



جامعة الإمام عبد الرحمن بن فيصل  
IMAM ABDULRAHMAN BIN FAISAL UNIVERSITY

**IMAM ABDULRAHMAN BIN FAISAL UNIVERSITY**

**Nursing College**

**Clinical Skills & Simulation Lab**

# **Clinical Skills and Simulation Laboratories**

## Layout of Clinical Skill Labs

- The clinical skills laboratories occupy the first floor of the 750 building-college of Nursing. It offers facilities to practice and learn a wide range of nursing skills in a safe non-threatening environment.
  
- **Nursing skill laboratories comprise:**
  - Critical care skills laboratories
  - Fundamentals of nursing skills laboratory
  - Medical – Surgical skills laboratory
  - Obstetric & gynecological skills laboratory
  - Pediatric nursing skills laboratory
  - Home Care laboratory
  - Emergency Room Laboratory
  - Simulated Operating Room Laboratory

## **Critical Care Skill Laboratories**

The critical care laboratory in the college of nursing is a fully equipped state-of-the-art laboratory designed to recreate the atmosphere of the critical care unit, the latest in laboratory and simulation technology such as high fidelity human patient simulators, digitalized video, bedside computer charting, and electronic supply and static mannequins are all included within the lab. The lab also provides a space for debriefing and reflective thinking exercises that allow the students time to review their decisions and actions with the instructor and their classmates

### **Objectives:**


- Enhance learning using simulation technology and related resources.
- Provide educational materials for students, faculty, and staff.
- Provide hands-on learning experiences specific to critical care nursing course objectives as directed by the nursing curriculum.
- Provide a safe environment for students to practice critical care nursing skills.
- Bridge the gap between theoretical learning and clinical training.
- Encourage independent student learning opportunities.
- Integrate Clinical Simulation into critical care Nursing curriculum.
- Increase preparedness of nursing students before introduction to hospital training.
- Introduce physiology/ pharmacology/health assessment, etc. into cases critical care students.
- Increase preparedness for dealing with high acuity and critical cases
- Enhance communication skills
- Demonstrate the value of team-work and collaboration






## Procedures :

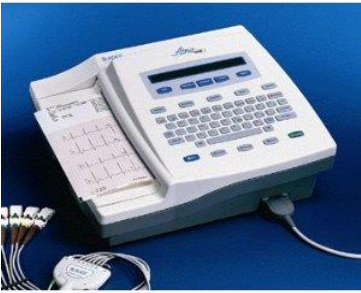


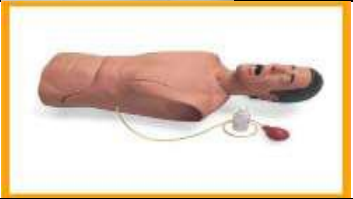


List of procedures	
SYSTEM	PROCEDURE
<b>Cardiovascular System</b>	<ul style="list-style-type: none"> <li>• Drawing blood from a vein.</li> <li>• Insertion of an IV line</li> <li>• Assisting insertion of a central venous line.</li> <li>• Central venous line care</li> <li>• CVP measurement.</li> <li>• Drawing an arterial sample</li> <li>• Inserting an arterial line</li> <li>• Cardiopulmonary resuscitation</li> <li>• Defibrillation</li> </ul>
<b>Respiratory System</b>	<ul style="list-style-type: none"> <li>• Maintaining patent airway</li> <li>• Inserting an oropharyngeal airway</li> <li>• Bag valve mask ventilation</li> <li>• Suctioning the airway</li> <li>• ETT care</li> <li>• Tracheostomy care</li> <li>• Managing ventilator emergencies</li> </ul>
<b>Gastrointestinal and Genitourinary System</b>	<ul style="list-style-type: none"> <li>• Feeding via NGT</li> <li>• Inserting a urinary catheter</li> <li>• Caring for a patient with an indwelling catheter</li> <li>• Inserting a nasogastric tube</li> </ul>







## List of equipment ,simulators ,manikins and medical appliances in Critical care labs :

Equipment	Image	Brief information
Emergency Care Simulator(ECS)		allows for the physical demonstration of various clinical signs including

		<p>bleeding, breathing, blinking eyes and convulsions ,provide appropriate responses to treatment interventions, including airway and oxygenation management, fluid administration, defibrillation and the administration of drug</p>
<p>Pedia ECS</p>		<p>PediaSIM offers the integrated METI physiology in a smaller practice patient with full trauma features for both nursing and emergency response. PediaSIM’s anatomical features include responsive pupils, an articulated mandible, exhalation of air and CO2 and secretions from the eyes, ears and mouth. PediaSIM responds to clinical interventions including chest compression, pacing, defibrillation, needle decompression and chest tube insertion. It enables learners to practice airway management in a safe environment.</p>

<p>Airway Management Trainer</p>	 <p>A medical training mannequin with a pink torso and head, lying on a white base. A small pink and blue device is positioned near the mannequin's mouth.</p>	<p>Trainer to demonstrate insertion of ETT ,oro and nasopharyngeal airway</p>
<p>Servo-Ventilator</p>	 <p>A white medical ventilator machine with various dials, gauges, and a digital display on the front panel.</p>	<p>Machine to deliver mechanical ventilation</p>
<p>Arterial Puncture Wrist with Circulation Pump</p>	 <p>A yellow medical training device consisting of a wrist model and a connected yellow rectangular box (circulation pump) with red tubing.</p>	<p>Simulating wrist for demonstration of arterial puncture</p>
<p>Tracheostomy Simulator</p>	 <p>A tan-colored mannequin head and neck with a tracheostomy opening. Next to it is a dark blue carrying case and a small white tube.</p>	<p>demonstration tracheostomy care and suctioning .</p>
<p>Crash Cart</p>	 <p>A blue and white medical cart with multiple drawers and shelves. It is equipped with a monitor, IV bottles, and other emergency supplies.</p>	<p>Cart Used to keep all emergency medication ,equipment .supplies for resuscitating patient</p>

<p>ECG Machine with leads</p>		<p>Used to demonstrate ECG procedure</p>
<p>Little Anne</p>		<p>Used for training of CPR</p>
<p>Medicine Cart</p>		<p>Cart used to distribute and prepare medication for patients</p>
<p>Choking Charlie Manikin</p>		<p>Manikin used to demonstrate first aid of chocking</p>
<p>Nebulizer</p>		<p>For administering inhalation medication .</p>
<p>Auscultation Trainer</p>		<p>This simulator allows training of the auscultation of various heart and lung sounds as in a real patient.</p>

<p>VATA-Peter PICC (Peripherally Inserted Central Catheter) Line</p>		<p>allows the teaching, practice and assessment of placing PICC lines</p>
<p>Catheterization/Enema Model</p>		<p>Model for insertion of urethral catheter and administering enema</p>
<p>Chester Chest</p>		<p>human torso with detachable right arm designed for the insertion care ,and removal of common long-term vascular access routes</p>
<p>AED-Advance External Defibrillator</p>		<p>For demonstration of CPR</p>
<p>Hungry Manikin</p>		<p>For demonstration of insertion of nasogastric tube</p>
<p>Buttocks Wound Care Model/Gluteal Ulcer</p>		<p>Model for demonstration of wound care</p>



Choking Charlie



Designed specifically for training of the Heimlich Abdominal Thrust Maneuver

IV Arm Accessories



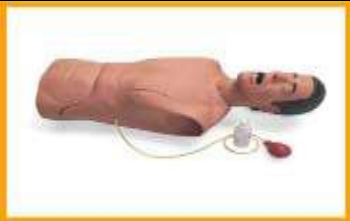
Arm for insertion of IV catheter and administration of IV fluid

SimMan3G Manikin (Laerdel) in bed



SimMan 3G is an advanced patient simulator that can display neurological symptoms as well as physiological. It is simple to operate and features innovative technology such as automatic drug recognition

NGTube & Tracheo Care Trainer/Respiratory & Wound Care Task Trainer



Torso task trainer designed for instruction in the care of patients with respiratory conditions and the practice of gastrointestinal care procedures via nasal and oral access

Ostomy Care Simulator




Simulator for demonstration of ostomy care and practice of dilation of the stomas, application of postoperative and permanent ostomy bags and Colostomy irrigation.





There are also suction machine ,ECG monitor and equipment for physical examination (stethoscope ,sphygmomanometer ,ophthalmoscope , otoscope ,glucometer )







## EMERGENCY ROOM LABORATORY




The College of nursing comprises an Emergency Room (ER) Laboratory where students train as part of their Critical Care Nursing course. The ER lab is designed to recreate the ER environment. Students learn to deal with patients in emergency and life threatening conditions such as cardiopulmonary arrest and advanced trauma, among the practiced skills are Basic life support advanced life support, airway management, wound dressing and many more. The lab also comprises a research area for conducting basic lab investigations

### List Of Equipment .simulators ,manikins in ER lab:

Equipment	Image	Brief description
Laerdal Rescue		Allows instructors to do comprehensive BLS and early defibrillation training for Fire & EMS professionals where the highest levels of competency are desired. The Skill guide performance indicator provides immediate and objective feedback on key CPR elements. Includes pad sensors in the chest skin that allows AED Trainer 2 device to verify proper pad placement before starting "analyze" sequence, plus small lights on manikin's chest that can illuminate to indicate correct pad placement

<p>Laerdal Vital Sim</p>		<p>VitalSim is designed to be used for realistic medical training within emergency care and nursing. It can be used with different types of manikins to simulate vital signs such as breathing, pulse, blood pressure, ECG, heart, lung and bowel sounds. Vocal (spoken sounds) are also generated.</p>
<p>AED Trainer Little Anne</p>		<p>system offers all the essential features necessary for learning adult CPR, defibrillation and defibrillator pad placement.</p>
<p>Little Anne</p>		<p>CPR training manikin</p>
<p>Truman Multi manikin Trainer with AED machine and Paddles</p>		<p>The Truman Multi manikin has been designed and engineered to bring added realism to training in cardiopulmonary resuscitation (CPR) and simulation of defibrillation technique using an automated external defibrillator (AED). These features, combined with the unique AirSim airway management system, enable Truman to deliver a comprehensive and cost effective AED/CPR experience</p>

<p>Choking Charlie</p>		<p>The Choking Charlie manikin is an adult torso designed specifically for training students in the performance of the Heimlich Abdominal Thrust Maneuver</p>
<p>Nursing Kelly-Laerdal</p>		<p>Nursing Kelly allows students to perform assessments and interventions thereby such as Insertion of NGT, urethral catheter , administration of IV fluids,.</p>
<p>Mr.Hurt Head Trauma Trainer</p>		<p>is cast from an actual victim of a road accident and presents students with a variety of trauma conditions.</p>
<p>Progetti S.2 Model – Rescue 2300068 4 leads ECG 1 Pulse oximeter</p>		<p>It is device used to delivery of an electric shock to the heart which causes depolarisation of the heart muscles and re-establishes normal conduction of the heart’s electrical impulse</p>
<p>Adult Manual Resuscitator</p>		<p>is a device used to inflate the lungs of an unconscious person who is not breathing</p>
<p>Julabo water bath/TW20</p>		<p>The TW series offers high-quality water baths with MICROPROCESSOR technology and a temperature stability of <math>\pm 0.2\text{ }^{\circ}\text{C}</math></p>

<p>Labomed SLM Microscope</p>		<p>The LABOMED MET 400 is a workhorse tabletop metallurgical microscope that takes on a compact and highly durable form, making it the ideal candidate for daily inspection needs. Whether inspecting heat treated and stress tested metals, glass, plastics, chemicals, contaminants, or thin films.</p>
<p>Auto hematology analyzer/Mindr ay BC-2800</p>		<p>BC-2800 is a compact, fully automatic hematology analyzer with 19 parameters for CBC test and micro sampling technology.</p>
<p>Coagulation Chrom 300 3/SLAMED Germany</p>		<p>suitable for the complete coagulation diagnostic with tests like:PT, TT, APTT and coagulation inhibitors</p>

## **Fundamentals of nursing skills laboratories**

The Fundamentals of Nursing Skills Lab at the College of Nursing provides an opportunity for students to practice nursing skills in a supportive and caring environment. The skills progress from simple to complex as students' progress in the nursing program. The lab allows for demonstration and practice of nursing skills learned in theory and clinical courses. Practice opportunities vary from highly structured to less structured simulations of clinical scenarios. Regular skill practice is required of all students in the first, second, and third semesters of the nursing program. Nursing is an art and science that needs a lot of practice. The fundamental of nursing lab is the practical area for the students, where they perform all nursing procedures prior to the exposure to the clinical field. The faculty uses the lab for various demonstrations of procedures in nursing. This spacious laboratory is well equipped with chase doll, patient simulator, cardio - pulmonary resuscitation mannequin, life form hand simulator.

### **Objectives**

- Providing students with basic nursing skills necessary for adult nursing care.
- Developing students' skills for working with advanced technology and equipment.
- Facilitating transition to actual clinical settings.
- Enhancing students understanding of the clinical skills necessary for providing comprehensive nursing care for the adult patient.
- Enhancing teamwork and communication skills.
- Provide hands-on learning experiences specific to course objectives as directed by the nursing curriculum.
- Developing clinical judgment through scientific inquisition, critical thinking and problem solving.
- Disseminate a culture of safe nursing practice by enhancing the universal standards, precautions and rules of safety in practicing clinical nursing and

reinforcing its role as an indicator of quality in healthcare and the continuing development in evidence- based nursing practice.





## **Procedures**


1. Hand Wash
2. Hygienic care Skills.
3. Body mechanics.
4. Bed Making.
5. Physical Examination.
6. Nutritional Assessment.
7. Vital Signs.
8. Range of motion exercise.
9. Hot & Cold Application.
10. Positioning and transferring and moving patient in bed.
11. Specimen Collection.
12. Back Massage.
13. Bandaging & Binder
14. Basic CPR
15. Breathing and coughing exercise.
16. Enema and offering bed pan.
17. First Aid Management.


### **List of models, simulators in the lab are:-**

Name	Description	Image
------	-------------	-------











Auscultation trainer	This simulator allows training of the auscultation of various heart and lung sounds as in a real patient.	
Laerdal Resusci Anne	Brand new Resusci Anne CPR Training manikin by Laerdal.	
Life/form® First Aid Arm	This lifelike training arm allows for practice of critical bleeding-control and wound-treatment techniques	
Advanced Geri Manikin	<p>Geris moves like a person, allows realistic patient positioning, and features nonpinching joints. Life/form simulations are added for realism. The overall appearance of the manikin is female, however, removal of the wig and attachment of the male genitals converts it for male catheterization and prostate examination simulations. Excellent for all levels of health care education??, from nursing assistants to medical students. Ideal for all OBRA required training. The Advanced Geri Manikin is fully functional with the addition of a right IV Training Arm and a left Blood Pressure Training Arm. The Life/form IV Arm features replaceable skins and latex veins that actually roll when palpated. A realistic flashback confirms proper needle placement, and the shoulder can be used for intramuscular injection training. The Life/form Blood Pressure Arm reproduces the five Korotkoff sounds and allows the instructor to vary systolic and diastolic levels,</p>	

	pulse rate, volume, and auscultatory gap.	
<b>Basic Geri Manikin</b>	<ul style="list-style-type: none"> <li>• As <b>AN4001</b> GERI™ COMPLETE MANIKIN except that there are no internal fluid reservoirs</li> <li>• Urinary catheterisation cannot be performed</li> <li>• Gastrostomy care, lavage, gavage cannot be performed</li> <li>• Ideal for preparing students for working with elderly patients</li> <li>• Excellent for all levels of health care education – from nursing assistants to medical students</li> <li>• Bandaging and wound dressing</li> <li>• Bed baths</li> <li>• Cancerous mole comparison</li> <li>• Clothing changes</li> <li>• Denture removal</li> <li>• Decubitus sacral ulcer location</li> <li>• Dilated pupil comparison</li> <li>• Ear irrigation and hearing aid placement</li> <li>• Enema administration</li> <li>• Eye irrigation</li> <li>• Finger and toe bandaging</li> <li>• Hair care</li> <li>• Hearing aid removal and placement</li> <li>• Intramuscular injection sites – arms, thigh,</li> <li>• buttock</li> <li>• Oral and nasal lavage, gavage and suctioning</li> </ul>	

	<ul style="list-style-type: none"> <li>• Oral hygiene and eye irrigation</li> <li>• Ostomy care – ileostomy and colostomy lavage and suctioning</li> <li>• Pap smears and douching</li> <li>• Patient positioning</li> <li>• Patient transfer techniques</li> <li>• Placement of nasogastric tubes</li> <li>• Prostate examination – Stage B</li> <li>• Tracheostomy care – lavage and suctioning.</li> </ul>	
<p>Life/form® Complete Adult CRiSis™ Manikin</p>	<ul style="list-style-type: none"> <li>• Completely functional CPR manikin with electronic connections includes: <ul style="list-style-type: none"> <li>○ IV training arm</li> <li>○ Blood pressure arm</li> <li>○ Defibrillation chest skin</li> <li>○ Airway management trainer</li> </ul> </li> <li>• Ideal for ACLS, nursing, paramedic and EMT training at every level</li> <li>• CPR: <ul style="list-style-type: none"> <li>○ Palpable and visual landmarks</li> <li>○ Fully articulated head, neck and jaw</li> <li>○ Jaw thrust</li> </ul> </li> <li>• Airway management: <ul style="list-style-type: none"> <li>○ Realistic anatomy of the mouth, tongue and pharynx, larynx, epiglottis, vocal cords, trachea and oesophagus</li> <li>○ Cricoid cartilage allows for practice of Sellick manoeuvre</li> </ul> </li> </ul>	

- Separate left and right lungs for auscultation
- Oral, nasal and digital intubation capabilities
- Suctioning capabilities
- IV Arm:
  - Articulated at biceps for antecubital and dorsal access
  - Bony landmark at shoulder to identify muscle tissue for intramuscular injections
  - Realistic flashback from a pressurised system
  - Replaceable skin and veins
- Blood Pressure Arm:
  - Instructor determines systolic and diastolic levels, heart rate and sound volume
  - Speaker in arm reproduces real blood pressure sounds
  - Five Korotkoff sounds
  - Auscultatory gap can be added
- Defibrillation Chest:
  - Completely compatible with all standard brands and types of defibrillators, monitors and patient simulators
  - Manual, automatic and semi-automatic defibrillation rhythms detected at four ECG sites and two defibrillation sites

<p>DELUXE CASUALTY SIMULATION KIT – Adam Rouilly.</p>	<p>A comprehensive kit of bleeding and non-bleeding strap-on wounds; stick-on wounds and make-up to create 70 individual injury simulations</p>	
<p>DIGITAL EYE EXAMINATION/RETINOPATHY TRAINER, WHITE – Adam Rouilly</p>	<p>Adam,Rouilly’s already successful AR303 Eye Retinopathy Trainer has been completely redesigned to use the latest in <b>high resolution digital screen technology</b> - enhancing realism and the training experience. Our new <b>AR403 Digital Eye Retinopathy Trainer</b> includes <b>36 diabetic, common and less common retinal conditions</b> to offer excellent ‘hands-on’ experience in examination of the eyes and the use of an ophthalmoscope.</p>	
<p>EAR SYRINGING TRAINER, WHITE – Adam Rouilly.</p>	<ul style="list-style-type: none"> <li>• Learn syringing without the fear or risk of harming a patient</li> <li>• The flexible pinna allows manipulation</li> </ul>	
<p>NOSE BLEED TRAINER – Adam Rouilly</p>	<ul style="list-style-type: none"> <li>• Developed in conjunction with the ENT Department of Addenbrooke’s Hospital, Cambridge</li> <li>• This interactive model provides a practical test of skill for all those who are required to manage severe nose bleeding</li> <li>• Strongly recommended for all ENT and Casualty departments</li> <li>• For training in cautery and nose packing</li> <li>• Success of cautery, at four sites on septum, identified by light panel (battery included)</li> </ul>	

	<ul style="list-style-type: none"> <li>The trainee must identify the bleeding point, clear it by suction and deal with it either by nasal packing or cautery</li> </ul>	
EAR DIAGNOSTIC TRAINER – Adam Rouilly	<ul style="list-style-type: none"> <li>Of interest to all those concerned with ear examinations.</li> <li>The ear drum appearances presented represent a range of common disorders seen on examination of patients with symptoms of middle ear problems.</li> <li>The ear model is designed to be used with an Otoscope.</li> </ul>	
Paul - Compact CPR Training Manikin	<p>Simulaids CPR Paul African-American Torso with Carry Bag (Includes 3 disposable/lung airway systems, 3 mouth/nosepieces, carry bag w/ kneeling pads. Realistic anatomical features: long torso for abdominal thrusts, realistic head tilt/chin lift, sternum, rib cage, substernal notch.</p>	
VitalSim Simulation	<p>Simulation designed for medical training to take care of emergency situations and regular student was able to measure blood pressure and respiratory rate, and hear the voice of the lungs and the heart.</p>	
Metii man Simulation	<p>High-fidelity with advanced technology to provide and prepare students before training in health facilities attached to a computer to carry out different scenarios and application.</p>	

## **Medical Surgical Nursing Laboratory**

The medical/ surgical lab is a part of the skill and simulation lab at the college of nursing. It teaches and trains the students the advanced nursing skills by providing hands on training on various simulators developed for each procedures, that are included in the course curriculum for medical surgical nursing. These simulators include static models, low fidelity and high fidelity simulators and also the most recent high fidelity simulator, the Geri manikin, the vital Sim, the SimMan2G and the iSTAN.

### **Objectives**

- Providing students with basic and advanced nursing skills necessary for adult nursing care.
- Developing students' skills for dealing with advanced technology and equipment.
- Facilitating transition to actual clinical settings.
- Enhancing students understanding of the clinical skills necessary for providing comprehensive nursing care for the adult patients.
- Enhancing teamwork and communication skills.
- Provide hands-on learning experiences specific to course objectives as directed by the nursing curriculum.
- Developing clinical judgment through scientific inquisition and critical thinking and problem solving.
- Disseminate a culture of safe nursing practice by enhancing the universal standards precautions and rules of safety in
- practicing clinical nursing and reinforcing it's role as an indicator of quality in healthcare and the continuing development in evidence- based nursing practice.

## **MEDICAL-SURGICAL NURSING I PROCEDURES**

### I. Administration of Intravenous Medications.

- Adding Bolus Medication to an Existing IV.
- Adding Medication to an IV Solution Container.
- Introducing drugs through a Heparin or IV Lock Using Saline Flush.
- Administering Intravenous Medications by Piggy Back, Volume control Administration Set or Mini-Infusion Pump.

### II. Intravenous Therapy

#### IV. Cannulation

- Starting an Intravenous Infusion.
- Regulating Intravenous Infusion Rate.
- Changing Intravenous Solutions and Tubings.
- Changing a Peripheral IV Dressing.
- Discontinuing an Intravenous Infusion.
- Administering Blood Transfusion.

### III. Drawing Blood from the Vein (Phlebotomy).

#### IV. Capillary Blood Testing for Glucose.

### V. Oxygen Administration.

- Administering O<sub>2</sub> by Nasal Cannula.
- Administering O<sub>2</sub> by Nasal Catheter.
- Administering O<sub>2</sub> by Mask.
- Administering O<sub>2</sub> by Tent.

### VII. Nebulization.

### VIII. Maintaining the Airway – Suctioning Techniques.

#### A. Oropharyngeal and nasopharyngeal suctioning.

#### B. Orotracheal and nasotracheal suctioning.

#### C. Suctioning of an artificial airway.

### IX. Inserting an Oropharyngeal Airway.

### X. Postural Drainage.

### XI. Deep Breathing Exercises.

### XII. Incentive Spirometry.




### XIII. Inserting and Maintaining a Nasogastric Tube.





- Feeding by Gastric Gavage.
- Irrigating a Nasogastric Tube.








- Removing a Nasogastric Tube.
- XIV. Wound Care management
  - Donning Surgical Gloves
  - Wound Dressing:
    - Wet to dry Dressing
    - Dry Sterile dressing
  - Wound Assessment Sheet
  - Solutions used in wound care.



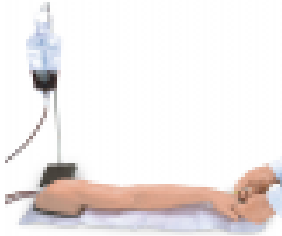

**List of models, simulators, that are present in the simulation lab with a brief description are:**




Nursing Kelly	With realistic anatomical features Nursing Kelly provides the optimum training experiences for a broad range of clinical skills practice. Nursing Kelly allows students to perform assessments and interventions thereby developing those critical thinking skills necessary in a healthcare environment.	
SimMan2G	A full body adult patient simulator that is of 2 <sup>nd</sup> generation simulator developed by laerdal containing a compressor, a link box, a laptop and a patient monitor.	
Sam auscultation trainer.	SAM II, the Student Auscultation Manikin is a new innovation in teaching and learning heart, breath, & bowel sounds, containing the largest sound library available.	

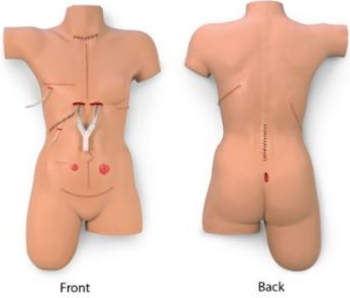

<p>Simulaids life/form® Intramuscular injection simulators</p>	<p>Perform dorsogluteal, ventrogluteal, and vastus lateralis injections on this specially designed simulator. One buttock is dissected to reveal major muscles, nerves, and blood vessels. Other buttock features all the bony landmarks needed to find the preferred injection area.</p>	
<p>Venatech trainer</p>	<p>The Venatech IV trainer is ideal for practicing blood extraction. The trainer includes the three main veins used in phlebotomy - cephalic, basilic, and median cubital - all in correct anatomical position. An arterial vessel is present on the trainer for arterial blood gas simulation, and can also be used as a tool for showing how to correct the puncture through a vein into an artery.</p>	
<p>Injection trainer pads</p>	<p>Multi-layered soft tissue pad for the practice of ID, SQ &amp; IM inj techniques.</p>	
<p>Hungry manikin</p>	<ul style="list-style-type: none"> <li>-Measurement, placement and securement of NG tube.</li> <li>-Insertion of a gastrostomy tube.</li> <li>-Aspiration of the stomach for confirming correct tube placement.</li> <li>-Measuring pH (acidity/alkalinity) of stomach aspirate)</li> <li>-Enteral feeding via NG or gastrostomy tubes.</li> <li>-Administration of liquid based medications.</li> </ul>	

<p>Arterial Arm Stick Kit - Laerdal</p>	<p>Lifelike adult male arm reproduction with infusible arteries designed for training the proper arterial puncture procedure for blood gas analysis.</p>	
<p>Lifeform® Complete GERi™ Nursing Skills Manikin</p>	<p>GERi™ moves like a person, allows realistic patient positioning and features non pinching joints. The overall appearance of the manikin is female, however, removal of the wig and attachment of the male genitals converts it for male catheterisation and prostate examination simulations. The visual inspection features include cancerous mole comparison, decubitus sacral ulcer and dilated pupil comparison. There are over 35 nursing and medical procedures that can be performed on this Nursing Manikin and the joint movements allow realistic patient positioning.</p>	
<p>Seymour II™ Wound Care Simulator</p>	<p>The Seymour II™ Wound Care Simulator flexible, life-like material that permits the application and easy removal of dressings, without leaving an adhesive residue. Still the most comprehensive model of its kind, molded from a 74-year-old patient, looks and feels like the real thing. Displaying the following pressure ulcers* (NPUAP 2007 - National Pressure Ulcer Advisory Panel): Stage I, Stage II, Stage III with undermining, tunneling, subcutaneous fat and slough, deep Stage IV with exposed bones, undermining, tunneling,</p>	






	<p>subcutaneous fat, eschar and slough. Also shown are a suspected DTI (Deep Tissue Injury), unstageable full eschar/slough wound, and a dehisced wound. The Stage III and Stage IV are positioned so that a “bridging” dressing for use with a vacuum assisted closure and negative pressure wound therapy devices can be demonstrated and practiced. This model makes it possible to visualize and understand the differences in wounds. Students are able to demonstrate and practice wound cleansing, classification, staging, and assessment, as well as the measurement of wound length, depth, undermining, and tunneling. The positioning of the wounds permits multiple dressings to be demonstrated at the same time.</p>	
<p>Laerdal - Inter-changeable catheterization and enema Trainer</p>	<p>The Interchangeable Enema and Catheterization Trainer (375-21001) is a life-like, vinyl female pelvis, designed to teach enema and urinary catheterization procedures.</p>	
<p>Fit on enema administration simulator sakamoto model</p>	<p>A wearable design enables training in actual postures. The feeling of inserting the syringe and injecting the enema is realistic.</p>	

<p>Wound Closure Pad – Light (Limbs and Things)</p>	<p>A low cost pad, ideal for demonstrating training and practicing core skills associated with wound closure.</p> <p><b><u>Skills</u></b></p> <ul style="list-style-type: none"> <li>• Making an incision</li> <li>• Application of skin adhesives</li> <li>• Interrupted suturing and knotting</li> <li>• Stapling</li> </ul>	
<p>Suture &amp; staple practice upper limb/arm Suture &amp; staple practice lower limb/arm</p>	<p>The Life/Form Suture and Stapling Practice Training Models are ideal for providing realistic suturing experience for your students. Crafted from lifelike soft vinyl skin over a core of stitchable foam which is easily pliable for sewing yet tough enough that sutures will not tear out when tightened.</p> <p>Each model come with three pre-existing 'wounds' which can be practiced on repeatedly before they will wear out, at which point new wounds can be cut. The model allows for over one hundred wounds to be cut and practiced on.</p>	
<p>The Nasco Life/form® Advanced Venipuncture and Injection Arm</p>	<p>The Nasco Life/form® Advanced Venipuncture and Injection Arm is a revolutionary training arm that provides complete venous access for IV therapy and phlebotomy, plus sites for intramuscular and intradermal injections.</p>	
<p>First Aid arm (Nasco life form)</p>	<p>Used to train Students in the Proper Techniques Used to Control Severe Bleeding: Direct Pressure, Tourniquet, Pressure Points.</p>	



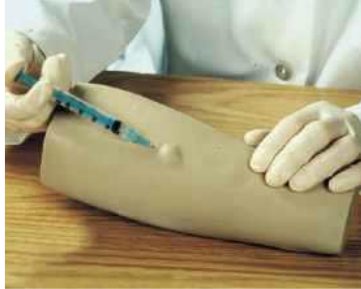
Hemodialysis practice arm	This valuable training aid is easy to set up and use to demonstrate preparing the patient's arm for hemodialysis.	
TB testing arm	Students can use these models to practice feeling for and measuring skin indurations.	
Ultrasound training model	<p>Blue Phantom ultrasound guided paracentesis training model is designed to aid clinicians in the use of ultrasound to recognize intraperitoneal fluid collections and development of the psychomotor skills associated with ultrasound guided paracentesis procedures. The superb realism helps users learn to use ultrasound to identify appropriate anatomy and to guide needle and catheter placements in the mid abdominal region in a patient with intraperitoneal fluid consistent with hemoperitoneum, ascites or other pathological scenarios. Using Blue Phantom patented simulated human tissue, this very realistic and ultra-durable ultrasound guided paracentesis training model is excellent for training clinicians in ultrasound skills including; using ultrasound system controls, transducer positioning and movement, recognition of liver, bowel, and intraperitoneal fluid collections, using ultrasound to target the appropriate pocket of fluid,</p>	



	<p>and guiding the needle to the targeted fluid pocket in real-time for pathological assessment.</p> <p>Contained in an adult size human torso, the paracentesis ultrasound module contains the right lobe of the liver, small bowel, and a variety of fluid pockets ranging in size from small, medium, and large allowing the user to begin their ultrasound training with easily obtainable fluid spaces and to progress to targeting smaller fluid collections as their skills progress.</p>	
<p>Life/form® "Surgical Sally" Bandaging Simulator</p>	<p>A readily available patient with 14 surgical wounds including a Mid-Sternal Split with two simulated drains, a Sacral Decubitus Ulcer - Stage 2, and a Leg Amputation Stump. Wound closures feature surgical staples for the Mid-Sternal Split, Thoracotomy, Nephrectomy, Laparotomy, Abdominal Hysterectomy, and Amputation Stump. Staples and sutures cannot be removed.</p> <p>Ideal for teaching wound management skills, dressing changes, and bandaging techniques.</p>	 <p>Front Back</p>
<p>Laerdal Vital Sim</p>	<p>VitalSim is designed to be used for realistic medical training within emergency care and nursing. It can be used with different types of manikins to simulate vital signs such as breathing, pulse, blood pressure, ECG, heart, lung and bowel sounds. Vocal (spoken sounds) are also generated.</p>	






<p>Laerdal AED trainer 2</p>	<p>The Laerdal AED Trainer 2 offers an affordable alternative for educating the layperson and healthcare provider in the effective use of an automated external defibrillator.</p>	
<p>The Little Anne® AED Training System</p>	<p>The Little Anne® AED Training System system offers all the essential features necessary for learning adult CPR, defibrillation and defibrillator pad placement:</p>	
<p>Laerdal ECG trainer</p>	<p>Adult male upper torso with anatomically accurate landmarks designed to realistically simulate airway management scenarios and train students in the proper utilization of 12 lead ECG devices, including the proper connection of patient cable, acquisition and interpretation of 12 lead ECG, and understanding and utilizing the AMI algorithm and local protocols relating to treatment of suspected or confirmed AMI.</p>	
<p>Tracheostomy care simulator</p>	<p><b><i>Tracheostomy care simulator</i></b></p> <ul style="list-style-type: none"> <li>• Suctioning</li> <li>• Dressing Changes</li> <li>• Visual Verification of Bronchial Location</li> <li>• Cuff Inflation</li> <li>• Visual Landmarks</li> </ul>	
<p>The <i>Life/form</i>® Auscultation Trainer Simulator with amplifier</p>	<p>The <i>Life/form</i>® Auscultation Trainer Simulator duplicates heart and lung conditions selected by the instructor by wireless remote control.</p>	



	<p>The student should palpate to identify the correct auscultation sites and will hear different heart and lung sounds as the SmartScope™ is moved from site to site.</p>	<p>Amplifier aborted.</p>
<p>Life/form® Ostomy Care Simulator</p>	<p>Life/form® Ostomy Care Simulator is designed to help introduce the essentials of ostomy care to patients and students, this unit is ideal for demonstration and practice for several procedures. The anatomy of both a colostomy and ileostomy are carefully reproduced to provide lifelike functions and appearance. Dilation of the stomas can be demonstrated and practiced, along with application of postoperative and permanent ostomy bags. The colostomy can be actually irrigated.</p>	 <p>The image shows a realistic human torso model with two red circular stoma openings on the abdomen. It is mounted on a green stand. In the foreground, there is a syringe, a yellow sponge, and a tube of ointment.</p>
<p>Diabetic training injection pad</p>	<p>This diabetic injection training pad offers the opportunity to practise giving injections in both a normal and hardened abdominal wall. This advanced injection pad can form a realistic fold for injection and has a life-like touch and feel. The model has been designed to be perforation-proof and can be attached to the students' body using a flexible band for extra realism.</p>	 <p>The image shows a person's hands using a syringe to inject into a realistic, pink, circular abdominal wall simulator. The simulator is attached to a person's body with a blue band.</p>
<p>Intradermal injection arm</p>	<p>With this detailed Intradermal Injection Arm Simulator, students can practice intradermal injections safely and conveniently. The unit consists of a casting molded from a real forearm from the wrist to just below the elbow.</p>	 <p>The image shows a person's hands using a syringe to inject into a realistic, beige, arm-shaped simulator. The simulator is mounted on a wooden surface.</p>

Cricoid stick trainer model	Needle and surgical cricothyrotomy skills can be practiced on this model with interchangeable rigid and soft tracheas.	
Bedsore cleansing and dressing model	One can practice treatment in the various stages of decubitus ulcer.	
Koken airway management model	<ul style="list-style-type: none"> <li>• Elevating the submaxilla.</li> <li>• Clearing the airway with an endotracheal tube, laryngeal mask, EGTA, or combination tubes.</li> <li>• Inserting a transnasal airway.</li> <li>• Giving artificial respiration with a bag mask.</li> <li>• Using a laryngoscope, removing endotracheal foreign matter with forceps, and doing endotracheal respiration.</li> <li>• Confirming the dilation of the stomach when air enters the esophagus.</li> <li>• Hearing respiratory sound with a stethoscope.</li> </ul>	
Multivenous IV training arm – Laerdal.	<p>Designed for peripheral intravenous therapy.</p> <ul style="list-style-type: none"> <li>• Venipuncture possible in the antecubital area or dorsum of the hand.</li> <li>• Accessible veins include the median, basilic and cephalic.</li> </ul>	
Palpation auscultation manikin GD/Z980A	<ol style="list-style-type: none"> <li>1. Remote controlled teaching.</li> <li>2. Elective palpation positions and experience of different symptoms.</li> </ol>	



	<p>3. Palpation: liver palpation, spleen palpation, gallbladder palpation and syntheses palpation, frequent disease tenderness and rebound tenderness.</p>	
<p>Liform® Peritoneal Dialysis Simulator</p>	<p>This simulator is designed to introduce patients, students and nurses to the essentials of CAPD procedures and care.</p>	
<p>iSTAN</p>	<p>iStan is the most advanced wireless patient simulator on the market, with internal robotics that mimic human cardiovascular, respiratory and neurological systems. When iStan bleeds, his blood pressure, heart rate and other clinical signs change automatically, and he responds to treatment with minimal input from an instructor. With wireless operation, iStan can display all the vital signs and signals of a critically ill or injured patient. An instructor can manage the simulation from a remote laptop.</p> <p><b>MÜSE SOFTWARE PLATFORM</b></p> <p>Operating iStan is simple with the Müse interface. The dashboard features an image of the patient as well as streaming patient data from monitors, the patient’s conditions and medications, a menu of Simulated Clinical Experiences (SCEs) and a timeline. The patient physiology and SCEs can be preset so an instructor can focus on teaching.</p>	 




	<p>With fully articulated limbs and joints, iStan offers mobility from first point of care to the operating room.</p> <p>iStan was a technological breakthrough, with integrated physiological responses that closely resemble those of a human patient. In addition to multiple pulse points and fully independent right and left lungs that respond automatically to treatment, iStan can simulate flail chest, cyanosis on fingers and toes and difficult airway challenges. With a realistic airway, articulated joints and blood on board, iStan has full mobile simulation capabilities.</p>	
--	--	--

## OPERATING ROOM LABORATORY

The College of nursing comprises one Operating Room (OR) Laboratory where students train as part of their medical/surgical nursing course. The lab is designed to recreate the OR environment. Students practice skills such as gowning, handling, preparing a sterile field and other important skills relevant to the OR environment. The lab aims at preparing the third year nursing student for her future role as a competent OR nurse by training in safe risk free environment.

### List of Equipment in Operating room Laboratory

Equipment	Image	Brief Definition
Rhinoplasty Head Simulator		a surgical nose simulator. This innovative anatomical model is intended to facilitate the training of the nose surgeon.
Nose Bleed Trainer		This interactive model provides the first practical test of skill for all those who are required to manage severe nose bleeding
Laerdal First aid training manikin		First Aid Training Manikin is the perfect partner for training that focuses on the

		<p>practice of first aid. This rugged manikin comes complete with a number of modules to re-create multiple first aid situations</p>
<p>Lecica Wild Microscope</p>		<p>Leica Microsystems develops and manufactures microscopes and scientific instruments for the analysis of microstructures and nanostructures</p>
<p>Narko Med Anesthesia Machine</p>		<p>The Anesthesia machine contains mechanical respiratory support (ventilator) and O2 support as well as being a means for administering anesthetic gases which may be used for sedation as well as total anesthesia</p>

## **Obstetrics & Gynecologic Skills Laboratory**

The College of Nursing comprises one Obstetrics & Gynecology Nursing Skills Laboratory that provides excellent laboratory facilities for learning Maternal and Child Health Sciences. This laboratory is where students learn the basic skills of maternity and child health nursing prior to exposure to the clinical area.



### **OB/GY Nursing Skill Laboratory's Objectives:**


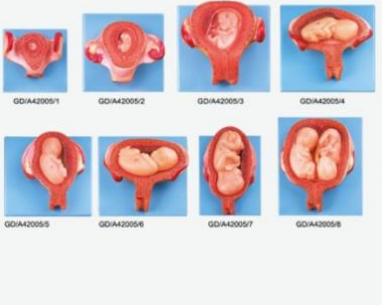
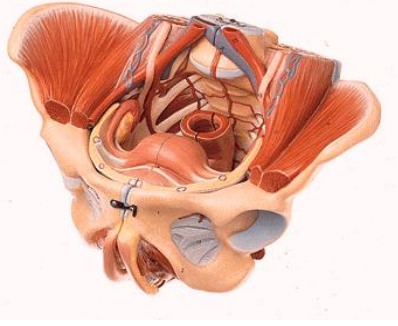
Upon completion of the laboratory rotations the students will be competent in performing different procedures through using different models & simulators available in the OB/Gyne skill lab and they will be able to:





- Identify the anatomical parts in both male & female reproductive system through using models (bony pelvis & soft tissues) and video tapes.
- Identify different stages of fetal development using different fetal development models.


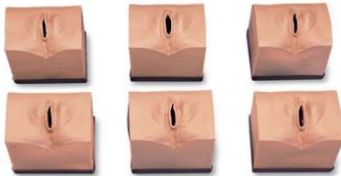


- Perform complete physical assessment for women during antenatal period through using full body simulator and other lab resource as CTG, video tapes, (plasma screen) and posters.
- Assess the parturient physical condition & the progress of process of normal labor through using interactive childbirth simulator, and different models available in the lab. Interactive child birth simulator ultrasound scanning can be used to detect any deviation from normal during pregnancy.
- Assess female genital system to help students dealing with women having any gynecologic problem.
- Identify different instruments used for gynecologic women.
- Apply universal infection control precautions & safety measures while providing care to the women during antenatal, labor & postpartum, Newborn, as well as women who have any gynecological problem.
- Perform complete physical assessment for women during post partum period through using full body simulator & childbirth simulator.
- Prepare delivery set and instruments and equipments needed during labor.
- Use the full body pregnant simulator to demonstrate the different fetal positions attitudes, lies, and presentations.
- Use different interactive childbirth simulator to help students to formulate nursing care plan according to each scenarios.
- Perform physical examination & resuscitation for the newborn using interactive childbirth simulator.
- Assess any deviation from normal during labor using interactive childbirth simulator.




Equipment	Image	Brief information
-----------	-------	-------------------








<p>Human fetus replica</p>		<p>Fetus Replicas add dramatic realism to the study of prenatal human development. Each replica is an actual reproduction, and offers an accurate and exciting way to study external development and growth of the fetus.</p>
<p>Embryonic Development</p>		<p>Includes a first-month embryo, second-month embryo, third-month embryo, fourth-month fetus in transverse lie position, fifth-month fetus in breach position, fifth-month fetus in transverse lie position, fifth-month twin fetuses, and seventh-month fetus. Each model is on a base</p>
<p>Female pelvis w/internal organs</p>		<p>This life size four part model of a female pelvis represents detailed information about the topography of bones, ligaments, pelvic floor muscles and female pelvic organs</p>


<p>Female Breast examination Model</p>		<p>The model has lumps simulating easy and hard-to-find breast tumours</p>
<p>Female pelvis Skeleton</p>		<p>This skeleton assist studying of the skeletal anatomy of the female pelvis. Consisting of hip bone, sacrum with coccyx and 2 lumbar vertebrae as well as movable symphysis pubis.</p>
<p>Doppler Huntleigh</p>		<p>The easy to use devices can enable a clinician to easily detect the fetal heart</p>
<p>Abdominal palpation model</p>		<p>This model is used to perform Leopold's maneuvers and to demonstrate palpation of the abdomen to determine fetal lie, presentation, and position. The Abdominal Palpation Model includes a</p>

		<p>fetus with a weighted body, movable arms and legs, firm buttocks, and a head with palpable anterior and posterior fontanels.</p>
<p>S500Advanced Childbirth Simulator</p>	 <p>A realistic anatomical model of a female pelvis and lower torso, used for medical training. It includes a blue cushioned base and various components for simulating childbirth.</p>	<p>This simulator provides an excellent simulation of the normal and abnormal delivery experience</p>
<p>Cervical dilation /effacement simulator</p>	 <p>Six small, tan-colored, rectangular simulators arranged in two rows of three. Each simulator has a central opening that mimics the shape and texture of a cervix during different stages of dilation and effacement.</p>	<p>Cervical Dilatation/Effacement Simulators. Designed to facilitate the teaching, demonstration, and practice of cervical examination prior to birth.</p>
<p>Cervical dilation module</p>	 <p>Five tan-colored, dome-shaped modules with a central opening, designed to simulate the feel and touch of a cervix during dilation. They are shown against a blue background.</p>	<p>These simulators have been redesigned to be incredibly soft with a realistic feel and touch to enhance the birthing simulation experience</p>
<p>Fetal monitoring &amp;labor progress model set</p>	 <p>A collection of components for fetal monitoring and labor progress simulation, including a blue box, a red circular sensor, and a white probe, used for realistic vaginal examinations and labor progress assessment.</p>	<p>model set that provides realistic simulation for vaginal examinations, labor progress, assessment of dilatation,</p>



		palpation of fetal fontanels and suture lines.
Hysteroscopy trainer		Comprehensive intra-uterine examination training system with a variety of uteri to teach instrument handling and diagnosis .
female pelvic trainer surgical		Accurate anatomical and tactile representation provides for extensive training at under graduate level for nurses and has many uses in family health and community care.
Family planning Model		simulator for demonstration of introduction and removal of an IUD, diaphragm, and sponge contraception devices. In addition, bi-manual examination technique may be practiced and normal and abnormal uterine positions may be demonstrated. The vulva is made of ultra-soft vinyl to give

		lifelike feel and flexibility.
Eva 1 Gyne Exam Simulator		A lifelike female pelvis for developing diagnostic skills in gynecologic procedures, anatomical instruction, abdominal palpation, and speculum instruction. EVA allows the comprehensive, stress-free introduction of gynecological examinations,
Gynecology training model		Designed to be used for training and instruction for diagnosis of various diseases state in gynecology as well as probing and collection of smear
Female Catheterization		This simulator consists of a female abdomen and allows you to feel the pressure and resistance when a catheter is passed through the urethra and sphincter into the

		<p>bladder. When the catheter enters the bladder, artificial urine (water) will flow through the catheter. Realistically moulded external genitalia and perineum, labia minora, clitoris, urethral opening and vaginal introitus.</p>
<p>Maternity simulator Jacket</p>		<p>This simulation jacket is ideal for experiencing the life and activities of a pregnant woman, and learning how to assist her. It will cater especially to the educational needs of midwifery, public health nursing, nursing and also for expectant parents.</p>
<p>Noelle Maternal &amp; Neonatal birthing sim</p>		<p>Designed to provide a complete birthing experience before, during, and after delivery. Simulator features include full-size articulating female manikin, intubatable airway with chest rise, IV arm for meds/fluids,</p>

		<p>removable stomach cover, practice Leopold maneuvers, multiple fetal heart sounds, automatic birthing system, measure head descent and cervical dilation, multiple placenta locations, , one articulating birthing baby with placenta, and one resuscitation baby with intubatable airway and umbilical catheter site. Also contains new postpartum hemorrhage.</p>
<p>Birthing station simulator</p>		<p>This birthing simulator is especially designed to demonstrate and practice the palpation of the birth canal. It shows the relationship between fetal head and ischial spines of the pelvic bone during birth.</p>



<p>Full body pregnancy simulator</p>		<p>By interchanging various parts, procedures such as external examination of a pregnant woman, internal examination during stages of delivery, practical obstetric assistance, perineal suture of soft birth canal lacerations, palpation of the uterus fundus during the puerperal peirod, and breast care can be practiced</p>
<p>Blue Phantom U/S Training model</p>		<p>Blue Phantom's intrauterine pregnancy (IUP) endovaginal ultrasound training model is an extremely life-like training mannequin superb for training users to develop and practice the skills necessary to perform first trimester transvaginal ultrasound exams.</p>



Biometric Fetal  
U/S Training  
Pantom  
/Cris - Tissue  
simmulation  
&Phantom  
Tecnology





The mid-term ultrasound exam is used to estimate gestational age and to diagnose fetal malformation. Students gain competency with hands-on practice. Unfortunately, access to patients can be limited.

Birth model



Anatomical representation of human birth. 5 stages of the birthing process, mounted individually on bases:

- ☐ Fetus in womb, cervix closed
- ☐ Fetus in womb, cervix open
- ☐ Fetus in womb, start of head passage
- ☐ Fetus in womb and pelvis, finish of head passage
- ☐ Placenta in the womb

<p>Purperal uterus palpation model</p>		<ul style="list-style-type: none"> <li>• This model is ideal for palpation training. Special materials are used for the abdominal surface to make the identification of fundus uteri very realistic.</li> <li>• By using one of four uterus models that represent four different reversions, the difference between conditions can be accurately identified by palpation.</li> </ul>
<p>Meti pelvic examination w/following</p>		<p>combines the ability to demonstrate multiple gynecologic procedures as well as practice laparoscopic examination and minilaparotomy.</p>

Episiotomy  
trainer model



For the practice and repair of episiotomy ,and repair of perineal lacerations skill

- Performing an episiotomy
- Tissue layer identification and handling
- Deep musculature suturing
- Subcuticular suturing
- Superficial suturing



U/S-Sonosite  
180 plus

Ultrasound machine for antenatal examination to assess the uterus it has two transducer (abdominal &vaginal)

CTG Sonocaid



Used for antenatal screening enabling clinical interpretation of changes in fetal heart rate during contractions

<p>CAE( Lucina) simulator</p>		<p>The CAE Fidelis Lucina Maternal Fetal Simulator was developed for clinicians and interprofessional teams who manage normal deliveries as well as childbirth complications and obstetrical emergencies. The birthing simulator offers reliable, realistic training for childbirth maneuvers and emergency response when time is short and teamwork is essential</p>
<p>A female pelvis and two fetal heads</p>		<p>A female pelvis and two heads designed to demonstrate the birth process .The two interchangeable head ,one full term, the other premature, are fastened to a flexible shaft to allow passage in different positions ,through the pelvic outlet.</p>

## **List of procedures included in OB/Gyn. Lab**

### **I. Ante-Natal Procedures**

1. Physical Examination during Pregnancy
2. Leopold's Maneuver.
3. Application of the External Monitor.

### **II. Labor & Delivery Procedures**

1. Timing Uterine Contractions during Labor.
2. Assisting Normal Birth.
3. Placental Examination.
4. Immediate care of the Newborn.

### **III. Postpartum Procedures**

1. Breast examination.
2. Postpartum Fundal & Lochial assessment.
3. Episiotomy Care.
4. Postpartum perineal Assessment.

### **V. Gynecologic Procedures**

1. Assessment of female Genitalia.
2. Gynecological Instruments.

## Pediatric Nursing Laboratory

The pediatric nursing skills lab at the nursing college provides nursing students with an additional learning resource to meet their educational goals. The lab is equipped with instructional videos and DVDs, supplies and equipment, as well as practice manikins including Baby sim Simulator, Pediatric manikins, CPR manikins, Physical examination manikins, as well as high fidelity child simulator. The lab provides students with a realistic, simulated clinical environment to practice and demonstrate competency of selected nursing skills. Open lab times are posted at the beginning of each semester.



### Objectives:

1. Assess gestational age as well as physical and behavioral states of neonates.
2. Monitor and interpret vital signs.
3. Measure weight, height as well as head and chest circumferences.
4. Provide immediate and daily care for neonates.

5. Apply the nursing process in caring for normal neonates.
6. Assist s in administration of medications via different routes.
7. Follow the universal infection control precautions.
8. Encourage mothers to breast feed whenever possible.
9. Maintain optimal nutrition for neonates either enteral or parenteral.
10. Encourage and facilitate parent child bonding.
11. Asses and manage neonatal pain.
  
12. Record and report any detected abnormality.
13. Prepare parents for discharge and home care.
14. Provide health education concerning child care & follow up
15. Documents findings, nursing care & abnormalities

### **List of procedures included in**

1. Feed infant and children by Nasogastric tube and bottle feeding.
2. Administer IM medication.
3. Administer IV medication.
4. Administer Nebulizer medication.
5. Administer oxygen through mask, nasal cannula, and oxygen hood.
6. Perform suction.
7. Perform CPR.

### **List of manikin, simulators and a short description of each:**

Name	Image	Description
------	-------	-------------

Laerdal Silicone resuscitator



device to facilitate assist ventilation

Kim NB CPR



Simulaid's Newborn Kim CPR for infant

Koken baby boy



- \*Full-size, male or female, neonatal pediatric manikin.
- \*Trains students in bathing, observation, measurement, and diaper changing.
- \*Allows suction, umbilicus treatment, and rectal thermometry.
- \*Demonstrates simple infant exercises.



Intubation  
phantum of NB



- Natural size
- Realistic nasal, oral and pharyngeal cavities
- Tongue and movable lower jaw
- Life size epiglottis, glottis and trachea with alveoli
- Oesophagus and detachable stomach
- Firm body with soft, flexible arms and legs
- Detachable female abdomen with umbilical cord

Special needs  
infant

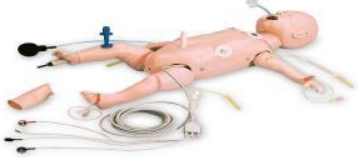









Special needs infants require specific yet gentle care which includes the performance of vital medical procedures that can be used include: tracheostomy tube and suction catheter, gastrostomy tube, nasogastric tube, urethral catheter.

Kim infant CPR



Simulaid's Newborn Kim CPR  
for child

<p>Infant ECG crisis manikin</p>	 <p>A small, realistic infant manikin lying on its back. It is equipped with various medical sensors and tubes, including ECG leads on its chest and limbs, and a nasal cannula. The manikin is designed for emergency resuscitation training.</p>	<p>The manikin features an Airway Management Head, IV Arm, Brachial Pulse Arm, IV Leg, Intraosseous Infusion Leg, and the Infant Chest Skin with Umbilicus and Four-Lead ECG Monitoring Capabilities.</p>
<p>Nita new for TM model infant access simulator</p>	 <p>A realistic infant manikin lying on its back, wearing a diaper. A person's hands are shown performing a procedure on the infant's arm. A bottle of disinfectant and a blue cloth are visible nearby, indicating a sterile procedure.</p>	<p>female baby developed to teach and practice vascular accessing of newborns and infants.</p>
<p>Infant airway management trainer</p>	 <p>A realistic infant head and neck model mounted on a white base. The mouth is open, revealing the internal airway structures, including the larynx and trachea. This model is used for practicing airway management techniques.</p>	<p>The Infant Airway Management Trainer features realistic size and anatomy and is perfect for practicing airway management skills on an infant. Can be attached to Resusci Baby brand CPR manikin</p>
<p>IV arm Pedia</p>	 <p>A realistic infant arm model, showing the hand and forearm. It is designed for practicing intravenous (IV) access techniques. A yellow tube is attached to the arm.</p>	<p>arm reproduction with multi-vein system designed for peripheral intravenous therapy.</p>
<p>IV baby arm /CLA</p>	 <p>A realistic infant arm model, showing the hand and forearm. It is designed for practicing intravenous (IV) access techniques. A yellow tube is attached to the arm.</p>	<p>IV Training Arm consists in a special, extremely thin, synthetic skin, and rubber tubing with appropriately small lumen and thin walls. The</p>

		<p>cephalic and basilic vein are accessible, as well as the dorsal venous arch on the hand.</p>
<p>Infant arterial training arm</p>	 <p>A realistic infant arm manikin with a red bulbous pump at the shoulder, used for practicing arterial punctures.</p>	<p>an infant arm allows students to master infant radial artery puncture techniques. Includes percutaneous puncture sites in brachial and radial artery. Manual radial artery pulse generator provides realistic arterial pressure. Simulated blood may be infused for backflow in syringe.</p>
<p>Nasco Infant ostomy trainer</p>	 <p>A collection of supplies for stoma care training, including a manikin, gloves, cleanser, ointment, and a stoma.</p>	<p>Infant Ostomy Trainer has been created to educate caregivers and parents on how to give special care to an infant with a stoma. This trainer will help by teaching step-by-step procedures for cleaning and caring for a baby's stoma and changing the pouching system.</p>
<p>Baby Anne -CPR Training</p>	 <p>A realistic baby manikin wearing a pink and white striped onesie, used for infant CPR training.</p>	<p>The Baby Anne manikin is a realistic, inexpensive, and lightweight infant CPR trainer with all the essential features for infant CPR learning.</p>

CLA Hospital  
training  
baby



natural size approximately 4-weeks-old Asian baby. Made of plastic throughout comprising body with movable head, arms and legs. The following parts can be exchanged on this doll: - female breast and abdominal wall with umbilical vein - male breast and abdominal wall with anus - temporal vein - urinary bladder - stomach and intestines - injection pads in thigh and buttocks  
Training possibilities:  
a) puncture of temporal vein  
b) stomach tube (nasal and oral)  
c) catheterisation (female and male)  
d) intestinal lavage  
e) injection  
f) anus-*praeter* care  
g) umbilical vein catheter insertion

Digital Baby Scale








Scale for measuring baby weight

Premature baby  
girl inside  
isolate infant  
incubator



Approximately to a baby in 27th week of pregnancy. In SOMSO-Plast®. With movable arms and legs. Undressed.  
Size of the head: approx. 25.5

		cm., length: approx. 35.5 cm., weight: approx. 690 g
Portable Suction Machine		
Isolette infant incubator		Incubator provides an ideal microenvironment system for premature babies and sick infants ,providing a controlled environment of warmth, humidity, and elevated O2 concentration in the patient area
Drager Caleo incubator		
CAE Baby Sim( infant )		infant cardiovascular, pulmonary and neurological systems, BabySIM is an infant- sized simulator with advanced physiology for the practice of life-saving care. Weighing 16 pounds, the infant simulator has eyes that blink, variable pupil size, cooing, crying, tearing and secretions from the ears, eyes and mouth as well as bulging fontanel capability. BabySIM can produce heart, bowel and breath sounds, including bilateral chest excursion and seesaw breathing. the BabySIM

		<p>enables clinicians to practice response to airway trauma or obstruction, including esophageal, nasal and oral intubation, BVM ventilation and laryngoscopic procedures. CAE Healthcare's BabySIM responds to chest compression, defibrillation and pacing, and allows safe practice of needle decompression, chest tube insertion and intraosseous insertion.</p>
<p>Laerdal®ALS Baby™</p>		<p>The Laerdal ALS baby is a portable skill trainer for realistic infant resuscitation training. Laerdal ALS Baby manikin is a three-month-old infant with an anatomy that offers exceptional realism for individual training. The Laerdal ALS baby offers the opportunity to practice advanced resuscitation skills, including airway management, professional rescuer CPR, vascular access, and 4-lead ECG monitoring.</p>

\*There are also equipment for physical examination (stethoscopes, sphygmomanometer ,penlight, laryngoscope, thermometer )

\*There a datashow, computer, LCD ,

**At the end of this rotation the student nurse will be able to:**

1. Assess physical and behavioral states of child.
2. Monitor and interpret vital signs.
3. Measure weight, height as well as head and chest circumferences.
4. Provide immediate and daily care for child.
5. Apply the nursing process in caring for normal child.
6. Assist in administration of medications via different routes.
7. Follow the universal infection control precautions.
8. Encourage mothers to breast feed whenever possible.
9. Maintain optimal nutrition for children either enteral or parenteral.
10. Encourage and facilitate parent child bonding.
11. Assess and manage pain.
12. Record and report any detected abnormality.
13. Prepare parents for discharge and home care.




**Procedures:-**

1. Feed infant and children by Nasogastric tube and bottle feeding.
2. Administer IM medication.
3. Administer IV medication.
4. Administer Nebulizer medication.
5. Administer oxygen through mask, nasal cannula, and oxygen hood.

6. Perform suction.

7. Perform CPR.

### List of manikin, simulators and a short description of each:

Name	Image	Description
Simulaids; Child Heart and Lungs Sounds Trainer	 The image shows a child-sized manikin with a striped tank top and a control unit. The control unit is a vertical black device with a screen displaying various sound settings and a large black knob at the bottom.	Child Heart and Lungs Sounds Trainer--This self-contained heart and lung sound generator delivers site-specific sounds of a four-year old, delivered through ten lung speakers and a heart speaker located in the normal auscultation sites for pediatric assessment.
The Infant Virtual I.V	 The image shows a person's hands on a computer mouse and keyboard, looking at a monitor. The monitor displays a virtual simulation of a hand being inserted into a vein, with various anatomical diagrams and data points.	The Infant Virtual I.V. is a comprehensive self-directed learning system for training peripheral venous cannulation in infants ranging from prematurity to 15 months.
Little Junior™ Adolescent by Laerdal - CPR:	 The image shows a realistic-looking adolescent manikin with a pinkish skin tone, used for CPR training. It is a torso and head model without arms.	Little Junior™ Adolescent by Laerdal - CPR Manikins & Manikin Accessories: The Little Junior manikins makes hands-on practice for effective child CPR training.



The Mike and Michelle 5 year old pediatric training simulator



The Mike and Michelle 5 year old pediatric training simulator is a sophisticated training manikin in standard and advanced clinical care.

**Skills**

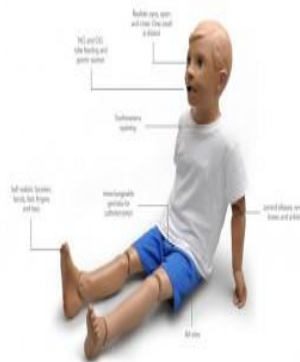
- Bathing and bandaging
- Intramuscular injection
- Male and female catheterization
- Enema administration

Mike® and Michelle® One Year Old Pediatric



The Mike and Michelle 1 year old pediatric training simulator is a sophisticated training manikin in standard and advanced clinical care.

S150 Mike® and Michelle® 5-Year Pediatric Care Simulator – inj arm



The Mike® and Michelle® five (5) year old is a sophisticated pediatric simulator for training in ... standard and advanced clinical procedures. Injection arm for IV, IM, Sub Q and intradermal injections.

S405 5-Year  
Injection Training  
Arm



The Mike® and Michelle® injection arm and hand simulate that of a 5 year old, with lifelike venous structure. The dorsum of the hand has two veins for additional intravenous set-up. The flexor and lateral sides of the arm contain sites for subcutaneous injections. The deltoid contains an intramuscular injection site. Two interchangeable hands are supplied with the simulator.

Advanced  
Multipurpose  
Venous Training  
Arm - Left Arm



Lifelike pediatric arm reproduction with multi-vein system designed for peripheral intravenous therapy. Procedures include: venipuncture in the antecubital fossa or dorsum of the hand; accessible veins including median, basilic, and cephalic; peripheral IV line insertion, removal, and maintenance; palpable veins enable site selection and preparation; infusible veins allow peripheral therapy with IV bolus or push injection method; intermittent infusion device insertion or conversion of existing IV line; and realistic anatomy allows IV site protection procedures such as stockinette and armboard or the use of an IV shield.

Resusci® Junior  
Basic and  
SkillGuide™



The Resusci Junior manikin offers realistic, high-quality child CPR education. It has full-body construction and use of an optional SkillGuide performance indicator. Students can quickly sharpen their skills in performing child CPR to high standards.

*Laerdal SimBaby*



SimBaby is an advanced infant patient simulator ideal for training in all aspects of infant care. With realistic anatomy and clinical functionality, SimBaby is suitable for all types of training - from routine care to critical emergencies.

# Home Health Care Nursing Laboratory

The home care lab is dedicated to providing its students with the clinical experience needed to provide care and companionship to patients in the comfort of their own home. Students will learn to offer help with activities of daily living such as bathing, feeding, dressing, transfers, and incontinence care. They will also learn to help clients with everyday tasks such as meal preparation, nutrition monitoring, help with shopping and running errands, medication reminders, assistance with walking, and most importantly—companionship and friendly conversation. Students also learn to provide, if the condition warrants, lab service, wound care, catheter care, help with tube feedings and IV therapy as well as in-home assessment and personal instructions to family members.

## Objectives:

- Produce highly qualified home care nurses who are able to provide quality holistic care to their patients.
- Develop creative modes of teaching and updating patient assessment skills, empowering the nursing staff to provide an advanced level of home care . in order to Prepare home care nurses for advanced levels of practice through applying creative and interactive, rather than rigid and proscriptive teaching, learning, and training strategies.
- Emphasis on community-based care, health promotion, disease prevention, family involvement, and self-care with the integration of technology.
- Demonstrate accountability, responsibility, and professional values in the practice of home care nursing.
- Acquire the special clinical skills needed for the care of frail elderly as well as disabled and non-ambulatory patients in institutional and home environments.
- Access services within the community's aging network which help to improve the quality of life of older persons Obtain the most valid and

reliable clinical findings by applying the appropriate modifications necessary in the examination of older patients.

- Differentiate expected age-related health changes and their functional implications from pathological conditions and their effects.
- Acquire additional knowledge not only about common systemic diseases associated with aging but also their systemic and functional implications.

### **List of procedures and simulations taking place in Home Care Lab**

#### **Procedures**

- **Stroke Rehabilitation: Nursing Intervention Strategies :**
  - o Rehabilitation following Stroke
  - o Patient Education in the Home: Key Concepts and Application
  - o Assisting stroke patient with dressing
  - o Assisting with the use of Oxygen concentrator
  - o Slid board transfer
  - o Transfer from wheelchair to shower and assisting with shower
  - o Transfer from wheelchair to toilet
  - o Insertion and removal of Female Urethral Catheter
- **Assisting With The Use Of The Hydraulic Lift**
- **Home Assessment Visits**
- **Nursing Bag Technique: The Community Health Nursing Bag**
- **Perinatal Nursing Assessment / Antinatal & Postpartum Care**
- **Role Play**
- **Guilines For Community Assessment**
- **Telehealth & Telenursing**

**List of equipments included in Home Care Laboratory:**

**Master room ( adult bed room)**

**Child room**

**Kitchen cabinet (upper and lower).**

**Bathroom**



**Basic patient care manikin elderly**



**Basic patient care manikin adult**





**Basic patient care manikin child.**



**Basic patient care manikin child**

**List of equipment and manikin in Home care lab**

Equipment	picture	Function
Electric patient lift		<p>Can be positioned in front of the person to be transferred. Built-in wheels make the E-Z Turn portable and maneuverable. The vertical support bar is adjustable, allowing correct user height. With knees centrally positioned on the supporting knee pads, patients grip the lower handle bar and raise themselves to an upright position. The brakes lock on and release—no need for the caregiver to keep a foot on the brake. Now both feet are kept firmly on the floor during transfers. The knee pads pivot and are adjustable to three settings for width between the knees.</p>
Three in one TRI stander from Tumble forms		<p>Its unique design allows prone, supine or vertical standing so a single stander can provide a variety of positioning needs.</p>

Bath master  
sonaris reclining



Combines functionality, outstanding performance and great design giving the user a delightful bathing experience. The single-button operation allows the user to descend and keep the backrest upright or to recline back to a more comfortable position, while retaining ample leg room to relax in the bath. All-plastic construction is easy to clean, yet strong and durable to ensure stability and years of use. The lightweight seat and back simply click together easily for quick assembly, installation and removal.

Invacare I-Fit  
shower chair with  
back






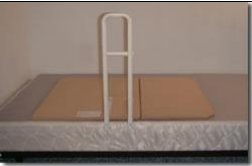
Heavy aluminum frame with a slip resistant high impact plastic seat and slide out pail. Contour back is reversible. Assembly required.

Wall-Mounted  
Shower Seat with  
Back and Arm  
Rests



The back is reclined 10° for additional support and comfort. The angle of the fold up arms can



		<p>be adjusted 5° up or down. Framework and legs are made from stainless steel, making this seat both durable and rustfree. The seat can be folded away when not in use. Legs are supplied, allowing the height of the seat to be adjusted.</p>
<p>Toilet Riser with Arms</p>		<p>Can be used on most toilet seats to provide comfort. Covered in a pale blue waterproof cotton with soft, flame retardant filling</p>
<p>Adult &amp; pediatric patient mover standard</p>		<p>facilitate quick and efficient patient transfers.</p>
<p>Adult and pediatric and BeasyTrans</p>		<p>Ideal for automobile transfers. The longer length will accommodate patients and transfers in areas where space is not an issue.</p>
<p>The transfer handle</p>		<p>This bed handle enables the elderly and people with disabilities to be independent and will ease the burden of the caregiver.</p>

Oxygen concentrator









Continuous flow portable travel oxygen concentrator . Giving patients oxygen therapy a choice when it comes to an oxygen concentrator that offers both pulse flow and continuous flow oxygen. Offers continuous flow up to 3 liters per minute or pulse oxygen in settings 1-5. It is a reliable, flexible, and clinically robust oxygen system that is very easy to operate. A/C , D/C and a supplemental battery gives the oxygen therapy patient the flexibility and freedom to go just about anywhere without the worry of running out of oxygen.



Geriatric™ Nursing Skills Manikin



The Geriatric™ Nursing Skills Manikin is ideal for preparing students for working with real-life geriatric patients, since it features an elderly appearance with skin wrinkles and folds. No other manikin on the

		<p>market is so realistic and true-to-life. When compared to similar manikins, it features the best and most lifelike range of motion; Geri™ moves like a person, allows realistic patient positioning, and features nonpinching joints. Uses Life/form® simulations for added realism. The overall appearance of the manikin is female, however, removal of the wig and attachment of the male genitals converts it for male catheterization and prostate examination simulation.</p>
<p>Long bath mat</p>		<p>Reliable slip resistance over the length of bathtub, with a cushioned, underfoot.</p>
<p>Ring cushion</p>		<ul style="list-style-type: none"> <li>• Provides comfort and support when sitting for an extended period of time</li> <li>• Reduces pressure on back and tailbone; ring-shape comfortably</li> </ul>

		conforms to body contours.
Vinyl bed rail pads		Rail Pads deter patients from leaving the bed reducing risk of side rail entrapment and injury.
Standers bed rails		Prevent falling from bed with the Stander Bed Rail. This 30 in long rail is used for assistance to sit up in bed
King assessment kit		Includes the basic dining products for persons cause tremors. Includes solid stainless steel utensils, an insulated weighted bowl and insulated weighted cup with no-spill lid.
Maddak Redware Tableware		These sets provide special benefits for Alzheimer's patients, who often experience weight loss, decreased visual capacity and visual deficits. Using high-contrast tableware such as Redwood's helps patients experience a 24% increase in food intake and 84% increase in liquid intake. The Basic

		<p>Set includes scooper dish with nonskid plate, drinking cup, built-up fork and built-up spoon. The Deluxe Set comes with partitioned scoop dish with lid, inner-lip plate, drinking cup, built-up fork and built-up spoon.</p>
<p>Parkinson's Deluxe Weighted Kit</p>		<p>Features the most recommended ADL products for persons with Parkinson's disease and other illnesses that cause tremors. Includes KEatery Weighted Utensil set a weighted and insulated bowl and cup, an adult Universal Holder</p>
<p>Posey lateral wedge</p>		<p>Ideal for helping to keep bed ridden patients repositioned, reducing pressure points under bony prominences and the incidence of pressure ulcers.</p> <ul style="list-style-type: none"> <li>• Easier to shape and position than regular foam pillows.</li> </ul>

Commode transfer board



Wheelchair / Toilet  
Commode Transfer  
Board

CJPS Medical  
system, vital  
point.



- VitalPoint® HOME is a revolutionary remote patient monitoring system that connects patients in the comfort of their own homes to their health care provider's office.
- The small, single-unit device measures blood pressure, blood oxygen saturation, pulse rate, weight, glucose level, prothrombin time, temperature, fluid status, and collects electrocardiogram data

