.P.</li> <li>– Planning process.</li> <li>– Establishing client goals / desired outcomes.</li> <li>– Writing nursing order.</li> </ul> </li> <li>▪ Implementing action                             <ul style="list-style-type: none"> <li>– Process of implementing.</li> <li>– Evaluation.</li> <li>– Process of evaluating client responses.</li> </ul> </li> <li>▪ Documenting and Reporting.                             <ul style="list-style-type: none"> <li>– Purposes of client record.</li> <li>– Documentation system.</li> <li>– Admission nursing assessment.</li> <li>– Nursing discharge and referral.</li> <li>– Guideline for recording.</li> <li>– Reporting</li> </ul> </li> </ul>	

<p>2.</p>	<p><b>Health assessment</b></p>	<p><b>A. Vital signs.</b></p> <ul style="list-style-type: none"> <li>- Time to assess vital signs.</li> <li>- Variations in normal vital signs by age. <ul style="list-style-type: none"> <li>▪ Body temperature. <ul style="list-style-type: none"> <li>- Factors affecting body temperature.</li> <li>- Alterations in body temperature.</li> <li>- Advantages and disadvantages of four, sites for body temperature measurement.</li> <li>- Types of thermometers.</li> <li>- Temperature scales (Celsius and Fahrenheit)</li> </ul> </li> <li>▪ Pulse. <ul style="list-style-type: none"> <li>- Factors affecting pulse rate.</li> <li>- Pulse sites.</li> <li>- Reasons for using specific pulse site.</li> <li>- Apical – radial pulse.</li> </ul> </li> <li>▪ Respiration. <ul style="list-style-type: none"> <li>- Review the mechanics and Regulation of breathing.</li> <li>- Assessing respiration.</li> <li>- Factors affecting respiratory rate.</li> <li>- Altered breathing patterns and Sounds.</li> </ul> </li> <li>▪ Blood pressure. <ul style="list-style-type: none"> <li>- Factors affecting blood pressure.</li> <li>- Assessing blood pressure (Equipment, sites, methods).</li> <li>- Common errors in assessing blood Pressure</li> </ul> </li> </ul> </li> </ul> <p><b>B. Body Health Assessment.</b></p> <ul style="list-style-type: none"> <li>- Preparing the client and environment.</li> </ul>	
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		<ul style="list-style-type: none"> <li>- Methods of examining.</li> <li>- General survey.</li> <li>- Head and necks.</li> <li>- Upper extremities.</li> <li>- Chest and back.</li> <li>- Abdomen.</li> <li>- Genitals.</li> <li>- Anus and Rectum.</li> <li>- Lower extremities.</li> </ul>	
3.	<b>Safety and protection.</b>	<ul style="list-style-type: none"> <li>▪ Factors affecting safety</li> <li>▪ Safety hazards throughout the life</li> <li>▪ Span.</li> <li>▪ Preventing specific hazards.                             <ul style="list-style-type: none"> <li>- Scales and burn.</li> <li>- Fires.</li> <li>- Falls.</li> <li>- Poisoning.</li> <li>- Suffocation or choking.</li> <li>- Electrical hazards.</li> </ul> </li> <li>▪ Restraining client.                             <ul style="list-style-type: none"> <li>- Kinds of restraints.</li> </ul> </li> </ul>	
4.	<b>Asepsis.</b>	<ul style="list-style-type: none"> <li>▪ Review method of transmission of microorganisms.</li> <li>▪ Preventing Nosocomial infection.</li> <li>▪ Factors increasing susceptibility to infection.</li> <li>▪ Preventing infections in the home.</li> <li>▪ Cleaning, disinfecting and sterilization.</li> <li>▪ Isolation precautions.</li> <li>▪ Isolation practices.</li> <li>▪ Sterile techniques.</li> <li>▪ Sterile field.</li> <li>▪ Infection control for health care workers</li> <li>▪ Role of infection control nurse.</li> </ul>	
5.	<b>Hygiene</b>	<ul style="list-style-type: none"> <li>▪ Factors influencing personal hygiene</li> <li>▪ Agents commonly used on the skin.</li> </ul>	

		<ul style="list-style-type: none"> <li>▪ Purpose of bathing, oral hygiene, skin, feet, nails, hair, eyes ears and nose care.             <ul style="list-style-type: none"> <li>– Hygienic environment.</li> <li>– Hospital beds.</li> <li>– Mattresses.</li> <li>– Side rails.</li> <li>– Foot board.</li> <li>– Bed cradles.</li> </ul> </li> <li>▪ Making beds.             <ul style="list-style-type: none"> <li>– Occupied, unoccupied, post operative beds.</li> </ul> </li> </ul>	
6.	<b>Skin integrity and wound care</b>	<ul style="list-style-type: none"> <li>▪ Infection cycle</li> <li>▪ Factors affecting skin integrity.</li> <li>▪ Pressure ulcer.             <ul style="list-style-type: none"> <li>– Etiology.</li> <li>– Risk factors.</li> <li>– Common pressure site.</li> <li>– Treating pressure ulcer.</li> </ul> </li> <li>▪ Wound healing.</li> <li>▪ Factors affecting wound healing.</li> <li>▪ Dressing wound.             <ul style="list-style-type: none"> <li>– Types of dressing.</li> </ul> </li> <li>▪ Heat and cold application.             <ul style="list-style-type: none"> <li>– Physiologic effects of heat and cold.</li> <li>– Variables affecting physiologic tolerance to heat and cold.</li> <li>– Guide lines when applying heat and cold.</li> <li>– Supporting and immobilizing wounds. Bandages, roller Bandages, figure – eight turn, binders,...etc</li> </ul> </li> </ul>	
7.	<b>Activity and Exercise</b>	<ul style="list-style-type: none"> <li>▪ Basic – elements of normal movement</li> <li>▪ Factors affecting body alignment and activity.</li> <li>▪ Joint movement.</li> <li>▪ Types of exercise (Isotonic, isometric, isokinetic, aerobic, anaerobic exercise).</li> <li>– Benefits of exercise.</li> </ul>	

		<ul style="list-style-type: none"> <li>- Effect of immobility.</li> <li>- Using body mechanics.</li> <li>- Positioning clients (fowlers, recumbent, dorsal recumbent, prone, lateral, Sims' etc).</li> <li>- Moving and turning clients in bed.</li> <li>- Transferring clients.</li> <li>- Providing range of motion exercise.</li> </ul>	
8.	<b>Rest And Sleep.</b>	<ul style="list-style-type: none"> <li>▪ Physiology of sleep.</li> <li>▪ Stages of sleep.</li> <li>▪ Sleep cycle.</li> <li>▪ Function of sleep.</li> <li>▪ Normal sleep patterns and requirements</li> <li>▪ Factors affecting sleep.</li> <li>▪ Common sleep disorders.</li> </ul>	
9.	<b>Pain Management.</b>	<ul style="list-style-type: none"> <li>▪ Nature of pain.</li> <li>▪ Types of pain.</li> <li>▪ Factors affecting the pain experience.</li> <li>▪ Pain assessment.</li> <li>▪ Barriers to pain management.</li> <li>▪ Key factors in pain management.</li> </ul>	
10.	<b>Nutrition</b>	<ul style="list-style-type: none"> <li>▪ Essential nutrients</li> <li>▪ Energy balance.</li> <li>▪ Body weight and body mass standards.</li> <li>▪ Factors affecting nutrition.</li> <li>▪ Nutritional variation throughout the life cycle.</li> <li>▪ Nutrition for older adult</li> <li>▪ Nasogastric tube insertion</li> </ul>	
11.	<b>Fluid and electrolyte, and acid – base balance</b>	<ul style="list-style-type: none"> <li>▪ Body fluids and electrolytes (Distribution and composition)</li> <li>▪ Regulating body fluid.                             <ul style="list-style-type: none"> <li>- Fluid intake.</li> <li>- Fluid output</li> </ul> </li> <li>▪ Regulation and function of electrolytes.</li> <li>▪ Factors affecting body fluid, electrolytes, and acid – base balance.</li> <li>▪ Fluid imbalance.</li> <li>▪ Electrolyte imbalance</li> </ul>	

		<ul style="list-style-type: none"> <li>▪ Acid base imbalance.</li> <li>▪ Normal electrolyte values for adult</li> </ul>	
12.	<b>Fecal Elimination</b>	<ul style="list-style-type: none"> <li>▪ Physiology of fecal elimination.</li> <li>▪ Factors that affect defecation.</li> <li>▪ Common fecal elimination problems.</li> <li>▪ Rectal tube and enema</li> </ul>	
13.	<b>Urinary Elimination</b>	<ul style="list-style-type: none"> <li>▪ Revision of physiology of urinary elimination.</li> <li>▪ Factors affecting urinary elimination.</li> <li>▪ Altered urine production.</li> <li>▪ Altered urine elimination.</li> <li>▪ Characteristics of normal and abnormal urine.</li> <li>▪ Guidelines that maintain normal voiding habits:                             <ul style="list-style-type: none"> <li>– Preventing urinary tract infection.</li> <li>– Urinary catheterization.</li> <li>– Use of bedpan and urinal</li> </ul> </li> </ul>	
14.	<b>Oxygenation</b>	<ul style="list-style-type: none"> <li>▪ Revision of the respiratory system.</li> <li>▪ Factors affecting respiratory and cardiovascular function.</li> <li>▪ Alteration in respiratory function.</li> <li>▪ Oxygen therapy methods.</li> </ul>	
15.	<b>Sexuality</b>	<ul style="list-style-type: none"> <li>▪ Sexual health.</li> <li>▪ Development of sexuality.</li> <li>▪ Factors influencing sexuality.</li> <li>▪ Breast self examination</li> </ul>	
16.	<b>Loss, Grieving, and Death .</b>	<ul style="list-style-type: none"> <li>▪ Loss and grief.                             <ul style="list-style-type: none"> <li>– Types.</li> <li>– Stages.</li> </ul> </li> <li>▪ Factors influencing the loss and grief response.</li> <li>▪ Ethical and legal issues.</li> <li>▪ Dying and death.</li> <li>▪ Signs of death.</li> <li>▪ Helping clients die with dignity.</li> <li>▪ Post mortem care.</li> </ul>	
17.	<b>Medication.</b>	<ul style="list-style-type: none"> <li>▪ Selected terms,(Medication, drugs pharmacology etc.. )</li> </ul>	

		<ul style="list-style-type: none"> <li>▪ Types of drug preparation</li> <li>▪ Legal aspects of drug administration.</li> <li>▪ Effects of drug.</li> <li>▪ Factors affecting medication action.</li> <li>▪ Routes of administration.</li> <li>▪ Medication orders (types)</li> <li>▪ Essential parts of a drug order.</li> <li>▪ Parts of a prescription.</li> <li>▪ Calculating dosage.</li> <li>▪ Administering medication safety.</li> <li>▪ Six "rights" of drug administration.                             <ul style="list-style-type: none"> <li>– Topical medications.</li> <li>– Ophthalmic instillations.</li> <li>– Otic instillation.</li> <li>– Vaginal instillations.</li> <li>– Rectal instillation.</li> </ul> </li> <li>▪ Respiratory inhalation.</li> <li>▪ Oral medication.</li> <li>▪ Parenteral medication (ID, SC, I.V and I.M).</li> </ul>	
18.	<b>Pre-post operative nursing</b>	<ul style="list-style-type: none"> <li>▪ Phases of the pre operative period.</li> <li>▪ Routine pre operative screening tests.</li> <li>▪ Pre operative teaching.</li> <li>▪ Nurse role in pre operative phase.</li> <li>▪ Nurse role in intra operative phase.</li> <li>▪ Nurse role in post operative phase.</li> <li>▪ Post operative problems.</li> </ul>	

**Evaluation Strategies:**

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----

	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects		10%	
<b>Total</b>		<b>100%</b>	

### Teaching Methodology:

- ❖ Lecture. Discussion. Simulation. Assignments.

### References:

1. Foundation of Nursing by Lois White and Susan, 2005.
2. Procedures Checklist to accompany foundations, Lois White (2004).
3. Fundamentals of nursing: Human health and function. Craven, R.F. & Hirnle, C.J. (2000). (3rd ed.). New Yorks: J.B. Lippincott Co.
4. Fundamentals of Nursing: Concepts, process, practice. Kozier, B., Erb. G, & Berman, A. (2000) (6th ed.). Redwood City, CA: Addison Wesley.
5. Clinical Examination. Epstein, O., Perkins, G., Bono, D., & Cookson, J. (2nd ed.). (1997) London: Mosby.

- Related articles from nursing Journals.

# Para-Medical Program

<b>Specialization</b>	<b>Surgical Technology</b>
<b>Course Number</b>	21102142
<b>Course Title</b>	<b>Fundamentals of nursing (practical)</b>
<b>Credit Hours</b>	(2)
<b>Theoretical Hours</b>	(0)
<b>Practical Hours</b>	(6)

## **Brief Course Description:**

- ❖ This course is designed to provide the student with laboratory guided experiences related to the integrated understanding of the basic nursing

concepts and its practical applications to enable nursing students in performing nursing activities safely. Critical thinking and problem based learning will be emphasized.

**Course Objectives:**

Upon the completion of the course, the student will be able to:

1. Apply a systematic approach of analyzing the client's problems to carry out a plan of action using nursing process as a framework to provide nursing care for clients with selected alterations in functional health.
2. Assess client health status utilizing a systematic approach.
3. Perform basic nursing skills related to various client conditions and the rational using principles of critical thinking.
4. Provide a safe and therapeutic environment for client care.
5. Utilize principles of medial/surgical asepsis and universal precautions in client care.
6. Utilize principles of body mechanics in positioning, transferring and ambulating the clients.
7. Prepare and administer medications safely.
8. Demonstrate the use of principles accurately in reporting and recording nursing actions and intervention and client's response

**Detailed Course Description:**

Unit Number	Unit Name	Unit content	Time Needed
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1.	<b>Application of nursing process</b>	<ul style="list-style-type: none"> <li>▪ Admission and discharge</li> <li>▪ Reporting and recording referral.</li> </ul>	
2.	<b>Health assessment</b>	<ul style="list-style-type: none"> <li>▪ Assessing temperature (oral, Rectal, Axillary's, tympanic).</li> <li>▪ Assessing pulse according to pulse site.                             <ul style="list-style-type: none"> <li>– Assessing peripheral pulses.</li> <li>– Assessing Apical- Radial pulse.</li> </ul> </li> <li>▪ Assessing breathing.</li> <li>▪ Assessing blood pressure.</li> <li>▪ Documentation of vital signs.</li> <li>▪ Physical examination.</li> <li>▪ Apply physical examination.</li> <li>▪ Measuring height an weight.</li> </ul>	
3.	<b>Safety and Protection.</b>	<ul style="list-style-type: none"> <li>▪ Positioning of patient.</li> <li>▪ Using side rails.</li> <li>▪ Restraints</li> </ul>	
4.	<b>Asepsis.</b>	<ul style="list-style-type: none"> <li>▪ Hand washing.</li> <li>▪ Isolation practices.                             <ul style="list-style-type: none"> <li>– Personal protective equipment.</li> <li>– Gloves.</li> <li>– Gowns.</li> <li>– Face mask.</li> <li>– Disposal of soiled equipment and supplies.</li> </ul> </li> <li>▪ Sterile technique.                             <ul style="list-style-type: none"> <li>– Establishing and maintaining a sterile field (open and close sterile package).</li> <li>– Donning and removing sterile equipments.                                     <ul style="list-style-type: none"> <li>• Gloves</li> <li>• Gowns.</li> </ul> </li> </ul> </li> </ul>	
5.	<b>Hygiene</b>	<ul style="list-style-type: none"> <li>▪ Bathing an adult.</li> <li>▪ Perineal – Genital care.</li> <li>▪ Foot care.</li> <li>▪ Brushing and flossing the teeth.</li> <li>▪ Cleaning artificial dentures.</li> </ul>	

		<ul style="list-style-type: none"> <li>▪ Special oral care.</li> <li>▪ Shampooing the hair of a client.</li> <li>▪ Eye care for the comatose client.</li> <li>▪ Making beds.                             <ul style="list-style-type: none"> <li>– Unoccupied beds.</li> <li>– Occupied beds.</li> <li>– Post operative beds.</li> </ul> </li> <li>▪ Applying heat and cold application.</li> </ul>	
6.	<b>Skin integrity and wound care</b>	<ul style="list-style-type: none"> <li>▪ Obtaining a specimen of wound drainage.</li> <li>▪ Wound dressing.</li> <li>▪ Securing dressing.</li> <li>▪ Cleaning wound.</li> <li>▪ Wound irrigation.</li> <li>▪ Immobilizing wounds.                             <ul style="list-style-type: none"> <li>– Bandages.</li> <li>– Figure – eight.</li> <li>– Binder ... etc.</li> </ul> </li> </ul>	
7.	<b>Activity and Exercise</b>	<ul style="list-style-type: none"> <li>▪ Using body mechanics.                             <ul style="list-style-type: none"> <li>– Lifting.</li> <li>– Pulling and pushing.</li> <li>– Pivoting.</li> <li>– Positioning of client.</li> <li>– Moving a client up in bed.</li> <li>– Turning a client to lateral or prone position in bed</li> <li>– Moving a client to a sitting position.</li> <li>– Transferring a client between a bed and a chair.</li> <li>– Transferring a client between a bed and a stretcher.</li> <li>– Providing a ROM exercises.</li> <li>– Assisting a client to walk.</li> <li>– Using mechanical aids for walking.</li> </ul> </li> </ul>	
8.	<b>Rest And Sleep.</b>	<ul style="list-style-type: none"> <li>▪ Back massage.</li> </ul>	
9.	<b>Pain Management.</b>	<ul style="list-style-type: none"> <li>▪ Pharmacological and non pharmacological pain management</li> </ul>	
10.	<b>Nutrition</b>	<ul style="list-style-type: none"> <li>▪ Assisting clients with meals.</li> <li>▪ Inserting nasogastric tube.</li> </ul>	

		<ul style="list-style-type: none"> <li>▪ Daily care of NGT.</li> <li>▪ Removing nasogastric tube.</li> <li>▪ Administering tube feeding.</li> </ul>	
11.	<b>Fluid and electrolyte, and acid – base balance</b>	<ul style="list-style-type: none"> <li>▪ Intravenous infusion.</li> <li>▪ Monitoring I.V infusion.</li> <li>▪ Blood transfusion.</li> <li>▪ Documenting intake &amp; output.</li> </ul>	
12.	<b>Fecal Elimination</b>	<ul style="list-style-type: none"> <li>▪ Giving and removing bed pan.</li> <li>▪ Administering an enema.</li> <li>▪ Administering a rectal tube.</li> <li>▪ Obtaining stool specimens.</li> </ul>	
13.	<b>Urinary Elimination</b>	<ul style="list-style-type: none"> <li>▪ Measuring urinary output</li> <li>▪ Measuring residual urine.</li> <li>▪ Collecting urine specimens.</li> <li>▪ Clean voided specimen.</li> <li>▪ Clean – catch or mid stream specimen</li> <li>▪ Urinary catheterization and daily care.</li> <li>▪ Offering and removing bedpan and urinal.</li> </ul>	
14.	<b>Oxygenation</b>	<ul style="list-style-type: none"> <li>▪ Using a pulse oximeter.</li> <li>▪ Sputum specimens.</li> <li>▪ ECG.</li> <li>▪ Deep breathing and coughing.</li> <li>▪ Postural drainage.</li> <li>▪ Oxygen therapy.</li> <li>▪ O<sub>2</sub> by canula, face mask, and nasal catheter.</li> <li>▪ Suctioning.</li> <li>▪ Chest tubes and drainage system care.</li> </ul>	
15.	<b>Loss, Grieving, and Death .</b>	<ul style="list-style-type: none"> <li>▪ Care of dead body.</li> </ul>	
16.	<b>Medication.</b>	<ul style="list-style-type: none"> <li>▪ Administering oral medications.</li> <li>▪ Parenteral medications.                             <ul style="list-style-type: none"> <li>– Intradermal.</li> <li>– Subcutaneous.</li> <li>– Intramuscular.</li> <li>– Intravenous.</li> </ul> </li> <li>▪ Preparing from ampoules.</li> <li>▪ Preparing from vials.</li> <li>▪ Mixing medication in one syringe.</li> </ul>	

		<ul style="list-style-type: none"> <li>▪ Topical medication                             <ul style="list-style-type: none"> <li>– Skin application</li> <li>– Ophthalmic instillation.</li> <li>– Otic.</li> <li>– Vaginal.</li> <li>– Rectal instillations.</li> <li>– Respiratory inhalation.</li> </ul> </li> </ul>	
17.	<b>Pre-post operative nursing</b>	<ul style="list-style-type: none"> <li>▪ Pre operative teaching.                             <ul style="list-style-type: none"> <li>– Moving.</li> <li>– Leg exercises.</li> <li>– Deep breathing and coughing exercises.</li> </ul> </li> <li>▪ Apply embolic stocking.</li> <li>▪ Gastrointestinal suction.</li> <li>▪ Cleaning a sutured wound and applying a sterile dressing.</li> <li>▪ Shortening a drain.</li> <li>▪ Removing surgical clips</li> </ul>	

**Evaluation Strategies:**

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----

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Homework and Projects		10%	
<b>Total</b>		<b>100%</b>	

**Teaching Methodology:**

- ❖ Laboratory demonstration , Group work

**Text Books & References:**

**References:**

1. Foundation of Nursing, by Lois White and Susan, 2005.
  2. Procedures Checklist to accompany foundations Lois White (2004).
  3. Fundamentals of nursing: Human health and function. Craven, R.F. & Hirnle, C.J. (2000). (3rd ed.). New Yorks: J.B. Lippincott Co.
  4. Fundamentals of Nursing: Concepts, process, practice. Kozier, B., Erb. G, & Berman, A. (2000) (6th ed.). Redwood City, CA: Addison Wesley.
  5. Clinical Examination. Epstein, O., Perkins, G., Bono, D., & Cookson, J. (1997) (2nd ed.). London: Mosby.
- Related articles form nursing journals.

# Para-Medical Program

<b>Specialization</b>	<b>Surgical Technology</b>
<b>Course Number</b>	<b>21104131</b>
<b>Course Title</b>	<b>Pathophysiology</b>
<b>Credit Hours</b>	<b>(3)</b>
<b>Theoretical Hours</b>	<b>(3)</b>
<b>Practical Hours</b>	<b>(0)</b>

## **Brief Course Description:**

- ❖ This course focuses on the Physiologic changes that occur due to internal and external environmental stresses, pathological processes and the response that produce signs and symptoms. Underlying concepts and principles common to health deviations in all major physiological systems are presented. The content is based on common health problems, including the special health needs of children and the elderly. The student will explore a variety of concepts of path

physiology, which will be utilized in clinical decision making and action related to nursing courses.

**Course Objectives:**

Upon the completion of the course, the student will be able to:

1. Understand the etiology and pathogenesis of disease entities and stressors as they affect humans
2. Understand the impact of heredity, age, physical mobility and life-style on the development of disease in individuals.
3. Understand the major alteration in normal body functions that are produced by disease processes and stressors
4. Explain bodily responses / reactions to internal and external environmental stressors in terms of adaptation
5. Use knowledge of disease processes to provide rationale for clinical nursing interventions.

**Detailed Course Description:**

Unit Number	Unit Name	Unit Content	Time Needed
1.	<b>Alteration in integrated body function</b>	<b>A. Stress and adaptation</b> <ul style="list-style-type: none"> <li>- State selye's definition of stress</li> <li>- Define the term stressor</li> </ul>	



		<ul style="list-style-type: none"> <li>- Cite the factors that influence the nature of stress response</li> <li>- Compare specific and non-specific stress responses</li> <li>- Explain interactions of the nervous system in mediating the stress response</li> <li>- Describe the stress response of the various body system</li> <li>- Explain the purpose of adaptation</li> <li>- Describe components of a simple control system</li> <li>- Describe the function of a negative feedback system</li> <li>- List factors the influence an individual's adoptive capacity</li> <li>- Cite cannon's for features of homeostasis</li> <li>- Contrast anatomic and physiologic reserve</li> </ul> <p><b>B. Alteration in activities tolerance</b></p> <ul style="list-style-type: none"> <li>- Describe the body's physiologic response to exercise and work</li> <li>- Differentiate between acute and chronic fatigue</li> <li>- Define chronic fatigue syndrome</li> <li>- Describe the effect of gravity on the body</li> <li>- Describe the effect of immobility and prolonged bed-rest n the body system</li> <li>- Discuss changes in fluids and electrolyte balance associated with immobility and prolonged bed-rest</li> <li>- Discuss changes in sensory perception that are consequences immobility and prolonged bed-rest</li> </ul>	
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<p>2.</p>	<p><b>Alteration in body defenses</b></p>	<p><b>A. Alteration in temperature regulation</b></p> <ul style="list-style-type: none"> <li>- Describe the mechanisms of heat production in the body</li> <li>- Define the terms conduction, radiation, convection, and evaporation and relate them to the mechanisms for heat loss from the body</li> <li>- Describe the four stage of fever</li> <li>- Explain what is meant by intermittent, sustained and relapsing fevers</li> <li>- State the relation ship between body temperature and heart rate</li> <li>- Differentiate between the physiological mechanisms involved in fever and hyperthermia</li> <li>- List the possible mechanisms of malignant hypothermia</li> <li>- Define hypothermia</li> <li>- Explain the reason that children can sometimes survive asphyxia and submersion hypothermia</li> <li>- Compare the manifestations of mild moderate, and severe hypothermia and relate changes in physiologic functioning that occur with decreased body temperature</li> </ul> <p><b>B. Alteration in skin function and integrity</b></p> <ul style="list-style-type: none"> <li>- Describe a variety of skin rashes and lesions</li> <li>- Cite two theories used to explain the physiology of puritus</li> <li>- Differentiate between strawberry hemangioma and a port wine stain hemangioma in terms of appearance and outcome</li> <li>- State three contributing factors in acne vulgaris</li> <li>- Describe the lesions of pruritus</li> </ul> <p><b>C. Acquired immunodeficiency syndrome</b></p>	
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		<ul style="list-style-type: none"> <li>- Briefly trace the history of the AIDS epidemic</li> <li>- State the virus responsible for AIDS and explain how it differs from other viruses</li> <li>- Describe the mechanisms of HIV transmission and relate them to the need for public awareness and concern regarding the spread of AIDS.</li> <li>- Describe the alterations in immune function that occur in persons with AIDS</li> <li>- Explain the possible significance of a positive antibody test for HIV infection</li> <li>- Describe the universal precautions for HIV infection</li> <li>- List the four stages of AIDS and describe the symptoms of each stage</li> </ul> <p><b>D. disorders of white blood cells and lymphoid tissue</b></p> <ul style="list-style-type: none"> <li>- Define leucopenia, neutropenia, granulocytopenia and a plastic anemia</li> <li>- Cite two general causes of neutropenia</li> <li>- Describe the mechanisms of symptom production in neutropenia</li> <li>- Use the predominant cell type and classification as acute or chronic to describe the four general types of leukemia</li> <li>- Explain the manifestation of leukemia in terms of altered cell differentiation</li> <li>- State the warning signs of acute Leukemia</li> <li>- Describe the signs and symptoms of Hodgkin's disease, non Hodgkin's lymphoma</li> <li>- Describe the Lymphoproliferative disorders that occur with Multiple myeloma</li> </ul>	
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		<p><b>E. disorders of homeostasis</b></p> <ul style="list-style-type: none"> <li>- State two causes of impaired platelet function</li> <li>- State the five stages of homeostasis</li> <li>- State the causes and effects of increased platelet function</li> <li>- Describe the manifestations of thrombocytopenia</li> <li>- State three common defects of coagulation factors and the causes of each</li> </ul>	
<p>3.</p>	<p><b>Alterations in oxygenation of tissues</b></p>	<p><b>A. The red blood cell and alteration in oxygenation transport</b></p> <ul style="list-style-type: none"> <li>- Describe the manifestations of anemia and their mechanisms</li> <li>- Compare polycythemia vera and secondary polycythemia</li> </ul> <p><b>B. Alterations in blood flow</b></p> <ul style="list-style-type: none"> <li>- List five mechanisms of blood vessels obstruction</li> <li>- Describe vessel changes that occur with atherosclerosis</li> <li>- List risk factors in atherosclerosis</li> <li>- Cite two current theories used to explain the pathogenesis of atherosclerosis</li> <li>- State the sign and symptoms of chronic peripheral of acute arterial occlusion</li> <li>- Distinguish among berry aneurysms, aortic aneurysms and dissecting aneurysms</li> <li>- Differentiate between the mechanisms of ischemia in Raynaud's syndrome and thromboangitis obliterans</li> <li>- State the signs and symptoms of Peripheral vascular disease</li> <li>- State the signs and symptoms of venous insufficiency</li> <li>- Describe the pathology involved in venous thrombosis</li> <li>- Cite two causes pressure sores</li> </ul>	

		<ul style="list-style-type: none"> <li>- Explain why pressure sores develop bony prominences.</li> </ul> <p><b>C. Alterations in blood pressure</b>  <b>D. Alterations in cardiac function, heart failure and circulatory shock</b>  <b>E. Alterations in respiratory function</b>  <b>F. Alterations of ventilation, impaired gas exchange and respiratory failure</b></p>	
4.	<b>Alterations in fluids and electrolytes</b>	<ul style="list-style-type: none"> <li>▪ Compare the pathology and manifestations of diabetes insipidus and the syndrome of inappropriate ADH</li> <li>▪ Describe the causes of fluids volume deficit</li> <li>▪ Describe the effects of fluids volume deficit on the body system</li> <li>▪ Cite the causes of hyponatremia and hypernatremia</li> <li>▪ Cite the causes of hypokalemia and hyperkalemia</li> </ul>	
5.	<b>Alterations in genitourinary function</b>	<ul style="list-style-type: none"> <li>▪ Alterations in urine elimination</li> <li>▪ Alterations in structure and function of male genitourinary system</li> <li>▪ Alterations in structure and function of female reproductive system</li> <li>▪ Sexually transmitted diseases</li> </ul>	

**Evaluation Strategies:**

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----

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	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects		10%	
<b>Total</b>		<b>100%</b>	

**Teaching Methodology:**

- ❖ Lectures, handouts , Audiovisuals aids

**Text Books & References:**

**References:**

1. Porth, C. (1994) . Pathophysiology : Concepts of altered health states 4<sup>th</sup> edition. Philadelphia: JB Lippincott.
2. Barvara Janson, Dena Lin, 2000, 9<sup>th</sup> edition ( Mummeler's) The Human Body in Acalth and Disease, Hippin cott, Calefonia

# Para-Medical Program

<b>Specialization</b>	<b>Surgical Technology</b>
<b>Course Number</b>	<b>21102131</b>
<b>Course Title</b>	<b>Pharmacology</b>
<b>Credit Hours</b>	<b>(3)</b>
<b>Theoretical Hours</b>	<b>(3)</b>
<b>Practical Hours</b>	<b>(0)</b>

## **Brief Course Description:**

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This course is designed to provide nursing students with general information and description of important drugs which are related to a particular system of human body or to an aspect of medical care.

**Course objectives:**

1. To study the general principles of pharmacology that will enable the student to use drugs properly and safely in nursing practice.
2. To be familiar with the therapeutic indications, toxic reactions, and contraindications of drugs commonly used in clinical practice.
3. Drug classes will be discussed with some emphasis on important representative examples of the most widely used drugs from each class.

**Detailed Course Description:**

Unit	Unit Name	Unit content	Time
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Number			Needed
1.	Orientation and introduction.		
2.	General principles of pharmacology:	<ul style="list-style-type: none"> <li>• The role of the nurse in drug administration</li> <li>• Pharmacokinetics.</li> <li>• Drug formulations and doses</li> <li>• Routes of drug administration</li> <li>• Pharmacodynamics.</li> </ul>	
3.	Pharmacology of the autonomic nervous system:	<ul style="list-style-type: none"> <li>• Cholinergic and cholinomimetic agents</li> <li>• Antimuscurinic drugs.</li> <li>• Sympathomimetics</li> <li>• Adrenergic blockers.</li> <li>• Neuromuscular junction blockers.</li> </ul>	
4.	Pharmacology of the central nervous system:	<ul style="list-style-type: none"> <li>• Sedative – hypnotics</li> <li>• Opioid agonists and antagonists</li> <li>• Anticonvulsants.</li> <li>• Drugs used in the management of parkinson's disease.</li> <li>• Antipsychiatric drugs (Antipsychotic and Antidepressants).</li> <li>• General anesthetics.</li> <li>• Local anesthetics.</li> <li>• CNS stimulants and drug abuse.</li> <li>• Alcohols.</li> </ul>	
5.	Pharmacology of the cardiovascular and renal systems:	<ul style="list-style-type: none"> <li>• Cardiac glycosides.</li> <li>• Antiarrhythmic drugs.</li> <li>• Antihypertensive drugs.</li> <li>• Drug used in the management of angina pectoris.</li> <li>• Drug therapy of hyperlipoproteinemias.</li> <li>• diuretics.</li> </ul>	

6.	Pharmacology of the endocrine system:	<ul style="list-style-type: none"> <li>• Pituitary hormones.</li> <li>• Drugs used in the management thyroid diseases.</li> <li>• Glucocorticoids.</li> <li>• Sex steroids and oral contraceptives.</li> <li>• Insulin and oral hypoglycemics.</li> </ul>	
7.	Chemotherapy	<ul style="list-style-type: none"> <li>• Antibacterial agents</li> <li>• Antineoplastic agents</li> <li>• Antiviral &amp; antifungal agents.</li> <li>• Anthelmintics.</li> <li>• Non steroidal.</li> </ul>	
8.	Nonsteroidal anti-inflammatory drugs:	<ul style="list-style-type: none"> <li>• Salicylic acid derivatives.</li> <li>• Acetaminophen and other agents.</li> <li>• Drug therapy of gout.</li> </ul>	
9.	Respiratory Pharmacology	<ul style="list-style-type: none"> <li>• Cough remedies.</li> <li>• Drugs used in the treatment of Bronchial asthma.</li> </ul>	
10.	Pharmacology of the gastrointestinal tract	<ul style="list-style-type: none"> <li>• Drug therapy of peptic ulcer.</li> <li>• Purgatives</li> <li>• Drugs used in the treatment of constipation.</li> </ul>	
11.	Miscellaneous classes	<ul style="list-style-type: none"> <li>• Anticoagulants</li> <li>• Antianemic drugs.</li> <li>• Vitamins.</li> <li>• Histamine and antihistamines.</li> </ul>	
12.	Toxicology	<p>1. Concept of toxicology</p> <p>2. Types of toxins</p> <p>○ According to the degree of toxicity</p> <p>Types:</p> <ul style="list-style-type: none"> <li>• Plant toxins (toxic plants ): highly toxic plant, bacterial, fungous</li> <li>• Animal toxins : toxins of snakes,</li> </ul>	

		<p>spiders, scorpions, ... etc.</p> <ul style="list-style-type: none"> <li>• Mineral toxins : toxins of heavy minerals such as zinc, pb, mercury....etc.</li> <li>• Mediations</li> <li>• Particular solutions such as alcohols and chloroforms</li> <li>• Pesticides             <ol style="list-style-type: none"> <li>1. Insecticides</li> <li>2. Rodenticides</li> <li>3. Miticides</li> <li>4. Herbicides</li> <li>5. Fungicides.</li> </ol> </li> </ul> <p>3- Routes of toxins entrance to human body:</p> <ul style="list-style-type: none"> <li>• The skin : non- injured ( healthy) skin injured</li> <li>• The respiratory system : the nose and the lungs</li> <li>• The digestive tract</li> <li>• The eyes</li> </ul> <p>4- Toxin transformations inside the human body:</p> <ul style="list-style-type: none"> <li>• Absorption of toxins and the conditions that must be available in the toxin to be absorbed through one of the following parts of the body ,The healthy skin , the injured skin, mucus membranes and the respiratory system.</li> <li>• Distribution of toxins inside the body.</li> <li>• Storage of toxins in human body.</li> </ul>	
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**Evaluation Strategies:**

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----

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	Final Exam	50%	--/--/----
Homework and Projects		10%	
<b>Total</b>		<b>100%</b>	

### Method of teaching

Lectures , Discussion, Presentation.

### References:

1. Clinical pharmacology for nurses, John Trounce, Fourteenth edition.1993  
ELBS, Churchil Livingstone.
2. Nursing pharmacology: A comprehensive approach to drug therapy warded et al., wadsworth Health Sciences (1985).
3. Falconer's the drug, the nurse , and the patient, Sheridan at al. 7<sup>th</sup> edition 1982,  
Philadelphia : Saunders.

# Para-Medical Program

<b>Specialization</b>	<b>Surgical Technology</b>
<b>Course Number</b>	<b>21125101</b>
<b>Course Title</b>	<b>Surgical Technology (1)</b>
<b>Credit Hours</b>	<b>(3)</b>
<b>Theoretical Hours</b>	<b>(1)</b>
<b>Practical Hours</b>	<b>(6)</b>

## **Brief Course Description:**

This course is designed to introduce the student to the role, working environment and required skills of the surgical technologists. Principles of aseptic technique, standard precautions, and methods of infection control will be emphasized. The student participates with supervision, in the perioperative care of the surgical patient,

utilizing beginning skills of aseptic technique, instrumentation, and environmental control.

### Course Objectives

Upon the completion of the course, the student will be able to:

1. Highlight the importance of surgery science.
2. Discuss the nursing role in perioperative pahse.
3. Evaluate the importance of checking the consent form.
4. Describe the principles underlying effective recording and reporting/ documenting of nursing interventions.
5. Develop awareness in relation to legal and records keeping in theaters.
6. Understand the nursing role in relation to death in operation rooms.
7. Discuss the importance of care documentation.
8. Describe the safety measures in operation rooms
9. Understand the physical lay out of the operation rooms

### Detailed Course Description:

Unit Number	Unit Name	Unit content	Time Needed
1.	<b>Introduction to Operation Room</b>	<ul style="list-style-type: none"> <li>• The art and science of surgery</li> <li>• Perioperative Care of the Patient</li> <li>• Psychological Support of the</li> </ul>	

		<p>Patient in Surgery</p> <ul style="list-style-type: none"> <li>• Surgical Assessment and Preoperative Checklist Chart.</li> <li>• Authorization for and Consent to Surgery Document.</li> <li>• Authorization for and Consent to Surgical Sterilization</li> <li>• Procedure Document.</li> <li>• Preoperative Care Plan Chart</li> <li>• Perioperative Record Chart</li> <li>• Admission procedure</li> </ul>	
2.	<b>Protection of the Patient in Surgery</b>	<ul style="list-style-type: none"> <li>• Patient Safety</li> <li>• Procedure for Safely Transferring the Patient to the Operating Table</li> <li>• Positioning/Surgical Positions.</li> <li>• Surgical Positions Drawings.</li> <li>• Medication Practices and Guidelines to Avoid medication errors</li> <li>• Allergies</li> <li>• Environmental Controls</li> <li>• Electrosurgery</li> <li>• Counting Procedures.</li> <li>• Sterilization Modalities.</li> <li>• Emergency and Disaster Considerations.</li> <li>• Legal Rights.</li> <li>• Legal Records.</li> <li>• Death in the operation room</li> </ul>	
3.	<b>Safety Measures for Operating Room Personnel</b>	<ul style="list-style-type: none"> <li>• Orientation</li> <li>• Surgery Department In-Service Education</li> <li>• Body Mechanics/Ergonomic Safety</li> <li>• Fatigue Factors</li> <li>• Radiation Safety</li> </ul>	

		<ul style="list-style-type: none"> <li>• Infection Control and Prevention</li> <li>• Latex Allergy Precautions.</li> <li>• Chemical Waste Hazards</li> <li>• Noxious Smoke Hazards</li> <li>• Fire Hazards</li> </ul>	
4.	<b>Physical facilities</b>	<ul style="list-style-type: none"> <li>• Historical background</li> <li>• Physical lay out of surgical suite</li> <li>• Transition zones</li> <li>• Operation room</li> <li>• Special procedures room</li> </ul>	
5.	<b>Preoperative preparation of the patient</b>	<ul style="list-style-type: none"> <li>• Historical Background</li> <li>• Preoperative preparation of all patients</li> <li>• Transportation to the operation room suite</li> <li>• Admission to operation room suite</li> </ul>	

### Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects		10%	
<b>Total</b>		<b>100%</b>	

**Teaching Methodology:**

- ❖ Lecture. Discussion. Simulation. Assignments.

**References:**

1. Phillips N. “Berry and Kohn’s Operating Room Technique”. Eleventh edition (2007). Mosby
  2. Pocket Guide to the Operating Room :Goldman M. (2008) Third Edition, F. A. Davis Company, Philadelphia
- Related articles from nursing Journals.

# Para-Medical Program

<b>Specialization</b>	<b>Surgical Technology</b>
<b>Course Number</b>	<b>21125201</b>
<b>Course Title</b>	<b>Surgical Technology 2</b>
<b>Credit Hours</b>	<b>(3)</b>
<b>Theoretical Hours</b>	<b>(1)</b>
<b>Practical Hours</b>	<b>(6)</b>

## **Brief Course Description:**

This course highlights the importance of perioperative care standards and focuses on study of sterile technique and basic techniques necessary to function as a surgical technologist in the scrub role and circulatory (runner) role. Topics include principles

of anesthesia, sterile technique, instruments, surgical scrub, gowning and gloving self and others, case setup, medication handling, counts, draping and proper instrument handling.

Special focus will be applied to work safely with surgical instruments, positioning the patient in operating table and draping. Special emphasis on principles of wound healing.

### Course Objectives:

Upon the completion of the course, the student will be able to:

1. Identify the components of the nursing process in relation to patient care in Perioperative phase.
2. Recognize the principles of sterilization. And to use instrument safely in relation to providing care to client in different operations.
3. Describe the role of scrub nurse.
4. Describe the role of circulating nurse.
5. Recognize the importance of gowning and draping.
6. List the important medication used in operation rooms and their uses
7. Recognize the importance of count of sharps, gauze, and instruments and document these to other health team members in theaters.
8. Identify the importance of positioning patient safely on operation table.
9. Discuss concepts related to Aseptic technique and their utilization in providing nursing care for client.
10. Discuss the phases of wound healing
11. Understand the principles of anesthesia.

### Detailed Course Description:

Unit Number	Unit Name	Unit content	Time Needed
1.	Foundation of	• Historical background	

	<b>Perioperative patient care standards</b>	<ul style="list-style-type: none"> <li>• Patients rights</li> <li>• Standardizations of patient care</li> <li>• Recommended practice</li> <li>• Professional Perioperative nursing</li> <li>• Evidence based practice</li> <li>• Nursing process</li> <li>• Standards of Perioperative nursing practice</li> <li>• Standards of practice for surgical technologists</li> </ul>	
2.	<b>The surgical first assistant</b>	<ul style="list-style-type: none"> <li>• Historical background</li> <li>• First assistant skills and knowledge</li> <li>• Responsibilities of first assistant</li> </ul>	
3.	<b>Anesthesia</b>	<ul style="list-style-type: none"> <li>• Anesthesia Modalities.</li> <li>• General Information.</li> <li>• General Anesthesia, Overview</li> <li>• Conduction Anesthesia, Overview.</li> <li>• Conscious Sedation and Analgesia.</li> <li>• Postoperative Transfer of the Patient to the recovery</li> <li>• General Anesthesia.</li> <li>• Perioperative Considerations.</li> <li>• Conduction Anesthesia.</li> <li>• Central Nerve Blocks: Spinal, Epidural, and Caudal</li> <li>• Regional, Local, Topical Anesthesia Modalities.</li> </ul>	
4.	<b>Potential source of injury to the care giver and the patient</b>	<ul style="list-style-type: none"> <li>• Historical background</li> <li>• Environment hazards</li> <li>• physical hazards and safeguards</li> <li>• Chemical hazards and safeguards</li> <li>• Biological Hazards and safeguards</li> </ul>	

		<ul style="list-style-type: none"> <li>• Risk management</li> </ul>	
5.	<b>Principles of asepsis and sterile techniques</b>	<ul style="list-style-type: none"> <li>• Historical background</li> <li>• Difference between asepsis and sterile techniques</li> <li>• Transmission of microorganisms</li> <li>• Human borne sources of contamination</li> <li>• Aseptic techniques and environmental controls</li> <li>• Standards precautions</li> <li>• Application of sterile techniques</li> <li>• Principles of sterile techniques</li> </ul>	
6.	<b>Appropriate attire surgical hand cleaning, gowning and gloving</b>	<ul style="list-style-type: none"> <li>• Historical background</li> <li>• Appropriate operation room attire</li> <li>• Surgical and skin cleansing</li> <li>• Gowning and gloving</li> </ul>	
7.	<b>Surgical instrument</b>	<ul style="list-style-type: none"> <li>• Historical Background</li> <li>• Fabrication of metal instruments</li> <li>• Classification of instruments</li> <li>• Power surgical instruments</li> <li>• Handling instruments</li> </ul>	
8.	<b>Specialized surgical equipment</b>	<ul style="list-style-type: none"> <li>• Using specialized equipment in surgery</li> <li>• Electrosurgery</li> <li>• Laser surgery</li> <li>• Microsurgery</li> <li>• Ultrasonosurgery</li> </ul>	
9.	<b>Surgical pharmacology</b>	<ul style="list-style-type: none"> <li>• Historical background</li> <li>• Pharmacology baselines</li> <li>• Considerations in surgical pharmacology</li> <li>• Pharmacologic forms used in surgery</li> </ul>	
10.	<b>Coordinate roles of the</b>	<ul style="list-style-type: none"> <li>• Division of the duties</li> <li>• Setting up the room</li> </ul>	

	<b>scrub and the circulating nurse</b>	<ul style="list-style-type: none"> <li>• Scrub person duties</li> <li>• Circulating nurse duties</li> <li>• Sponge, sharps and instrument count</li> <li>• Operating room team</li> </ul>	
11.	<b>Position, preparing and draping the patient</b>	<ul style="list-style-type: none"> <li>• Historical background</li> <li>• Preliminary considerations</li> <li>• Anatomic and physiological considerations</li> <li>• Equipment for positioning</li> <li>• Physical preparation and draping of the surgical site</li> <li>• Principles of patient skin preparation</li> <li>• Surgical skin cleansing fundamentals</li> <li>• Antiseptic solutions</li> <li>• Skin preparation for special for specific anatomic areas</li> <li>• Draping materials</li> <li>• Types of drapes</li> <li>• Principles of draping</li> <li>• Procedures for draping the patients</li> </ul>	
12.	<b>Wound healing</b>	<ul style="list-style-type: none"> <li>• Anatomy and physiology of body tissues</li> <li>• Mechanism of wound healing</li> <li>• Types of wounds</li> <li>• Factors influence wound healing</li> <li>• Wound management</li> <li>• Complications of wound healing</li> <li>• Post operative wound infections</li> <li>• Wound assessment</li> <li>• Basic wound care</li> </ul>	

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects		10%	
<b>Total</b>		<b>100%</b>	

### Teaching Methodology:

- ❖ Lecture. Discussion. Simulation. Assignments.

### References:

1. Phillips N. "Berry and Kohn's Operating Room Technique". Eleventh edition (2007). Mosby

2. **Pocket Guide to the Operating Room** :Goldman M. (2008) Third Edition, F. A. Davis Company, Philadelphia

- Related articles from nursing Journals.

# Para-Medical Program

<b>Specialization</b>	<b>Surgical Technology</b>
<b>Course Number</b>	<b>21125211</b>
<b>Course Title</b>	<b>General Surgery</b>
<b>Credit Hours</b>	<b>(3)</b>
<b>Theoretical Hours</b>	<b>(1)</b>
<b>Practical Hours</b>	<b>(6)</b>

## **Brief Course Description:**

This course is designed to provide nurses with historical back ground, special considerations about general surgery, breast surgery, abdominal surgeries, liver, biliary and spleen operations, pancreatic, colo-rectal, anal and hernias. This course enable nurses in applying nursing activities safely for patient with general surgical problems.

Emphasis on using nursing process in applying nursing care for patient with general surgical problems.

### Course Objectives:

Upon the completion of the course, the student will be able to:

1. Identify the anatomy and physiology of GI system, breast.
2. Discuss the common surgical incisions in relation to general surgery.
3. Understand the special considerations with respect to general surgery.
4. Describe the principles of preparing patient for general procedures.
5. Recognize the principles underlying all nursing intervention produces related to providing care to client with GI, and breast problems
6. Recognize the importance of documentation in relation to special procedures.
7. Develop an awareness concerning the complications of general surgeries.

### Detailed Course Description:

Unit Number	Unit Name	Unit content	Time Needed
1.	Introduction	<ul style="list-style-type: none"> <li>• Anatomy and physiology of GI system</li> <li>• Special consideration of general surgery</li> </ul>	
2.	Breast	<ul style="list-style-type: none"> <li>• Incision and drainage</li> </ul>	

	<b>procedures</b>	<ul style="list-style-type: none"> <li>• Breast biopsy</li> <li>• Lumpectomy</li> <li>• Segmental mastectomy</li> <li>• Simple mastectomy</li> <li>• Modified radical mastectomy</li> <li>• Radical mastectomy</li> </ul>	
3.	<b>Abdominal surgery</b>	<ul style="list-style-type: none"> <li>• Types of abdominal incision</li> <li>• Abdominal Laparoscopy</li> <li>• Abdominal Herniorrhaphy</li> <li>• Laparoscopic Groin</li> <li>• Herniorrhaphy</li> </ul>	
4.	<b>Biliary tract procedures</b>	<ul style="list-style-type: none"> <li>• Cholecystectomy</li> <li>• Open abdominal cholecystectomy</li> <li>• Laparoscopic Cholecystectomy</li> <li>• cholelithotripsy</li> <li>• Drainage of Pancreatic Cyst (Pseudocyst)</li> <li>• Pancreaticoduodenectomy (Whipple Procedure)</li> <li>• Drainage of Abscess(es) in the Region of the Liver</li> <li>• Hepatic Resection</li> <li>• Splenectomy</li> <li>• Laparoscopic Splenectomy</li> </ul>	

<p>5.</p>	<p><b>Gastrointestinal Surgery</b></p>	<ul style="list-style-type: none"> <li>• Esophagoscopy</li> <li>• Gastroscopy</li> <li>• Colonoscopy</li> <li>• Sigmoidoscopy</li> <li>• Laparoscopic Esophagomyotomy for Achalasia (Heller Procedure)</li> <li>• Esophagectomy</li> <li>• Esophageal Hiatal Herniorrhaphy</li> <li>• Laparoscopic Fundoplication (Nissen Procedure)</li> <li>• Vagotomy and Pyloroplasty</li> <li>• Laparoscopic Vagotomy</li> <li>• Closure of a Perforated Peptic Ulcer</li> <li>• Laparoscopic Closure of a Perforated Ulcer (With Vagotomy)</li> <li>• Gastrostomy</li> <li>• Gastrectomy</li> <li>• Laparoscopic Adjustable Gastric</li> <li>• Banding and Proximal Gastric Bypass</li> <li>• Jejunostomy</li> <li>• Small-Bowel Resection</li> <li>• Cutaneous Ileostomy</li> <li>• Appendectomy</li> <li>• Laparoscopic Appendectomy</li> <li>• Colostomy</li> <li>• Closure of Colostomy</li> </ul>	
<p>6.</p>	<p><b>Colo rectal surgery</b></p>	<ul style="list-style-type: none"> <li>• Right Hemicolectomy</li> <li>• Transverse Colectomy</li> <li>• Anterior Resection of the Sigmoid Colon and Rectum</li> <li>• Abdominoperineal Resection of the Rectum</li> <li>• Laparoscopic-Assisted Colon Resection</li> <li>• Proctocolectomy with Ileal Pouch Anal Anastomosis</li> </ul>	

		<ul style="list-style-type: none"> <li>• Transanal Endoscopic Microsurgery</li> <li>• Hemorrhoidectomy, Anal Fissurectomy, Anal Fistulotomy</li> <li>• Anal Sphincteroplasty</li> </ul>	
7.	Special cases	<ul style="list-style-type: none"> <li>• Pilonidal Cystectomy and Sinusectomy</li> <li>• Muscle biopsy</li> <li>• Liver transplant</li> <li>• Bone marrow transplant</li> </ul>	

### Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects		10%	
<b>Total</b>		<b>100%</b>	

### Teaching Methodology:

- ❖ Lecture. Discussion. Simulation. Assignments.

### References:

1. Phillips N. "Berry and Kohn's Operating Room Technique". Eleventh edition (2007). Mosby

2. **Pocket Guide to the Operating Room** :Goldman M. (2008) Third Edition, F. A. Davis Company, Philadelphia

- Related articles from nursing Journals.

# Para-Medical Program

<b>Specialization</b>	<b>Surgical Technology</b>
<b>Course Number</b>	<b>21125221</b>
<b>Course Title</b>	<b>Orthopedic Surgery</b>
<b>Credit Hours</b>	<b>(2)</b>
<b>Theoretical Hours</b>	<b>(1)</b>
<b>Practical Hours</b>	<b>(3)</b>

### **Brief Course Description:**

This course is designed to provide nurses with historical back ground, special features of orthopedic surgery, fractures, joints procedures, vertebral operation and cast application. This course enables nurses in applying nursing activities safely for patient with orthopedic problems. Critical thinking and problem based learning will be emphasized.

### **Course Objectives:**

Upon the completion of the course, the student will be able to:

1. Identify the pertinent anatomy and physiology of the musculoskeletal system.
2. Discuss several types of fractures, soft tissues and joint injuries and management of each.
3. Understand several common specialties of orthopedic instruments.
4. Describe the principles underlying effective recording and reporting/ documenting of nursing interventions in relation to orthopedic problems
5. Recognize the principles of bone healing.
6. Discuss the process of applying cast.
7. Develop an awareness of care of patient with orthopedic problems.
8. Describe the complications after orthopedic surgery.

**Detailed Course Description:**

Unit Number	Unit Name	Unit content	Time Needed
1.	<b>Introduction</b>	<ul style="list-style-type: none"> <li>• dnuorgkcab lacirotsiH</li> <li>• Anatomy and physiology of muscuolskeletal system</li> <li>• The art and science of orthopedic surgery</li> <li>• Special features of orthopedic surgery</li> <li>• Instrumentations</li> </ul>	
2.	<b>Fractures</b>	<ul style="list-style-type: none"> <li>• Close reduction</li> <li>• Skeletal traction</li> <li>• External fixation</li> <li>• Internal fixation</li> </ul>	
3.	<b>Joint procedures</b>	<ul style="list-style-type: none"> <li>• dislocations</li> <li>• arthrodesis</li> <li>• ytsalporhtra</li> <li>• arthroscopy</li> <li>• Arthrotomy</li> </ul>	
4.	<b>Repair of tendons and ligaments</b>	<ul style="list-style-type: none"> <li>• Hand surgery</li> <li>• Sport medicine</li> <li>• Knee injuries</li> <li>• Shoulder injuries</li> <li>• Ankle injuries</li> </ul>	
5.	<b>Cast application</b>	<ul style="list-style-type: none"> <li>• Plaster cast</li> <li>• Application of cast</li> <li>• Padding under casts</li> <li>• Common cast configurations</li> <li>• Trimming, removing and changing cast</li> </ul>	
6.	<b>Common complications after orthopedic surgery</b>	<ul style="list-style-type: none"> <li>• Embolus</li> <li>• Compartment syndrome</li> </ul>	

### Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects		10%	
<b>Total</b>		<b>100%</b>	

### Teaching Methodology:

- ❖ Lecture. Discussion. Simulation. Assignments.

### References:

1. Phillips N. "Berry and Kohn's Operating Room Technique". Eleventh edition (2007). Mosby

2. **Pocket Guide to the Operating Room** :Goldman M. (2008) Third Edition, F. A. Davis Company, Philadelphia

- Related articles from nursing Journals.

# Para-Medical Program

<b>Specialization</b>	<b>Surgical Technology</b>
<b>Course Number</b>	<b>21125231</b>
<b>Course Title</b>	<b>Genitourinary Surgery</b>
<b>Credit Hours</b>	<b>(2)</b>
<b>Theoretical Hours</b>	<b>(1)</b>
<b>Practical Hours</b>	<b>(3)</b>

### **Brief Course Description:**

This course is designed to provide nurses with historical back ground, special features of urological surgeries, male and female renal organs operation and endocrine glands. This course enables nurses in applying nursing activities safely for patient with urological problems. Critical thinking and problem based learning will be emphasized.

### **Course Objectives:**

Upon the completion of the course, the student will be able to:

1. Describe the anatomy and physiology of renal system.
3. Understand several common specialties of urology instruments.
4. Describe the principles underlying effective recording and reporting/ documenting of nursing interventions in relation to renal problems
5. Recognize the principles of renal positions.
6. Discuss the special considerations in renal surgeries.
7. Develop an awareness of care of patient with renal problems.
8. Describe the complications after renal surgery.
9. Describe the procedures performed for urinary incontinent
10. Discuss the procedures used in prostate cancer
11. List the complication of urological surgery

### Detailed Course Description:

Unit Number	Unit Name	Unit content	Time Needed
1.	<b>Introduction</b>	<ul style="list-style-type: none"> <li>Anatomy and physiology of renal system</li> <li>Special features of urological surgeries</li> </ul>	
2.	<b>Urological Endoscopy</b>	<ul style="list-style-type: none"> <li>Urologic bed</li> <li>Preparation for cystoscopy</li> <li>Types of urologic endoscopes</li> <li>Endoscopic accessories</li> </ul>	
3.	<b>Surgical procedures of the renal system</b>	<ul style="list-style-type: none"> <li>Nephrectomy</li> <li>Nephrostomy or pyelostomy</li> <li>pyeloplasty</li> <li>Renal vascularization</li> </ul>	
4.	<b>Dialysis</b>	<ul style="list-style-type: none"> <li>Hemodialysis</li> <li>Peritoneal dialysis</li> </ul>	
5.	<b>Renal calculus</b>	<ul style="list-style-type: none"> <li>Percutaneous nephrostolithotomy</li> <li>Nephrolithotomy or pyelolithotomy</li> <li>Extra shock wave lithotripsy ESWL</li> </ul>	
6.	<b>Urinary bladder</b>	<ul style="list-style-type: none"> <li>Cystometrogram</li> <li>cystoscopy</li> <li>Suprapubic cystostomy</li> <li>Cystectomy</li> <li>Cystoplasty</li> </ul>	
7.	<b>Urethra</b>	<ul style="list-style-type: none"> <li>Perineal urthrostomy</li> <li>Urethral dilation</li> <li>urethrotomy</li> <li>Urthroplasty</li> </ul>	

8.	<b>Male reproductive organ</b>	<ul style="list-style-type: none"> <li>• ymotceihcro</li> <li>• Scrotal testicular trauma</li> <li>• Testicular torsion</li> <li>• Hydrocelectomy</li> <li>• Spermatocelectomy</li> <li>• Varicocele ligation</li> <li>• Vasectomy</li> </ul>	
9.	<b>Prostate gland</b>	<ul style="list-style-type: none"> <li>• Ballon dilation and stenting of prostate urethra</li> <li>• Transurethral microwave thermotherapy</li> <li>• Transurethral needle ablation</li> <li>• Transurethral prostatectomy</li> </ul>	

### Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects		10%	
<b>Total</b>		<b>100%</b>	

### Teaching Methodology:

- ❖ Lecture. Discussion. Simulation. Assignments.

### References:

1. Phillips N. "Berry and Kohn's Operating Room Technique". Eleventh edition (2007). Mosby

2. **Pocket Guide to the Operating Room** :Goldman M. (2008) Third Edition, F. A. Davis Company, Philadelphia

- Related articles from nursing Journals.

# Para-Medical Program

<b>Specialization</b>	<b>Surgical Technology</b>
<b>Course Number</b>	<b>21125241</b>
<b>Course Title</b>	<b>Neurological Surgery</b>
<b>Credit Hours</b>	<b>(2)</b>
<b>Theoretical Hours</b>	<b>(1)</b>
<b>Practical Hours</b>	<b>(3)</b>

**Brief Course Description:**

This course is designed to provide nurses with historical back ground, special consideration of neurosurgery, surgical procedures of cranium, spine and peripheral nerves. This course enables nurses in applying nursing activities safely for patient with neurosurgery problems. Critical thinking and problem based learning will be emphasized.

**Course Objectives:**

Upon the completion of the course, the student will be able to:

1. Identify the pertinent anatomy and physiology of the spinal system.
2. Discuss several types of spinal cord injuries and their management
3. Understand several common specialties of spinal instruments.
4. Describe the principles underlying effective recording and reporting/ documenting of nursing interventions in relation to spinal problems
5. Recognize the principles of spine positions and operating beds.
6. Discuss the special considerations in spinal surgeries.
7. Develop an awareness of care of patient with spinal problems.
8. Describe the complications after spinal surgery.

**Detailed Course Description:**

Unit Number	Unit Name	Unit content	Time Needed
1.	<b>Introduction</b>	<ul style="list-style-type: none"> <li>Anatomy and physiology of nervous system</li> <li>Special considerations of neurosurgery</li> </ul>	
2.	<b>Surgical procedures of the cranium</b>	<ul style="list-style-type: none"> <li>Craniotomy</li> <li>Cranioplasty</li> <li>Craniectomy</li> <li>Intracranial microneurosurgery</li> <li>Ventricular Shunts</li> <li>stretotaxis</li> </ul>	
3.	<b>Extra cranial procedures</b>	<ul style="list-style-type: none"> <li>External occlusion of the carotid artery</li> <li>Endovascular procedure</li> <li>Transsphenoidal procedures</li> <li>Treatment of head injuries</li> <li>Complication of cranial surgery</li> </ul>	
4.	<b>Spine procedures</b>	<ul style="list-style-type: none"> <li>Anatomy and physiology of spinal cord and vertebral column</li> <li>Special considerations in spine surgery</li> <li>Scoliosis</li> <li>Kyphosis</li> <li>Spine trauma</li> </ul>	
5.	<b>Surgical procedures of the spine</b>	<ul style="list-style-type: none"> <li>Discectomy</li> <li>Percutaneous discectomy</li> </ul>	

### Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects		10%	
<b>Total</b>		<b>100%</b>	

### Teaching Methodology:

- ❖ Lecture. Discussion. Simulation. Assignments.

### References:

1. Phillips N. "Berry and Kohn's Operating Room Technique". Eleventh edition (2007). Mosby

2. **Pocket Guide to the Operating Room** :Goldman M. (2008) Third Edition, F. A. Davis Company, Philadelphia

- Related articles from nursing Journals.

# Para-Medical Program

<b>Specialization</b>	<b>Surgical Technology</b>
<b>Course Number</b>	<b>21125251</b>
<b>Course Title</b>	<b>Plastic Surgery</b>
<b>Credit Hours</b>	<b>(2)</b>
<b>Theoretical Hours</b>	<b>(1)</b>
<b>Practical Hours</b>	<b>(3)</b>

### **Brief Course Description:**

This course is designed to provide nurses with historical back ground, special features of plastic and reconstructive surgeries, skin and tissue grafting, head and neck plastic and reconstructive surgeries and other body areas. This course enable nurses in applying nursing activities safely for patient with plastic and reconstructive problems. Critical thinking and problem based learning will be emphasized.

### **Course Objectives:**

Upon the completion of the course, the student will be able to:

1. Identify the pertinent anatomy and physiology of the integumentary system.
2. Discuss reasons for plastic surgeries
3. Understand several common specialties of plastic instruments.
4. Describe the principles underlying effective recording and reporting/ documenting of nursing interventions in relation to plastic problems
5. Recognize the principles of plastic positions and operating beds.
6. Discuss the special considerations in plastic surgeries.
7. Develop an awareness of care of patient with plastic problems.
8. Describe the complications after plastic surgery.
9. Differentiate between different types of tissue grafts
10. Discuss the importance of burn management

### **Detailed Course Description:**

Unit Number	Unit Name	Unit content	Time Needed
1.	<b>Introduction</b>	<ul style="list-style-type: none"> <li>• Anatomy and physiology of skin</li> <li>• Special features of plastic and reconstructive surgeries</li> <li>• General consideration in plastic surgery</li> </ul>	
2.	<b>Skin and tissue grafting</b>	<ul style="list-style-type: none"> <li>• Skin Grafting knives and dermatomes</li> <li>• Types of skin and tissue grafts</li> <li>• Free composite graft</li> </ul>	
3.	<b>Head and neck surgery</b>	<ul style="list-style-type: none"> <li>• Soft tissue reconstruction</li> <li>• Craniofacial surgery</li> <li>• Maxillofacial surgery</li> </ul>	
4.	<b>Aesthetic procedures</b>	<ul style="list-style-type: none"> <li>• belpharoplasty</li> <li>• otoplasty</li> <li>• Rhinoplasty</li> <li>• Mentoplasty</li> <li>• Rhytidoplasty</li> <li>• Soft tissue augmentation</li> </ul>	
5.	<b>Plastic and reconstruction procedures of other body area</b>	<ul style="list-style-type: none"> <li>• Liposuction</li> <li>• Abdominoplasty</li> </ul>	
6.	<b>Breast</b>	<ul style="list-style-type: none"> <li>• Augmentation mammoplasty</li> <li>• Reconstructive mammoplasty</li> <li>• Reduction mammoplasty</li> <li>• Reduction of male breast</li> </ul>	
7.	<b>Special cases</b>	<ul style="list-style-type: none"> <li>• Scars</li> <li>• Dermabrasion</li> <li>• Skin cancer</li> </ul>	
8.	<b>Burn</b>	<ul style="list-style-type: none"> <li>• Classification of burn</li> <li>• Estimated of burn damage</li> <li>• Care of burn patients</li> <li>• Methods of surgical treatment</li> </ul>	

### Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects		10%	
<b>Total</b>		<b>100%</b>	

### Teaching Methodology:

- ❖ Lecture. Discussion. Simulation. Assignments.

### References:

1. Phillips N. "Berry and Kohn's Operating Room Technique". Eleventh edition (2007). Mosby
2. **Pocket Guide to the Operating Room** :Goldman M. (2008) Third Edition, F. A. Davis Company, Philadelphia

- Related articles from nursing Journals.

# Para-Medical Program

<b>Specialization</b>	<b>Surgical Technology</b>
<b>Course Number</b>	<b>21125261</b>
<b>Course Title</b>	<b>Gynecologic/Obstetric Surgery</b>
<b>Credit Hours</b>	<b>(3)</b>
<b>Theoretical Hours</b>	<b>(2)</b>
<b>Practical Hours</b>	<b>(3)</b>

**Brief Course Description:**

This course is designed to provide nurses with historical back ground, special considerations of gynecological surgeries, diagnostic techniques, vulvar and vaginal procedures, This course enable nurses in applying nursing activities safely for patient with gynecological and obstetric problems. Critical thinking and problem based learning will be emphasized.

### **Course Objectives:**

Upon the completion of the course, the student will be able to:

1. Identify the pertinent anatomy and physiology of female genitourinary system.
2. understand several common specialty of gynecological instruments .
3. Describe the principles underlying effective recording and reporting/ documenting of nursing interventions in relation to gynecology problems
4. Recognize the principles of wound healing.
5. Discuss the pertinent considerations when caring for pregnant women.
6. Develop an awareness of care of patient with gynecology problems.
7. Describe the complications after gynecology surgery.

### **Detailed Course Description:**

Unit	Unit Name	Unit content	Time
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Number			Needed
1.	<b>Introduction</b>	<ul style="list-style-type: none"> <li>• Anatomy and physiology of female reproductive system</li> <li>• Special features of gynecological problems</li> </ul>	
2.	<b>Diagnostic techniques</b>	<ul style="list-style-type: none"> <li>• Biopsy of the cervix</li> <li>• Culdocentesis and colpotomy</li> <li>• Fallopian tube diagnostic procedures</li> <li>• Pelvic endoscopy</li> </ul>	
3.	<b>Vulvar procedures</b>	<ul style="list-style-type: none"> <li>• Diseases of vulva</li> <li>• Simple vulvectomy</li> <li>• Total vulvectomy</li> <li>• Radical vulvectomy</li> </ul>	
4.	<b>Vaginal</b>	<ul style="list-style-type: none"> <li>• Excision of vaginal lesions</li> <li>• Vaginectomy</li> <li>• Vagioplsaty</li> <li>• Repair of pelvic outlet</li> <li>• Repair of genital fistulas</li> </ul>	
5.	<b>Cervix</b>	<ul style="list-style-type: none"> <li>• Cauterization</li> <li>• Trachelorrhaphy</li> <li>• Trachelectomy</li> </ul>	
6.	<b>Uterus</b>	<ul style="list-style-type: none"> <li>• Dilatation and curettage</li> <li>• Intrauterine thermal ballon ablation</li> <li>• Vaginal Hystrectomy</li> </ul>	
7.	<b>Abdominal procedures</b>	<ul style="list-style-type: none"> <li>• myomectomy</li> <li>• Abdominal hysterectomy</li> <li>• Pelvic exenteration</li> <li>• Procedure with fallopian tube</li> </ul>	
8.	<b>Ovaries</b>	<ul style="list-style-type: none"> <li>• Screening for ovarian cancer</li> <li>• Excision or biopsy</li> <li>• Removal of ovarian cyst</li> <li>• Oophorectomy</li> </ul>	
9.	<b>Special cases</b>	<ul style="list-style-type: none"> <li>• Threatened abortion</li> <li>• Aborted pregnancy</li> <li>• Cesarean birth</li> <li>• Prenatal testing</li> </ul>	

### Evaluation Strategies:

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects		10%	
<b>Total</b>		<b>100%</b>	

### Teaching Methodology:

- ❖ Lecture. Discussion. Simulation. Assignments.

### References:

1. Phillips N. "Berry and Kohn's Operating Room Technique". Eleventh edition (2007). Mosby

2. **Pocket Guide to the Operating Room** :Goldman M. (2008) Third Edition, F. A. Davis Company, Philadelphia

- Related articles from nursing Journals.

# Para-Medical Program

<b>Specialization</b>	<b>Surgical Technology</b>
<b>Course Number</b>	<b>21125271</b>
<b>Course Title</b>	<b>Pediatric Surgery</b>
<b>Credit Hours</b>	<b>(3)</b>
<b>Theoretical Hours</b>	<b>(2)</b>
<b>Practical Hours</b>	<b>(3)</b>

## **Brief Course Description:**

This course is designed to provide nurses with historical back ground, special features of pediatric surgeries. This course enable nurses in applying nursing activities safely for patient with pediatric problems. Critical thinking and problem based learning will be emphasized.

**Course Objectives:**

Upon the completion of the course, the student will be able to:

1. Describe the anatomy and physiology of different system.
2. Understand several common specialties of pediatric surgeries.
3. Describe the principles underlying effective recording and reporting/ documenting of nursing interventions in relation to pediatric problems
4. Recognize the principles of pediatric surgeries.
5. Discuss the special considerations in pediatric surgeries.
6. Develop an awareness of care of patient with pediatric problems.
7. Describe the complications after pediatric surgery.
8. List the complication of pediatric surgery

**Detailed Course Description:**

Unit Number	Unit Name	Unit content	Time Needed
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1.	<b>Introduction</b>	<ul style="list-style-type: none"> <li>• Historical background</li> <li>• Indication for surgery</li> <li>• Consideration in Perioperative pediatrics</li> <li>• Perioperative assessment of the pediatric patients</li> <li>• Perioperative psychological preparation of the pediatric patients</li> </ul>	
2.	<b>Pediatric anesthesia</b>	<ul style="list-style-type: none"> <li>• Assessment</li> <li>• Premedication</li> <li>• Anesthesia equipment</li> <li>• Type of induction</li> <li>• Emergency and extubation</li> </ul>	
3.	<b>Common surgical procedures [general surgery]</b>	<ul style="list-style-type: none"> <li>• Endoscopic procedures</li> <li>• Biliary atresia</li> <li>• Esophageal atresia</li> <li>• Imperforated anus</li> <li>• Intussusception</li> <li>• Pyloromyotomy</li> <li>• Herniorraphy</li> <li>• Appendectomy</li> <li>• Splenectomy</li> </ul>	
4.	<b>Genitourology</b>	<ul style="list-style-type: none"> <li>• Cystoscopy</li> <li>• Nephrectomy</li> <li>• Wilms tumor</li> <li>• Neurogenic bladder</li> <li>• Exstrophy of the bladder</li> <li>• Ureteral reimplantation</li> <li>• Ureteral repair</li> <li>• Orchiopexy</li> <li>• Circumcision</li> </ul>	
5.	<b>Orthopedic and spinal surgery</b>	<ul style="list-style-type: none"> <li>• Fractures</li> <li>• Tendon repair</li> <li>• Congenital dislocation of the hip</li> <li>• Leg length discrepancies</li> <li>• Talipes deformities</li> <li>• Talipes varus</li> </ul>	

6.	<b>Ophthalmology</b>	<ul style="list-style-type: none"> <li>• Congenital obstruction of the nasolacremal duct</li> <li>• Oculplastic procedure on the eye lids</li> <li>• Extraocular muscle procedure</li> <li>• Congenital cataract extraction</li> <li>• Goniotomy</li> </ul>	
7.	<b>ENT</b>	<ul style="list-style-type: none"> <li>• Myringotomy</li> <li>• Tympanoplasty</li> <li>• Adenoidectomy</li> <li>• Tonsillectomy</li> <li>• Tracheal or laryngeal stenosis</li> <li>• Tracheotomy</li> </ul>	
8.	<b>Plastic and reconstructive surgeries</b>	<ul style="list-style-type: none"> <li>• Cleft lip</li> <li>• Cleft palate</li> <li>• Hemangioma</li> <li>• Otoplasty</li> <li>• Syndactyle</li> <li>• Polydactyly</li> </ul>	
9.	<b>Neurosurgery</b>	<ul style="list-style-type: none"> <li>• Craniosynostosis</li> <li>• Encephalocele</li> <li>• Hydrocephalus</li> <li>• Myelomeningocele</li> <li>• Spinal bifida</li> </ul>	
10.	<b>Thoracic surgery</b>	<ul style="list-style-type: none"> <li>• Pectus excavatum</li> <li>• Pectus carinatum</li> </ul>	
11.	<b>Cardiovascular</b>	<ul style="list-style-type: none"> <li>• Anomalous venous return</li> <li>• Coarctation of the aorta</li> <li>• Patent ductus arteriosus</li> <li>• Ventricular Septal defect</li> <li>• Aterial Sepetal defect</li> <li>• Tetralogy of fallot</li> </ul>	

**Evaluation Strategies:**

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects		10%	
<b>Total</b>		<b>100%</b>	

**Teaching Methodology:**

- ❖ Lecture. Discussion. Simulation. Assignments.

**References:**

1. Phillips N. "Berry and Kohn's Operating Room Technique". Eleventh edition (2007). Mosby

2. **Pocket Guide to the Operating Room** :Goldman M. (2008) Third Edition, F. A. Davis Company, Philadelphia

- Related articles from nursing Journals.

# Para-Medical Program

<b>Specialization</b>	<b>Surgical Technology</b>
<b>Course Number</b>	<b>21125281</b>
<b>Course Title</b>	<b>Ear, Nose and Throat (ENT) and Eye surgery</b>
<b>Credit Hours</b>	<b>(2)</b>
<b>Theoretical Hours</b>	<b>(1)</b>
<b>Practical Hours</b>	<b>(3)</b>

### **Brief Course Description:**

This course is designed to provide nurses with historical back ground, special considerations of nose, ear, throat, oral cavity problems, face and neck, ocular operations, eye injuries, ophthalmic laser This course enable nurses in applying

nursing activities safely for patient with ENT and eye problems. Critical thinking and problem based learning will be emphasized.

**Course Objectives:**

Upon the completion of the course, the student will be able to:

1. Discuss the anatomy and physiology of Ear, Nose, Throat and Eye
2. Discuss the main considerations for patients undergoing ENT or Eye surgery.
3. Understand the nursing process as a framework for providing nursing care for a client with ENT or Eye problems.
4. Describe the principles underlying effective recording and reporting/ documenting of nursing interventions for patients with ENT and Eye problems.
5. List the main types of hearing loss.
6. Apply the principles of infection prevention in any clinical setting.
7. Develop an awareness concerning the importance of health promotion for patients with ENT or eye disorders.
8. Describe the procedures performed for patient with cataract, Glaucoma and intraocular lens
9. Identify the main complications post ENT and Eye surgeries

**Detailed Course Description:**

Unit Number	Unit Name	Unit content	Time Needed
1.	<b>Introduction</b>	<ul style="list-style-type: none"> <li>• Anatomy and physiology of ear, nose and throat and eye</li> <li>• Special features of ENT and eye surgeries</li> </ul>	

2.	<b>EAR</b>	<ul style="list-style-type: none"> <li>• Physiology of hearing</li> <li>• Pathology of hearing</li> <li>• Middle ear procedures</li> <li>• External ear procedures</li> <li>• Inner ear procedures</li> </ul>	
3.	<b>NOSE</b>	<ul style="list-style-type: none"> <li>• Anatomy of the nose</li> <li>• Nasal cavity procedures</li> <li>• Para nasal sinus procedures</li> </ul>	
4.	<b>Oral cavity and throat</b>	<ul style="list-style-type: none"> <li>• Excision of salivary gland tumors</li> <li>• Excision of oral carcinoma</li> <li>• Procedures of the nasopharynx</li> <li>• Procedure of the oropharynx</li> </ul>	
5.	<b>Neck</b>	<ul style="list-style-type: none"> <li>• Anatomy and physiology of the neck</li> <li>• laryngoscopy</li> <li>• Laryngeal injuries</li> <li>• Carcinoma of the larynx</li> <li>• Tracheotomy and tracheostomy</li> <li>• Radical neck dissection</li> </ul>	
6.	<b>Facial and skull</b>	<ul style="list-style-type: none"> <li>• Anatomy and physiology of the face</li> <li>• Considerations of craniofacial surgery</li> <li>• Craniofacial anomalies</li> <li>• Craniofacial procedures</li> </ul>	
7.	<b>EYE</b>	<ul style="list-style-type: none"> <li>• Anatomy and physiology of the eye</li> <li>• Ophthalmic surgical patient care</li> </ul>	
8.	<b>Special features of ophthalmic surgery</b>	<ul style="list-style-type: none"> <li>• Ophthalmic instruments</li> <li>• Operating microscope</li> <li>• Ophthalmic drugs</li> <li>• Ophthalmic solutions</li> </ul>	

<b>9.</b>	<b>Ocular surgical procedures</b>	<ul style="list-style-type: none"> <li>• Extra ocular procedures</li> <li>• Lacrimal apparatus</li> <li>• Surgical removal of eye</li> <li>• Cataract</li> <li>• A mocualg</li> <li>• Implantation of intraocular iris</li> <li>• Repair of retinal detachment</li> <li>• Laser therapy</li> <li>• Eye injuries</li> </ul>	
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**Evaluation Strategies:**

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----
	Final Exam	50%	--/--/----
Homework and Projects		10%	
<b>Total</b>		<b>100%</b>	

**Teaching Methodology:**

- ❖ Lecture. Discussion. Simulation. Assignments.

**References:**

1. Phillips N. “Berry and Kohn’s Operating Room Technique”. Eleventh edition (2007). Mosby

2. **Pocket Guide to the Operating Room** :Goldman M. (2008) Third Edition, F. A. Davis Company, Philadelphia

- Related articles from nursing Journals.

# Para-Medical Program

<b>Specialization</b>	<b>Surgical Technology</b>
<b>Course Number</b>	<b>21125291</b>
<b>Course Title</b>	<b>Vascular, Thoracic and Cardiac surgery</b>
<b>Credit Hours</b>	<b>(3)</b>
<b>Theoretical Hours</b>	<b>(1)</b>
<b>Practical Hours</b>	<b>(6)</b>

## **Brief Course Description:**

This course is designed to provide nurses with historical back ground, special features of thorax, cardiac and vascular surgeries, chest trauma, intrathorax esophageal procedures, common cardiac surgical procedures, and conservative interventional procedures. This course enables nurses in applying nursing activities safely for

patient with cardiac, vascular and thorax problems. Critical thinking and problem based learning will be emphasized.

**Course Objectives:**

Upon the completion of the course, the student will be able to:

1. Discuss the pertinent anatomy and physiology of thoracic cavity, vascular and cardiac system
2. Describe the main positions for patients with thoracic, vascular and cardiac disorders.
3. Understand the nursing process as a framework for providing nursing care for a client with thoracic, vascular and cardiac problems.
4. Describe the principles underlying effective recording and reporting/ documenting of nursing interventions for patients with thoracic, vascular and cardiac disorders.
5. Recognize the principles underlying all nursing intervention produces related to providing care to client in different care settings.
6. Apply nursing care for patients with chest tubes.
7. Develop an awareness concerning patients with pacemakers.
8. Describe complications associated with patients with thoracic, vascular or cardiac problems.

**Detailed Course Description:**

Unit Number	Unit Name	Unit content	Time Needed
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1.	<b>Thoracic</b>	<ul style="list-style-type: none"> <li>• Anatomy and physiology of thorax</li> <li>• Special considerations of thoracic surgery</li> <li>• Bronchoscopy</li> <li>• Thoracoscopy</li> <li>• Thoracic incisional approaches</li> </ul>	
2.	<b>Thoracic surgery procedures</b>	<ul style="list-style-type: none"> <li>• Rib resection</li> <li>• Mediastinotomy</li> <li>• Thoractomy</li> <li>• Thymectomy</li> </ul>	
3.	<b>Chest trauma</b>	<ul style="list-style-type: none"> <li>• Blunt trauma</li> <li>• Fracture rib</li> <li>• Penetrating wounds</li> <li>• Thoracentesis</li> </ul>	
4.	<b>Intrathoracic esophageal procedures</b>	<ul style="list-style-type: none"> <li>• Esophagectomy</li> <li>• Repair of hiatal hernia</li> </ul>	
5.	<b>Cardiac</b>	<ul style="list-style-type: none"> <li>• Anatomy and physiology of the heart and great vessels</li> <li>• Special features of cardiac surgery</li> <li>• Commonly used incision for cardiac surgery</li> <li>• Invasive hemodynamic monitoring</li> <li>• Intraoperative monitoring</li> <li>• Cardiopulmonary bypass</li> </ul>	
6.	<b>Cardiac surgery procedure</b>	<ul style="list-style-type: none"> <li>• Valvular heart surgery</li> <li>• Coronary artery disease</li> <li>• Coronary artery bypass</li> <li>• Coronary artery angioplasty</li> <li>• Cardiac dysrhythmias</li> <li>• Ventricular aneurysm</li> <li>• Atrial myxoma</li> <li>• Cardiac pacemaker</li> </ul>	

7.	<b>Vascular</b>	<ul style="list-style-type: none"> <li>• Anatomy and physiology of vascular system</li> <li>• Vascular disease</li> <li>• Diagnostic procedures</li> <li>• Special features of vascular surgery</li> <li>• Vascular graft</li> </ul>	
8.	<b>Conservative interventional technique</b>	<ul style="list-style-type: none"> <li>• Percutaneous transluminal angioplasty</li> <li>• Atherectomy</li> <li>• Thrombectomy or embolectomy</li> <li>• Thrombolytic therapy</li> </ul>	
9.	<b>Vascular surgical procedures</b>	<ul style="list-style-type: none"> <li>• Arterial bypass</li> <li>• Endarterectomy</li> <li>• Aneurysmectomy</li> <li>• Embolectomy</li> <li>• Venous stasis disease</li> <li>• Vascular shunts</li> <li>• Vascular anastomosis</li> <li>• Limb salvage</li> </ul>	

**Evaluation Strategies:**

Exams		Percentage	Date
Exams	First Exam	20%	--/--/----
	Second Exam	20%	--/--/----

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	Final Exam	50%	--/--/----
Homework and Projects		10%	
<b>Total</b>		<b>100%</b>	

**Teaching Methodology:**

- ❖ Lecture. Discussion. Simulation. Assignments.

**References:**

1. Phillips N. “Berry and Kohn’s Operating Room Technique”. Eleventh edition (2007). Mosby

2. **Pocket Guide to the Operating Room** :Goldman M. (2008) Third Edition, F. A. Davis Company, Philadelphia

- Related articles from nursing Journals.

# Para-Medical Program

<b>Specialization</b>	<b>Surgical Technology</b>
<b>Course Number</b>	<b>21125200</b>
<b>Course Title</b>	<b>Training</b>
<b>Credit Hours</b>	<b>(3)</b>
<b>Theoretical Hours</b>	<b>(0)</b>
<b>Practical Hours</b>	<b>(280 training hours)</b>

## **Brief Course Description:**

This clinical rotation in a hospital provides the first opportunity for the student to apply knowledge gained as a "scrub" or circulatory role on surgical operations and work with specialized supplies and equipment. Knowledge and skills will apply with emphasis on role of surgical technologist. The student will take full responsibility under the supervision of clinical instructors and staff incharge of clinical settings who act as preceptors

Students will be participating in setting up, carrying out and breaking down a surgical case and will experience the environment of the work and team members. Planned clinical conference will provide time for exposure to biotechnology and specialized instruments and discussion of the experience.

### Course Objectives:

Upon the completion of the course, the student will be able to:

1. Integrate knowledge gained from theory courses into clinical practice.
2. Perform the responsibilities and duties of scrub nurse.
3. Perform the responsibilities and duties of circulatory nurse.
4. Describe the principles underlying working under sterile field.
5. Recognize the importance of documentation in theater.
6. Apply the principle of communication with other health team members.
7. Discuss the importance of infection control and disinfection in operation rooms..
8. Understand the principles of theatre managers.

### Teaching/Learning strategies:

1. The student will be distributed to clinical settings.
2. The student will be asked to develop a training contract under the supervision of the faculty member and the preceptor
3. Each student will resume full responsibilities of a graduate surgical technology associate degree, but under the supervision of the faculty clinical instructor and /or preceptor.
4. The faculty cooperates with the preceptor to plan and provide learning situations to meet students training objectives.

### Evaluation Methodology:

Exams		Percentage	Date
Clinical performance		20%	--/--/----
Clinical training assignments		20%	--/--/----
Written exam		10%	--/--/----

Final clinical performance		50%	--/--/----
<b>Total</b>		<b>100%</b>	

### Faculty and course evaluation:

Reaction paper to be completed by the end of the course.

### X. Plan for Evaluation

Evaluation of the Associate Degree Nursing Program will be conducted as a continuous process though the different stages of building the curriculum.

The evaluation of the program will include feedback from and about:

- Students
- Faculty members
- The curriculum in general (e.g. teaching- learning methods, resources, etc)

### Types of evaluation:

- Formative: During the learning/teaching process.
- Summative : after the completion of each course and graduation from the program

### A. Student Evaluation

Development of objectives and guidelines for student assessment and evaluation of theoretical and clinical courses will be the basis to evaluate the student's achievement of the objectives in the different courses.

1. Theoretical Courses will be evaluated based on the regulations and policies of Al Balqa' University. Each course syllabus includes methods of evaluating student's performance, which includes written examinations, performance based assignments and papers.
2. Clinical courses: a student's progress in developing clinical skills will be continually assessed by systematic observation utilizing specific guidelines according to the objectives of each clinical course. Satisfactory completion of courses will be evaluated by faculty members by evaluating the student's clinical competencies utilizing formative and summative evaluation and in accordance with Al Balqa' University regulations and policies.
3. Achievement of the overall objectives of the program and competencies will be evaluated using a comprehensive examination at the national level.

## **B. Faculty members Evaluation/Courses**

1. At the completion of each course, each student will be asked to evaluate the responsible faculty members and the course as a whole, utilizing the criteria used by Al Balqa' University administration personnel.
2. The other components of the faculty member's performance will be evaluated, as it is required by the university administration.

## **C. Curriculum Evaluation in general**

1. Courses will be reviewed and evaluated periodically and as needed by specialized faculty members and administrative personnel.
2. Curriculum evaluation will be based upon a systematic approach to assess input, throughput and output ( structure, process and output), and should include evaluation of the organizational structure, facilities, faculty members, students, knowledge components, clinical practice areas, material and resources, library and audiovisuals, Learning material resources, teaching and learning activities, and the evaluation process.
3. Suggested evaluation to include an evaluation research study to compare the graduates' competencies form the revised AD curriculum with graduates form the prior curriculum.
4. The Accreditation of the program is another way of evaluating the curriculum.

The curriculum evaluation as a whole should be conducted at least every two years and it should include evaluation by the grogram graduated, employers and consumers.

## **Teaching Methodology:**

- ❖ Discussion. Simulation. Assignments and Skill demonstrations at Theater sitting.

## **References:**

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1. Goldman M “**Pocket Guide to the Operating Room**” Third Edition (2008), F. A. Davis Company, Philadelphia
  2. Phillips N. “**Berry and Kohn’s Operating Room Technique**”. Eleventh edition (2007). Mosby