



## Simulation Lab Calendar of Events

### Fall – Junior

- **Week 1– Simulation Immersion Experience**
  - **Students work in groups at specific stations**
    - Introduced to the basic principles of preparing the anesthetizing site (OR) for patient care
    - Introduced to the anesthesia workstation
      - **Drager Narkomed GS**
      - **Drager Fabius Premium**
      - **GE Aisys**
    - Utilize task trainers and airway equipment for skills development
      - **Airway Larry**
      - **Trucorp Airway trainer**
      - **Ingmar RespiTrainer**
  - **Faculty:**
    - **Cindy Betron, DNP CRNA**
    - **Michael Kost, DNP CRNA**

### Simulation Activity

- **Immersion week**
  - **SOAPTIM**
  - **Anesthesia workstation checkout procedure**
  - **Basic airway equipment and airway management principles**
    - Mask ventilation
    - Oral/nasal airway insertion
    - Introduction to Laryngeal Mask Airway insertion
    - Introduction to endotracheal intubation
    - Glidescope intubation
  - **Perioperative patient flow**



## Simulation Lab Calendar of Events

### Fall – Junior

- Weeks 3 through 12
- September through November
- Weekly Friday Simulation activities
  - Students are oriented to anesthesia simulation with the use of the Gaumard HAL® adult patient simulator with dynamic lung features for mechanical ventilation, the Laerdal SimMan Essential® human patient simulator & the Laerdal ALS Simulator
  - Students attend Tuesday or Friday skills labs
  - Students have access to multiple anesthesia equipment & devices with simulated medications similar to those seen in clinical practice
  - Students have access to both the Drager Narkomed GS & Drager Fabium Premium plus the state of the art GE Aisys anesthesia workstations
  - Small group faculty-directed practice & review sessions are scheduled prior to competency check-outs
  - Students work with:
    - Cindy Betron, DNP CRNA
    - CRNA faculty members
    - Senior students

### Simulation Activity

- Orientation to simulation and lab setting
- SOAPTIM review and check-out
- Anesthesia workstation review and check -out
  - Setup, maintenance, and trouble-shooting the anesthesia workstation including the Drager Narkomed GS, Drager Fabius Premium and GE Aisys
- Sedation management
  - Practice with setting up infusion pump devices including the CareFusion® syringe pump and infusion channel plus the Medfusion® syringe pump
- General induction sequence for LMA and endotracheal intubation including rapid sequence induction (RSI)
  - Introduction sessions
  - Faculty supervised small group practice sessions
  - Competency check-out
- Patient positioning
  - Didactic and simulation
- Preoperative evaluation/assessment with standardized patient
  - Anesthesia care plan formulation
  - Obtaining anesthesia consent
  - Effective handoff communication
- Perfusion block placement
- Case Management strategies



## Simulation Lab Calendar of Events

### Winter – Junior

- Weeks 16 - 27
- January - March
  - Students attend Friday simulation sessions utilizing the Gaumard HAL® adult patient simulator with dynamic lung features for mechanical ventilation, the Laerdal SimMan Essential® human patient simulator, the Gaumard HAL® 5 year old pediatric simulator, and the Laerdal SimNewB® newborn patient simulator
  - Students work in small group faculty-directed case management sessions for frequently encountered respiratory and hemodynamic events
  - Students utilize various spinal and epidural task trainers
    - Spinal and epidural needle/catheter placement kits are utilized similar to those seen in clinical practice
  - Students work in small group faculty-directed case management sessions for obstetrical related complications
  - Faculty:
    - Cindy Betron, DNP CRNA
    - CRNA faculty members

### Simulation Activity

- Management of respiratory and airway complication scenarios
  - Patient assessment and chart review
  - Anesthesia plan of care development
  - Implementation of plan of care
  - Adjust titration of anesthesia care delivery based on patient's presenting/developing issue
  - Participation in group pre-briefing, debriefing, & problem-based learning discussion
- Hemodynamic management related to anesthesia or surgical complications
  - Patient assessment and chart review
  - Anesthesia plan of care development
  - Implementation of plan of care
  - Adjust titration of anesthesia care delivery based on patient's presenting/developing issue
  - Participation in group pre-briefing, debriefing, & problem-based learning discussion
- Spinal/Epidural placement
  - Combined didactic and simulation
  - Individual practice session time
  - Competency check-out
- Management of an obstetrical patient scenario
  - Patient assessment and chart review
  - Anesthesia plan of care development
  - Implementation of plan of care
  - Adjust titration of anesthesia care delivery based on patient's presenting/developing problem
  - Participate in group pre-briefing, debriefing & problem-based learning discussion
- Neonatal resuscitation for meconium aspiration



## Simulation Lab Calendar of Events

### Spring – Junior

- Weeks 28 - 40
- April - June
  - Students attend Friday simulation sessions
  - Students utilize the Gaumard HAL® adult patient simulator with dynamic lung features for mechanical ventilation, the Laerdal SimMan Essential® human patient simulator the Gaumard HAL® 5 year old pediatric simulator, & the Laerdal ALS Simulator and address patient safety concepts
  - Students utilize the newborn task trainer and the Laerdal SimNewB® newborn patient simulators
  - Students utilize task trainers related to anesthesia subspecialty
    - Airway Larry
    - Trucorp AirSim Bronchi trainer
    - Ingmar RespiTrainer
    - Symbionix Fiberoptic Trainer
    - A-Scope fiberoptic scopes
    - Glidescope
    - GE Venue 40
    - Central & Arterial Line Task trainers
    - Peripheral nerve block trainers
      - Interscalene
      - Femoral
  - Work with:
    - Cindy Betron, DNP CRNA
    - CRNA faculty for advanced airway techniques
    - CRNA faculty for invasive line placement
    - St Christopher’s Hospital for Children & Children’s Hospital of Philadelphia (CHOP) CRNA faculty
    - CRNA faculty for peripheral nerve block placement

### Simulation Activity

- Management of complex anesthesia complications/problems
  - Patient assessment and chart review
  - Anesthesia plan of care development
  - Implementation of plan of care
  - Adjust titration of anesthesia care delivery based on patient’s presenting/developing problem
  - Participation in group debriefing and problem-based learning discussion
- Advanced airway techniques
  - Video laryngoscopy equipment
  - Fiberoptic scope
  - Other advanced airway techniques and equipment
  - Specialty endotracheal tubes
  - Cricothyrotomy needle placement utilizing pig trachea and task trainers
- Central line insertion including Swan-Ganz catheter placement utilizing ultrasound guidance
  - Cardiac room set-up
- Pediatric ‘Boot Camp’
  - Room setup/equipment and fluid management
  - Pediatric anesthesia scenarios
  - Problem-based learning discussion
- Peripheral nerve block placement utilizing Stimplex nerve stimulation and ultrasound guidance techniques



## Simulation Lab Calendar of Events

### Senior Year

- September through June
  - Students attend Wednesday Crisis Resource Management (CRM) simulation sessions
- Students utilize the Gaumard HAL® adult patient simulator with dynamic lung features for mechanical ventilation, the Laerdal SimMan Essential® human patient simulator the Gaumard HAL® 5 year old pediatric simulator, & the Laerdal ALS Simulator
  - Advanced patient safety concepts are addressed
  - Faculty:
    - Cindy Betron, DNP CRNA
    - CRNA faculty for CRM
- Guest speaker
  - John O'Donnell, CRNA, MSN, DrPH,

### Simulation Activity

- Crisis Resource Management lecture
- Crisis Resource Management Scenarios
  - Malignant Hyperthermia
  - Laser endotracheal tube fire
  - Neck dissection/trach
  - ASA Difficult Airway algorithm
  - VAE or pneumothorax
  - OB catastrophe
  - AFE or Trauma
  - Post-partum hemorrhage



## Simulation Lab Calendar of Events

### SIMULATION LAB GENERAL FACULTY

Cynthia Betron, DNP, CRNA, CHSE, CNE, Simulation Lab Director (*Frank J Tornetta School of Anesthesia*)  
Michael Kost, DNP, CRNA, (*Frank J Tornetta School of Anesthesia*)  
Rachael Gerner, CRNA MSN (*United Anesthesia Services*)  
Rico Liwanagan, CRNA MSN (*John Hopkins Health System, Baltimore, MD*)  
Kristin Markmann, CRNA MSN (*Penn Presbyterian Medical Center*)  
Juliann Smith, CRNA, MSN (*St Luke's Hospital, Bethlehem, PA*)  
Rachel Snyder, CRNA MSN (*Lancaster General Hospital*)  
Elizabeth Stewart, CRNA MSN (*St Luke's Hospital, Allentown, PA*)  
Kelly Stillwell, CRNA MSN (*Penn Presbyterian Medical Center*)  
Derek Yohn, CRNA MSN (*Pinnacle Health – Harrisburg, PA*)

### Crisis Resource Management/TeamSTEPPS

Cynthia Betron, DNP, CRNA, CHSE, CNE, Simulation Lab Director (*Frank J Tornetta School of Anesthesia*)  
Michael Kost, DNP, CRNA, (*Frank J Tornetta School of Anesthesia*)  
Kristin Markmann, CRNA MSN (*Penn Presbyterian Medical Center*)  
Elizabeth Stewart, CRNA MSN (*St Luke's Hospital, Allentown, PA*)

### Central Line Insertion

Dan Graves, CRNA MSN (*St Luke's Hospital, Bethlehem, PA*)  
Ray Rivera, MSPAS, PA-C (*St Luke's Hospital, Bethlehem, PA*)  
Rachael Gerner, CRNA MSN (*United Anesthesia Services*)  
Brittany Scalley, CRNA MSN (*Penn Presbyterian Medical Center*)

### Fiberoptic Bronchoscopy Workshop

Michael Hartman, DNP CRNA (*Lehigh Valley Healthcare Network, Muhlenberg, PA*)  
Brittany Scalley, CRNA MSN (*Penn Presbyterian Medical Center*)



## Simulation Lab Calendar of Events

### Peripheral Nerve Block Placement Training Sessions

Jeff Petrillo, CRNA MS (*United Anesthesia Services, Abington Memorial Hospital, Lansdale*)  
Dr Scott Zalut (*Einstein Healthcare Network*)

### Pediatric Faculty Team (Pediatric Boot Camp)

Dawn Bent, DNP CRNA (*Clinical Coordinator, St Christopher's Hospital for Children*)  
Robert Grasso, CRNA MSN (*St Christopher's Hospital for Children*)  
Don Rank, MSN CRNA (*Chief CRNA, St Christopher's Hospital for Children*)  
Rob Simon, CRNA MS (*Children's Hospital of Philadelphia*)

### Airway Workshop Team

Michael Hartman, DNP CRNA (*Lehigh Valley Healthcare Network*)  
Michael Sweeney, CRNP, CCRN, CFRN, CNRN, CPEN, CEN, PHRN (*Chestnut Hill Hospital*)  
Jim Pisaturo, EMT-P (*University of Pennsylvania*)  
Dr. Kenneth Butler, DO, FACEP, FAAEM (*Associate Professor University of Maryland*)  
Brittany Scalley, CRNA MSN (*Penn Presbyterian Medical Center*)

### Simulation Lab Consultant

John O'Donnell, CRNA, MSN, DrPH (*University of Pittsburgh School of Nursing*)  
Professor and Chair, Department of Anesthesia  
Director, Nurse Anesthesia Program  
Associate Director, The Peter M. Winter Institute for Simulation, Education, and Research (Wiser)