



# Perioperative Nursing Care Diploma

2026



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

— In The Name of Allah —

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# PREFACE

This curriculum document includes sections describing certain training regulations; these regulations are expected to be referenced in the “General Bylaws” and “Executive Policies” for training published by the Saudi Commission for Health Specialties (SCFHS) and available online on the official SCFHS website.

In this program, the central objective of the Perioperative Nursing Care Diploma is to enhance the postgraduate learners’ learning experiences by outlining learning objectives that will enable trainees to become independent and competent prospective Senior Perioperative Nurses. If any inconsistency arises between the regulatory statements, those stated in the most current bylaws and executive policies serve as the applicable reference. Because this curriculum document is periodically updated, the electronic version of the most recent edition is available online at [www.scfhs.org.sa](http://www.scfhs.org.sa).

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We also acknowledge that the CanMEDS framework is a copyright of the Royal College of Physicians and Surgeons of Canada and that many of the competencies described have been drawn from its resources. Please refer to: Frank, J. R., Snell, L., Sherbino, J., & Boucher, A. (2015). CanMEDS 2015 Physician Competency Framework Series I. Ottawa: Royal College of Physicians and Surgeons of Canada.

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## IV. INTRODUCTION

### 1. Context of Practice

The Perioperative Nursing Care Diploma program is a specialized educational pathway to prepare nurses for competent and focused perioperative nursing practice within the Saudi healthcare system.

The program addresses the increasing demand for a skilled perioperative nursing workforce capable of supporting safe, efficient, and high-quality surgical care in an evolving, technologically advanced healthcare environment.

Perioperative nursing is a critical specialty that directly influences patient safety, surgical outcomes, and the overall quality of care. Perioperative nurses are essential members of the surgical team and act as continuous patient advocates throughout the surgical journey. Their roles are fundamental in preventing surgical errors, reducing healthcare-associated infections, maintaining sterile, safe surgical environments, and ensuring adherence to evidence-based clinical and ethical standards. Within the Saudi healthcare context, the program contributes to national priorities related to patient safety, quality improvement, workforce specialization, and healthcare transformation.

The scope of the Perioperative Nursing Care Diploma program encompasses comprehensive education and training across all phases of surgical care, including the preoperative, intraoperative, and postoperative periods. This program equips trainees with the knowledge and skills required to assess and prepare patients for surgery, verify surgical readiness, and ensure the surgical environment's availability and safety. For the intraoperative phase, the program helps trainees develop competencies in aseptic and sterile techniques, patient positioning, surgical instrumentation and equipment management, and effective collaboration with surgeons, anesthesiologists, and other members of



the multidisciplinary team. For the postoperative phase, the program prepares trainees to support safe patient transfers, effective clinical handovers, early identification of complications, accurate documentation, and continuity of care.

By integrating theoretical foundations and structured clinical training, the program develops technical competence, critical thinking abilities, professional accountability, and ethical practices. By clearly defining the importance and scope of perioperative nursing practice, the program supports informed career development and prepares graduates to function confidently as competent perioperative nurses who can contribute to improved surgical safety, enhanced patient outcomes, and the achievement of national healthcare quality and patient safety goals.

## 2. Goals and Responsibilities of Curriculum Implementation

This curriculum aims to guide trainees to ultimately become competent and fit for practice in their respective specialties. Accordingly, achieving this goal requires significant effort and coordination from all stakeholders involved in postgraduate training. As adult learners, trainees must be proactive, fully engaged, and exhibit the following: (1) careful understanding of learning objectives, (2) self-directed learning, (3) problem-solving, (4) eagerness to apply learning through reflective practice based on feedback and formative assessment, (5) growth mindset and self-awareness, and (6) willingness to seek support when needed. Program directors, trainers, accreditors, and training stakeholders are crucial in ensuring the successful implementation of this curriculum. Moreover, training committee members, particularly program administrators and chief residents, have a significant impact on program implementation. Further, trainees should be called on to share responsibility for curriculum implementation.

The Saudi Commission for Health Specialties (SCFHS) adopted a recognized competency-based training governance model to ensure the highest quality of training. Postgraduate programs are also required to integrate research- and evidence-based practices into their curricula. Furthermore, academic affairs departments in training centers, along with regional supervisory training committees, play pivotal roles in overseeing and implementing training activities. The respective specialty scientific council or committee ensures that the curriculum content is regularly reviewed and updated to maintain alignment with the highest standards of postgraduate education and specific needs of each specialty.



## V. ABBREVIATIONS USED IN THIS DOCUMENT

| Abbreviation | Description                                |
|--------------|--------------------------------------------|
| SCFHS        | Saudi Commission for Health Specialties    |
| D1           | 1 <sup>st</sup> year of Diploma            |
| D2           | 2 <sup>nd</sup> year of Diploma            |
| OR           | Operating Room                             |
| ICU          | Intensive Care Unit                        |
| CCU          | Coronary Care Unit                         |
| GNP          | Good Nursing Practice                      |
| SOE          | Structured Oral Examination                |
| OSCE         | Objective Structured Clinical Examination  |
| OSPE         | Objective Structured Practical Examination |
| CPD          | Continuous Professional Development        |
| TBL          | Team-Based Learning                        |
| PACU         | Post-anesthesia Care Unit                  |
| DOPS         | Direct Observation of Procedural Skills    |
| OMF          | Oral and Maxillofacial Surgery             |

| Abbreviation | Description                                        |
|--------------|----------------------------------------------------|
| CBD          | Case-Based Discussion                              |
| CBE          | Competency-Based Education                         |
| MCH          | Maternity and Children Hospital                    |
| ITER         | In-Training Evaluation Report                      |
| RTC          | Residency Training Committee                       |
| AHD          | Academic Half-Day                                  |
| R            | Rotation                                           |
| RCPSC        | Royal College of Physicians and Surgeons of Canada |
| CBME         | Competency-Based Medical Education                 |
| CSSD         | Central Sterile Supply Department                  |
| SSI          | Surgical Site Infection                            |
| RSI          | Retained Surgical Item                             |
| VTE          | Venous Thromboembolism                             |
| NPO          | Nil Per Os (Nothing by Mouth)                      |
| ASA          | American Society of Anesthesiologists              |
| ICP          | Intracranial Pressure                              |
| ECG          | Electrocardiogram                                  |
| ABG          | Arterial Blood Gas                                 |
| CPR          | Cardiopulmonary Resuscitation                      |
| CPAP         | Continuous Positive Airway Pressure                |



| Abbreviation | Description                                       |
|--------------|---------------------------------------------------|
| OPA          | Oropharyngeal Airway                              |
| NPA          | Nasopharyngeal Airway                             |
| LMA          | Laryngeal Mask Airway                             |
| EWS          | Early Warning Score                               |
| I&O          | Intake and Output                                 |
| NG           | Nasogastric Tube                                  |
| ESU          | Electrosurgical Unit                              |
| WHO          | World Health Organization                         |
| TURP         | Transurethral Resection of the Prostate           |
| AVF          | Arteriovenous Fistula                             |
| PD           | Peritoneal Dialysis                               |
| IVP          | Intravenous Pyelogram                             |
| CABG         | Coronary Artery Bypass Graft                      |
| MTP          | Massive Transfusion Protocol                      |
| APGAR        | Appearance, Pulse, Grimace, Activity, Respiration |
| OPD          | Outpatient Department                             |
| GS           | General Surgery                                   |
| CT           | Cardiothoracic                                    |
| RT           | Respiratory Therapist                             |
| PoC          | Point of Care                                     |

## VI. PROGRAM ENTRY REQUIREMENTS

Admission to the Perioperative Nursing Care Diploma Program is governed by the Executive Policy on Admission and Registration issued by the Saudi Commission for Health Specialties (SCFHS).

Applicants are required to comply with all eligibility criteria, application procedures, and regulatory requirements outlined in the official SCFHS policies. Candidates are advised to refer to the official SCFHS website for the most current and detailed information regarding admission and registration.





# VII. LEARNING AND COMPETENCIES

## 1. Introduction to Competency-Based Education

Training should be guided by well-defined “*enabling competencies*” that are developed based on a particular program’s “*competencies*” to serve specific specialty needs. Enabling competencies are intended to reflect the professional “*competencies*” and tasks that are “*entrusted*” to trainees upon graduation. This ensures that graduates meet the expected demands of the healthcare system and patient care in their specialties. Competency-based education (CBE) is an approach to “*adult learning*” grounded in the achievement of *predefined, fine-grained, and well-paced* sub-competencies derived from complex professional competencies.

Professional competencies in healthcare are inherently complex and encompass the integration of knowledge, skills, and professional behavior. CBE represents a shift from the traditional time-based approach in postgraduate education to a performance- and outcome-based model. In this framework, the duration of training, although valuable, is not regarded as a direct indicator of competence; for example, the length of a rotation in a specific clinical area does not, by itself, indicate competence. Furthermore, CBE emphasizes the importance of informed judgment in assessing a trainee’s progress through the continuous evaluation of progressively staged performance. This assessment relies on multiple data sources, including diverse educational encounters, assessment tools, and workplace-based observations. Several CBE frameworks have been developed for postgraduate medical education, such as CanMEDS by the Royal College of Physicians and Surgeons of Canada (RCPSC),

the Competency-Based Medical Education (CBME) model by the Accreditation Council for Graduate Medical Education (ACGME), and Tomorrow's Doctor in the United Kingdom, among others. The key concepts underpinning CBE include the following:

- a. **Competency** is the observable ability of a healthcare professional to integrate knowledge, skills, values, and professional attitudes or behaviors. It reflects the ability to perform effectively and consistently in real-world practice, in accordance with professional standards. Competencies are expressed through practical applications of these components in various clinical contexts. To facilitate learning and assessment, professional roles, such as medical experts, communicators, collaborators, leaders, health advocates, and scholars, are often used to structure and define specific competency domains.
- b. **Milestones** are the key stages in a trainee's developmental progression along a competency continuum. They guide the transformation of learners from novices and supervised practitioners to advanced, independent professionals while still recognizing the essential role of supervisory and regulatory bodies in preventing malpractice. Milestones support the learning process by aligning training and assessment with the trainee's developmental level, ensuring that expectations and responsibilities are appropriate for both the junior and senior stages of professional growth.
- c. **Learning domains** refer to categories or dimensions of learning that encompass the development of learners' knowledge, skills, and professional attributes. These domains are typically divided into three key areas: K = Knowledge, S = Skills, and A = Attitude (also referred to as professional behavior).
- d. **Content-area categorization:** Learning outcomes are best organized into broad content areas relevant to professional practice, such as diagnostic vs. therapeutic, simple vs. complex, and urgent vs. chronic. Trainees are



expected to advance from the novice level to the mastery level within each set of professional competencies. This curriculum was designed in accordance with the principles of CBE to ensure structured and progressive professional development.

## Principles of Competency-Based Medical Education (CBME)

These include the following:

1. **Focused Outcomes:** CBME emphasizes defining and achieving clear outcomes aligned with societal needs and ensuring that graduates meet these standards.
2. **Competencies as a Framework:** The curriculum is developed around clearly defined abilities or competencies that integrate knowledge, skills, attitudes, and behaviors.
3. **Learner-Centered Approach:** It promotes individualized learning by allowing trainees to progress at their own pace, based on their ability to demonstrate competencies.
4. **Integrated Assessment:** It uses multiple assessment methods to evaluate competencies comprehensively and continuously.
5. **Flexibility in Learning Pathways:** It encourages adaptable learning experiences tailored to individual needs while fulfilling established competency standards.
6. **Focus on Real-World Application:** The program emphasizes translating theoretical knowledge into effective practice in real clinical environments.
7. **Supervision and Feedback:** Close supervision and regular feedback are incorporated to promote continuous improvement and ensure safety.
8. **Emphasis on Lifelong Learning:** It prepares learners for ongoing self-directed learning and adaptation to a rapidly evolving healthcare environment.

9. **Accountability:** This ensures that training aligns with societal needs and the preparation of competent professionals.

## 2. Program Duration

The Perioperative Nursing Care Diploma program was delivered as a full-time training program over two calendar years.

During this period, trainees are required to complete all academic, clinical, and assessment components of the program in accordance with the approved curriculum and training regulations.

### Leaves & Vacations

Please refer to the SCFHS policies for more specific details (<https://scfhs.org.sa/ar/training>).

| Rotation                | 1st Year              | Duration by weeks | Setting                      | 2nd Year                  | Duration by weeks | Setting                                |
|-------------------------|-----------------------|-------------------|------------------------------|---------------------------|-------------------|----------------------------------------|
| Mandatory Core Rotation | Orientation           | 2 W               | Operation Room<br>CSSD       | Research                  | 1 W               | Research unit                          |
|                         | Research              | 1 W               | Research unit                | Gynecology and obstetrics | 2 W               | MCH                                    |
|                         | Pre-Anesthesia clinic | 1 W               | OPD                          | Pre-Anesthesia clinic     | 2 W               | OPD                                    |
|                         | Surgical inpatient    | 2 W               | Inpatient unit               | Surgical inpatient        | 2 W               | Inpatient unit                         |
|                         | General surgery       | 8 W               | Main OR GS room              | Pediatric surgery         | 4 W               | MCH                                    |
|                         | Orthopedic surgery    | 4 W               | Main OR Ortho room           | Plastic & burn surgery    | 4 W               | Main OR Plastic Surgery room           |
|                         | Neurosurgery          | 3 W               | Main OR Neurosurgery room    | Orthopedic Sports surgery | 3 W               | Main OR Ortho room                     |
|                         | ENT                   | 3 W               | Main OR ENT room             | Dental surgery            | 2 W               | Main OR Dental surgery room / Day care |
|                         | Ophthalmology surgery | 2 W               | Main OR Ophthalmology room   | Neurosurgery              | 4 W               | Main OR Neurosurgery room              |
|                         |                       |                   |                              | OMF surgery               | 3 W               | Main OR OMF room                       |
|                         | Urology surgery       | 3 W               | Main OR Urology surgery room | Cardiothoracic surgery    | 4 W               | Main OR Cardiothoracic room            |
|                         | PACU                  | 4 W               | Main PACU                    | Vascular surgery          | 4 W               | Main OR                                |

| Rotation         | 1st Year                         | Duration<br>by weeks | Setting            | 2nd Year                         | Duration<br>by weeks | Setting                            |
|------------------|----------------------------------|----------------------|--------------------|----------------------------------|----------------------|------------------------------------|
|                  | Plastic and Burn<br>surgery      | 4 W                  | Main OR GS<br>room |                                  |                      | Vascular<br>surgery<br>Room/hybrid |
|                  |                                  |                      |                    | PACU                             | 2 W                  | Main PACU                          |
|                  | Elective Rotation                | 1 W                  |                    | Elective Rotation                | 1 W                  |                                    |
| Theoretical Part | Lectures & in-<br>class sessions | 10 W                 |                    | Lectures & in-<br>class sessions | 10W                  |                                    |
| Leaves           | Annual                           | 4 W                  |                    | Annual                           | 4 W                  |                                    |
| Total            | 52 w                             |                      |                    |                                  |                      |                                    |

### 3. Program Rotations

**Mandatory Core Rotations:** These rotations are the essential components of the program and must be completed by all trainees as part of the core training requirements.

**Elective Rotations:** These rotations are specialty-specific and have been selected based on the Scientific Committee's recommendations. Trainees are required to complete a designated number of elective rotations in accordance with the program guidelines.

**Note:** The titles and availability of rotation settings may vary depending on the approved training site.

## 4. Mapping of Competencies, Roles, Assessment, and Educational Activities to Program Rotations

| 1 <sup>st</sup> Year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Procedures to be observed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                               |
| <ol style="list-style-type: none"> <li>1. Surgical interventions in all the minor and major OTs</li> <li>2. Anesthesia preparation</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                               |
| <p>Trainees are expected to assist in a range of clinical procedures relevant to perioperative and critical care practice, including but not limited to the following:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                               |
| <ol style="list-style-type: none"> <li>1. Monitoring of intracranial pressure (ICP)</li> <li>2. Participation in advanced life support interventions</li> <li>3. Performance and interpretation support of arterial blood gas analysis</li> <li>4. Electrocardiographic (ECG) monitoring and recording</li> <li>5. Assistance with arterial catheter insertion and management</li> <li>6. Support during chest tube insertion procedures</li> <li>7. Assistance with endotracheal intubation</li> <li>8. Provision and monitoring of ventilatory support</li> <li>9. Assistance with central venous access, arterial line placement, and cardiac pacing</li> </ol> | <ol style="list-style-type: none"> <li>10. Participation in defibrillation procedures and cardiopulmonary resuscitation (CPR)</li> <li>11. Endoscopy</li> <li>12. Arteriovenous Fistula, and peritoneal dialysis</li> <li>13. Intra-venous pyelogram (IVP)</li> <li>14. Participation in bronchoscopy procedures under supervision</li> </ol> |

Trainees are expected to perform the following perioperative nursing procedures under appropriate supervision and in accordance with institutional policies and professional standards:

1. Functioning as a scrub nurse during surgical procedures.
2. Functioning as a circulating nurse within the operating room environment.
3. Preparing and organizing surgical trays and trolleys for various surgical procedures.
4. Performing preoperative skin preparation in accordance with aseptic guidelines.
5. Assisting with surgical draping and patient positioning to ensure safety and accessibility.
6. Safely transferring patients within the perioperative setting.
7. Using and implementing the operating room nursing care plan.
8. Providing procedure-specific patient education related to the planned surgery.
9. Ensuring the availability and adequacy of surgical instruments throughout procedures.
10. Using specialized supplies and equipment as required for specific surgical interventions.
11. Performing wound dressing in accordance with postoperative care protocols.
12. Applying principles of sterilization and aseptic technique consistently.
13. Demonstrating understanding of microbiological principles and environmental control within the operating room.
14. Preparing surgical supplies and instruments in compliance with safety and sterility standards.
15. Demonstrating working knowledge of disposable surgical packs.
16. Appropriately handling disposable gowns and maintaining proper management of sterile paper wrappers.
17. Proper Handling of Specimen.





## 1<sup>st</sup> Year

- 18. Handling of Electrosurgical Unit (ESU).
- 19. Equipment use.
- 20. Surgical Table Operation and Patient Positioning.
- 21. Patient Safety Surgery Verification.
- 22. Principles of laparoscopic & robotic surgery.

## 2<sup>nd</sup> Year

### 1. Care of patient in preoperative area:

- a. PT ID
- b. PT ASSESSMENT (Pero checklist)

### 2. Preoperative room preparations:

- a. Availability of surgical supplies
- b. Availability of medical equipment
- c. Functionality of all surgical equipment

### 3. Assist as a (scrub & circulating) surgical team in the following specialties:

- a. General Surgery
- b. Orthopedic surgery
- c. Urology surgery
- d. Bariatric Surgery
- e. ENT Surgery
- f. Thoracic surgery
- g. Vascular surgery
- h. Plastic surgery
- i. Neurosurgery
- j. Ophthalmology surgery
- k. Cardiothoracic Surgery
- l. Orthopedic Sports Surgery

### 5. Care of patient in PACU:

#### a. Airway management:

- i. Application of an oropharyngeal airway
- ii. Administration of oxygen therapy
- iii. Application and monitoring of continuous positive airway pressure (CPAP)
- iv. Care and management of patients with a tracheostomy
- v. Assistance with endotracheal intubation
- vi. Administration of nebulization therapy

#### b. Neurological assessment

- c. Vital signs
- d. Pain assessment
- e. Dressing and drain care and assessment
- f. Medication Administration
- g. IV fluid administration
- h. Blood and blood product administration



- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>m. Urology surgery</li> <li>n. Colorectal Surgery</li> <li>o. Endocrine Surgery</li> <li>p. Thoracic Surgery</li> <li>q. Endovascular surgery</li> <li>r. Plastic burn surgery</li> <li>s. Neurosurgery</li> <li>t. Pediatric surgery</li> <li>u. OMF surgery</li> <li>v. Obstetrics &amp; gynecology surgery</li> <li>w. laparoscopic &amp; robotic surgery</li> </ul> <p>4. Proper Handling of Specimen:</p> <ul style="list-style-type: none"> <li>a. Labeling</li> <li>b. Fixation</li> <li>c. Endorsing</li> </ul> | <ul style="list-style-type: none"> <li>6. Admission and discharge of critically ill patients in accordance with clinical protocols and institutional policies.</li> <li>7. Performance of gastric lavage procedures under appropriate supervision and clinical indication.</li> <li>8. Configuration and adjustment of ventilator settings in collaboration with the multidisciplinary care team.</li> <li>9. Assessment of neonates, including identification and evaluation of risk factors and determination of APGAR scores.</li> <li>10. Management of thermoregulation, including monitoring and control of body temperature and the use of therapeutic hypothermia devices when indicated.</li> <li>11. Implementation of infection prevention and control procedures, including hand hygiene practices, disinfection and sterilization processes, surveillance activities, and environmental fumigation measures.</li> <li>12. Burns: assessment, calculation of fluids – crystalloids and colloids.</li> <li>13. Maintenance of the intake and output chart.</li> </ul> |
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## Perioperative Nursing Care Diploma — Comprehensive Rotation & Competency Mapping

| (Core)                                        | Name in Curriculum Mapping                                                        | (Rotation / Year)                               |
|-----------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------|
| Surgical Interventions<br>(Minor/Major OTs)   | Scrub & circulate under supervision; safe set-up and counts                       | General Surgery — D1–R4                         |
| Anesthesia Preparation                        | Pre-op ID, NPO/medications review, airway screen, consent & checklist             | Pre-Anesthesia Clinic — D1–R3                   |
| Monitoring ICP                                | Neuromonitoring/ICP awareness tied to positioning & protection                    | Neurosurgery — D1–R7                            |
| Advanced Life Support System                  | Mock codes & immediate post-anesthesia response (ALS readiness)                   | PACU Fundamentals — D1–11                       |
| Arterial Blood Gas (ABG) Analysis             | Assist ABG sampling & PoC analysis; escalate red flags                            | PACU Fundamentals — D1–11                       |
| ECG Recording                                 | ECG acquisition and escalation for red-flag tracings                              | Surgical Inpatient — D1–R4                      |
| Arterial Catheterization                      | Assist arterial line set-up & zeroing (exposure starts in D1, consolidated in D2) | Cardiothoracic/Vascular — D2–R11/R12            |
| Chest Tube Insertion                          | Prepare chest drain set, suction, dressing; assist insertion & monitoring         | Cardiothoracic — D2–R11                         |
| Endotracheal Intubation                       | Assist ETI; airway cart readiness and confirmation steps                          | PACU Fundamentals — D1–R11 (advanced in D2–R12) |
| Ventilation                                   | Ventilator handover checks and alarm safety (with anesthesia/RT)                  | PACU — D2–R13                                   |
| Central Line / Arterial Line / Cardiac Pacing | Assist CVC/arterial line setup; support pacing under supervision                  | Cardiothoracic/Vascular — D2–R11/R12            |
| Use of Defibrillation / CPR                   | Mock codes; defib/CPR roles in immediate recovery                                 | PACU Fundamentals — D1–R11 (advanced in D2–R13) |



| (Core)                                             | Name in Curriculum Mapping                                             | (Rotation / Year)                              |
|----------------------------------------------------|------------------------------------------------------------------------|------------------------------------------------|
| Endoscopy                                          | Cystoscopy/TURP tower & irrigation safety; endoscopic workflows        | Urology — D1–R10                               |
| Arteriovenous Fistula & Peritoneal Dialysis        | AVF sets & PD equipment readiness; sterile handling                    | Vascular (Hybrid) — D2–R12                     |
| Intravenous Pyelogram (IVP)                        | Support IVP logistics & contrast safety when ordered perioperatively   | Urology — D1–R10                               |
| Bronchoscopy                                       | Bronchoscopy tower setup; suction; specimen labeling                   | Cardiothoracic — D2–R11 (exposure D1–R8 ENT)   |
| Work As a Scrub Nurse                              | Scrub role across the listed cases with count discipline               | General Surgery — D1–R5 (+ other OR rotations) |
| Work As a Circulatory Nurse                        | Circulator role: room flow, sterility, and specimen chain-of-custody   | General Surgery — D1–R5 (+ other OR rotations) |
| Setting Up Trays & Trolleys                        | Tray/trolley setup to preference cards; indicator checks               | General Surgery — D1–R5                        |
| Skin Preparation                                   | Correct antisepsis, area/agent selection, and timing                   | General Surgery — D1–R5                        |
| Draping & Positioning                              | Field draping and safe positioning/padding                             | General Surgery — D1–R5 (Ortho focus D1–R6)    |
| Transferring the Patient                           | Safe transfer & handover to/from OR/PACU                               | Surgical Inpatient — D1–R4 / PACU — D1–R11     |
| Use of the Operating Room Care Plan                | OR care plan for setup, counts, implants, specimens, and post-op needs | Orientation (CSSD/OR) — D1–R1                  |
| Specific Teaching Related to the Patient's Surgery | Discharge teaching & safety-netting for recovery                       | Surgical Inpatient — D1–R4 (+ PACU — D1–R11)   |
| Adequate Instrumentation                           | Verify instruments/implants vs. preference card; proactive substitutes | Orthopedic — D1–R6 / Orientation — D1–R1       |

| (Core)                                       | Name in Curriculum Mapping                                  | (Rotation / Year)                                    |
|----------------------------------------------|-------------------------------------------------------------|------------------------------------------------------|
| Use Special Supplies/Equipment               | Device/consumable readiness; ESU/warming checks             | Orientation — D1–R1 / General Surgery — D1–R5        |
| Dressing of All Wounds                       | Post-op dressings and drain care with escalation            | Surgical Inpatient — D1–R4 / Plastic & Burn — D1–R11 |
| Sterilization & Asepsis                      | Aseptic flow, indicators, packaging, and transport          | Orientation (CSSD/OR) — D1–R1                        |
| Microbiology & Environment                   | Traffic control, environmental controls, specimen integrity | Orientation (CSSD/OR) — D1–R1                        |
| Preparation of Supplies & Instruments        | Prepare sets per case list and surgeon preference           | Orientation (CSSD/OR) — D1–R1                        |
| Working Knowledge of Disposable Packs        | Use disposable packs correctly to maintain sterility        | Orientation (CSSD/OR) — D1–R1                        |
| Disposable Gowns/Paper Wrappers (Handling)   | Proper handling of wrappers and gowns without contamination | Orientation (CSSD/OR) — D1–R1                        |
| Proper Handling of Specimen                  | Labeling, fixation, endorsing; chain-of-custody             | All OR rotations — baseline in D1–R1                 |
| Handling of the Electrosurgical Unit (ESU)   | ESU safety checks and documentation                         | Orientation — D1–R1 / General Surgery — D1–R5        |
| Use of Equipment                             | Routine device checks, readiness, and troubleshooting       | Orientation — D1–R1 / General Surgery — D1–R5        |
| Surgical Table Operation & Positioning       | Table controls: pressure-area protection                    | General Surgery — D1–R5 / Ortho — D1–R6              |
| Patient Safety Surgery Verification          | WHO time-out, counts, and antibiotic timing                 | General Surgery — D1–R5 / Orientation — D1–R1        |
| Principles of Laparoscopic & Robotic Surgery | Laparoscopic workflows, ports, and towers (exposure)        | General Surgery — D1–R5                              |



| (Core)                                          | Name in Curriculum Mapping                                   | (Rotation / Year)                       |
|-------------------------------------------------|--------------------------------------------------------------|-----------------------------------------|
| PT ID                                           | Two-identifier verification and consent checks               | Pre-Anesthesia Clinic — D2–R3           |
| PT ASSESSMENT (Perio checklist)                 | Full pre-anesthesia assessment and peri-operative checklist  | Pre-Anesthesia Clinic — D2–R3           |
| Availability of Surgical Supplies               | Tray completeness against preference cards                   | All OR rotations in D2 (baseline D1–R1) |
| Availability of Medical Equipment               | Equipment readiness and backup planning                      | All OR rotations in D2 (baseline D1–R1) |
| Functionality of All Surgical Equipment         | Function tests and safety checks before incision             | All OR rotations in D2                  |
| Assist As Scrub & Circulating — General Surgery | Scrub/circulate across GS cases per schedule                 | General Surgery — D2 (case-dependent)   |
| Assist — Orthopedic / Sports Surgery            | Arthroscopy towers/pumps; implant verification               | Orthopedic Sports Surgery — D2–R7       |
| Assist — Urology Surgery                        | Endoscopic tower/irrigation; catheter/drain workflows        | Urology — D2 (case-dependent)           |
| Assist — Bariatric / Colorectal / Endocrine     | Within GS lists (laparoscopy, specimen handling)             | General Surgery — D2 (case-dependent)   |
| Assist — ENT Surgery                            | Airway readiness; micro-field counts                         | ENT — D2 (case-dependent)               |
| Assist — Thoracic / Cardiothoracic              | CABG/valves readiness; chest drains; lines & pacing (assist) | Cardiothoracic — D2–R11                 |
| Assist — Vascular / Endovascular                | Hybrid workflows; anticoagulation; radiation/contrast safety | Vascular (Hybrid) — D2–R12              |
| Assist — Plastic / Plastic Burn                 | Grafts/flaps; burn dressings and infection control           | Plastic & Burn — D2–R6                  |

| (Core)                                             | Name in Curriculum Mapping                                     | (Rotation / Year)                                     |
|----------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------|
| Assist — Neurosurgery                              | Cranial/spine sets; neuromonitoring; specimen chain-of-custody | Neurosurgery — D2–R9                                  |
| Assist — Ophthalmology                             | Microsurgical setup; eye prep; specimen handling               | Ophthalmology — D2 (case-dependent)                   |
| Assist — Pediatric Surgery                         | Pediatric airway; dosing; warming; family education            | Pediatric Surgery — D2–R5                             |
| Assist — OMF Surgery                               | Trauma/tumor; airway readiness; specimen orientation           | OMF — D2–R10                                          |
| Assist — Ob & Gynecology                           | Cesarean laparotomy; hemorrhage readiness; APGAR handover      | Gynae & Obstetrics — D2–R1                            |
| Laparoscopic & Robotic Surgery (Advanced Exposure) | Laparoscopic towers/ports; case-dependent robotic exposure     | GS/CT/Vascular — D2 (case-dependent)                  |
| Specimen handling — Labeling                       | Accurate labeling with full identifiers                        | All OR rotations — emphasized in D2–R1/R9/R10/R10/R12 |
| Specimen Handling — Fixation                       | Correct fixative/volume and documentation                      | All OR rotations — emphasized in D2–R1/R10            |
| Specimen Handling — Endorsing                      | Chain-of-custody and timely transport                          | All OR rotations                                      |
| PACU — Oropharyngeal Airway                        | OPA readiness and safe insertion                               | PACU — D2–R13                                         |
| PACU — Oxygen Therapy                              | Titrated oxygen delivery and monitoring                        | PACU — D2– R13                                        |
| PACU — CPAP                                        | CPAP setup and tolerance checks                                | PACU — D2– R13                                        |
| PACU — Tracheostomy Care                           | Readiness and routine care steps                               | PACU — D2– R13                                        |
| PACU — Endotracheal Intubation                     | Assist ETI and confirm placement with the team                 | PACU — D2– R13                                        |





| (Core)                                           | Name in Curriculum Mapping                                   | (Rotation / Year)                             |
|--------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------|
| PACU — Nebulization                              | Nebulizer setup and assessment of response                   | PACU — D2– R13                                |
| PACU — Neurological Assessment                   | Neuro status and sedation scoring                            | PACU — D2– R13                                |
| PACU — Vital Signs                               | Hemodynamic/respiratory monitoring and escalation            | PACU — D2– R13                                |
| PACU — Pain Assessment                           | Use of pain scores and analgesia coordination                | PACU — D2– R13                                |
| PACU — Dressing & Drain Care                     | Immediate post-op dressing/drain checks                      | PACU — D2– R13 (+ D2–R4)                      |
| PACU — Medication Administration                 | Safe med prep/administration under policy                    | PACU — D2– R13                                |
| PACU — IV Fluid Administration                   | Fluids per plan with I&O tracking                            | PACU — D2– R13 (+ D2–R3)                      |
| PACU — Blood & Blood Product Administration      | Transfusion safety: verification, monitoring & documentation | PACU — D2– R13                                |
| Admission & Discharge of Critically Ill Patients | Structured PACU admission and safe discharge                 | PACU — D2– R13 (+ Surgical Inpatient — D2–R4) |
| Gastric Lavage                                   | Gastric lavage per protocol when indicated                   | Surgical Inpatient — D2–R4                    |
| Setting of Ventilators                           | Ventilator setup/alarms during handover                      | PACU — D2– R13 (+ CT — D2– R11)               |
| Neonate Assessment (Risk, APGAR)                 | APGAR at 1 & 5 min; coordinate with neonatology              | Gynae & Obstetrics — D2–R1                    |

| (Core)                                                                                     | Name in Curriculum Mapping                                | (Rotation / Year)                                                 |
|--------------------------------------------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------|
| Thermoregulation / Hypothermia Machines                                                    | Active warming and monitoring (age/procedure-appropriate) | G&O — D2-R1 / Pediatric — D2-R5 / Plastic — D2-R6 / PACU — D2-R12 |
| Infection Prevention (Hand Washing, Disinfection, Sterilization, Surveillance, Fumigation) | Strict asepsis and environmental controls                 | Baseline D1-R1; applied daily in all D2 ORs                       |
| Burns (Assessment, Fluids Crystalloid/Colloid)                                             | Burn assessment and fluid calculation per formulas        | Plastic & Burn — D2-R6                                            |
| Maintenance of the Intake & Output Chart                                                   | Accurate I&O documentation with escalation triggers       | Surgical Inpatient — D2-R4                                        |

## Research Rotation FOR D1/D2 (Rotation 2 for D1 – Rotation 1 for D2)

The following is for illustrative purposes only. Additional details of frequency, levels, and years must be clearly outlined and aligned with the mapping.

The official research components of the Perioperative Nursing Care Diploma program are as follows: It is adapted to perioperative (OR) nursing practice and aligned with program mapping and SCFHS competencies. Programs must specify the frequencies, levels (D1/D2), and assessments in their local mapping.

### 2.2.6 RESEARCH ROTATION

| Number of rotations | First year | Second year |
|---------------------|------------|-------------|
|                     | 1 WEEK     | 1 WEEK      |

## MEDICAL EXPERT

### Goals

- Demonstrate an understanding of basic research design, methodology, data analysis, and clinical epidemiology with applications to perioperative nursing (OR workflow, PACU outcomes, infection prevention, and patient safety).
- Describe ethical requirements (IRB/REC), data privacy, and responsible use of informed consent in the research.
- Draft a research question, protocol, and data collection plan; perform analysis; and interpret and discuss the results.
- Use medical informatics (EHR, OR information systems, and adverse-event databases) is used to identify topics and retrieve evidence.
- Deliver clear scientific presentations (poster/oral) and contribute to scholarly discussions.

## Training Methods

- A designated one-month research rotation in D2 (or distributed protected time equivalent).
- D1: Foundational workshops on research methods, biostatistics, critical appraisal, and journal clubs (EBP).
- Completion of GCP/Research Ethics modules prior to data collection.
- Assignment of a research supervisor; scheduled progress meetings (at least monthly) with documented minutes.
- Proposal and IRB/REC submission: Proposal completed by the end of the first six months of enrollment (D1).
- Abstract presentation: Specialty Research Day (end: D2 prior to final examinations).
- Manuscript submissions to indexed journals are encouraged, and presentations at national and international meetings are desirable.

## Suggested Perioperative Research & QI Themes

- Operating room efficiency (turnover time, first case start, delays, and cancellations).
- Infection prevention and asepsis (SSI bundle, WHO checklist adherence, and counts/RSI prevention).
- Medication safety in the OR/PACU (opioid stewardship, high-alert medications, labeling).
- Crisis resource management (malignant hyperthermia, massive transfusion, anaphylaxis).
- Specimen management (chain of custody, labeling accuracy, and transport time).
- Patient positioning and nerve injury prevention; pressure injury prevention in long cases.
- PACU outcomes (pain control, PONV, airway events, and compliance with discharge criteria).



- Robotic/laparoscopic to open conversion workflows; device/ESU safety.
- Burns and pediatric perioperative pathways (warming, fluids, and family-centered care).

### Timeline & Deliverables

| Timeline            | Milestone                   | Deliverables                                                                    |
|---------------------|-----------------------------|---------------------------------------------------------------------------------|
| D1 — Month 1–3      | Orientation & Topic Scoping | Supervisor assigned; 1-page concept note; complete GCP/Ethics modules.          |
| D1 — Month 4–6      | Protocol & IRB/REC          | Full proposal (background, methods, data tools); IRB/REC submission/approval.   |
| D2 — Research Month | Data Collection & Analysis  | Data collection, cleaning; preliminary analysis; mid-rotation progress log.     |
| D2 — Late Year      | Dissemination               | Abstract/poster; oral presentation in Research Day; draft manuscript submitted. |

### Evaluation

- Attendance and completion of designated workshops contributed to the annual academic score (D1).
- Panel scoring of the abstract/poster/oral presentation during Specialty Research Day contributes to the D2 rotation grade.
- Proposal/protocol quality, IRB/REC approval, data integrity, the appropriateness of the analysis, and the timeliness of progress are assessed.
- Professional conduct (ethics, authorship, conflicts of interest, disclosure, and data protection) is mandatory.



## Assessment Methods & Suggested Weighting

| Assessment Tool                       | Description                                            | Suggested Weight |
|---------------------------------------|--------------------------------------------------------|------------------|
| Proposal & IRB/REC Approval           | Protocol clarity, feasibility, ethics compliance (D1). | 15%              |
| ePortfolio & Progress Logs            | Scheduled meeting minutes, milestones, reflections.    | 15%              |
| Data Quality & Analysis               | Data completeness, accuracy, appropriate methods.      | 20%              |
| Abstract / Poster / Oral              | Clarity, scientific merit, impact, Q&A handling.       | 25%              |
| Manuscript Draft / Scholarship Output | Structure, adherence to journal/authorship norms.      | 15%              |
| Professionalism & Compliance          | Authorship, COI, data privacy; attendance.             | 10%              |

## CanMEDS-aligned Expectations

### COMMUNICATOR

- Communicate the study rationale and methods to supervisors and peers to produce clear posters/abstracts/manuscripts.
- Engage in constructive feedback cycles; maintain transparent communication with the team.

### COLLABORATOR

- Consult statistics/biostatistics, informatics, and infection prevention teams as needed.
- Coordinates with OR nursing leadership, anesthesia, and surgical services to enable data collection.

## LEADER

- Define a realistic research scope and timelines; allocate time efficiently.
- Use institutional resources (libraries, data offices) cost-effectively.

## HEALTH ADVOCATE

- Link research outcomes to improvements in patient safety, quality, and perioperative experience.

## SCHOLAR

- Pose answerable questions; select suitable study designs; collect and analyze data appropriately.
- Identify limitations; propose future directions; disseminate results to improve practice.

## PROFESSIONAL

- Adhere to IRB/REC and data-protection policies; maintain meticulous records.
- Assign authorship appropriately; disclose conflicts of interest; meet deadlines.

### Pass Criteria & Remediation

To pass, the following are required: IRB/REC approval, completion of ethics e-learning modules, delivery of an abstract/poster, or oral presentation, acceptable data or analysis, ePortfolio logs, and professional conduct. Failure to meet any element triggers a remediation plan (targeted methods workshop, additional Mini-CEX on presentation skills, and revised deadline) approved by the program director.

### D1–D2 Research Project Distribution

Trainees are required to complete one longitudinal research project over the course of the two-year diploma.





## First year (D1)

- Planning: Engage in critical thinking around perioperative clinical questions and review the literature, available data, and resources.
- Define the study: Finalize the research question/hypothesis and select the methodology/study design.
- Protocol & approval: Write the proposal and obtain IRB/REC approval.
- Suggested timing: Months 1–3 (scoping) and Months 4–6 (protocol and IRB submission/approval).

## Second year (D2)

- Implementation: Start the project, collect data, and present interim progress at unit and research day meetings.
- Completion: Conclude data collection and close the study processes.
- Analysis: Clean and analyze data; interpret results.
- Manuscript: Complete writing and provide evidence of submission to a peer-reviewed journal  $\geq 3$  months before final exams.
- Dissemination: Deliver oral/poster presentations; aim for publication.

## Year 1 (D1)

### Rotation 1 – Orientation (CSSD / OR)

#### Introduction

This rotation oriented the trainees toward OR systems and sterile processing. Trainees gain knowledge and practical experience in OR zoning, aseptic principles, surgical counts, and retained surgical item (RSI) prevention, instrument handling and flow, sterilization techniques, and traceability from the Central Sterile Supply Department (CSSD) to the OR.

| Role | Enabling Competencies | Application of Competency |
|------|-----------------------|---------------------------|
|------|-----------------------|---------------------------|

|                 |                                                                                           |                                                                                               |
|-----------------|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Medical Expert  | Map OR zones and sterile fields; perform safe counts; verify indicators across CSSD flow. | Reduces retained-surgical-item risk and contamination, ensuring safe instrument availability. |
| Communicator    | Explain time-out elements and specimen chain-of-custody to team members.                  | Promotes shared mental model and traceable documentation.                                     |
| Collaborator    | Coordinate with CSSD on tray completeness, rapid re-processing, and device recalls.       | Prevents delays and supports safe turnover.                                                   |
| Health Advocate | Apply SSI bundle, hand hygiene, and traffic control policies.                             | Prevents infection and protects patients/staff.                                               |
| Leader          | Lead brief/debrief to surface hazards and assign roles in count discrepancies.            | Improves reliability and rapid resolution of safety threats.                                  |
| Scholar         | Use current sterilization standards and indicator interpretation; reflect on near-misses. | Aligns practice with evidence and continuous improvement.                                     |
| Professional    | Maintain confidentiality with specimens and photos; ensure accurate logs.                 | Upholds ethics and legal requirements.                                                        |

**Duration:** 2 weeks

**Setting:** OR, CSSD

**Educational Activities:** • Walkthroughs: OR layout, CSSD processes, and traceability • Workshops: asepsis, gowns/gloves, draping, packaging/indicators • Simulation: WHO checklist, counts/RSI scenarios • CBD/AHD: infection prevention and incident reporting

**Assessment Tools:** • Skills checklist/return demo • DOPS • Mini-CEX • ePortfolio



## Rotation 2 – Research Refer to the (page 31 -35)

## Rotation 3 – Pre-Anesthesia Clinic

### Introduction

Early exposure to preoperative safety practices focusing on patient identification (two identifiers), a peri-anesthesia checklist, basic airway screening, and medication reconciliation with clear patient communication.

| Role            | Enabling Competencies                                                      | Application of Competency                              |
|-----------------|----------------------------------------------------------------------------|--------------------------------------------------------|
| Medical Expert  | Conduct focused pre-anesthesia assessment (history, exam, ASA/Mallampati). | Supports safe anesthesia planning and optimization.    |
| Communicator    | Explain procedure risks/benefits; confirm consent in plain language.       | Ensures informed decisions and reduces anxiety.        |
| Collaborator    | Coordinate with anesthesia and surgery for high-risk optimization.         | Aligns perioperative plans and prevents cancellations. |
| Health Advocate | Reinforce NPO, medication adjustments, and smoking cessation.              | Reduces aspiration risk and complications.             |
| Leader          | Manage clinic flow and triage to escalate when criteria are met.           | Improves throughput and safety.                        |
| Scholar         | Apply perioperative guidelines to comorbidities and risk scores.           | Improves outcomes through evidence-based decisions.    |
| Professional    | Verify patient identity (two identifiers) and protect privacy.             | Upholds ethical and legal standards.                   |

**Duration:** 1 week

**Setting:** OPD

**Educational Activities:** • Practice pre-anesthesia checklist; ID policy • Role-play: consent in plain language • Bedside: focused history & exam; medication review • CBD: basic risk stratification and optimization

**Assessment Tools:** • Mini-CEX • DOPS • CBD • ePortfolio

## Rotation 4 – Surgical Inpatient

### Introduction

Foundations of perioperative ward care: wound/drain care, analgesia, mobilization, sepsis recognition, and discharge teaching with emphasis on safe handovers and documentation accuracy.

| Role            | Enabling Competencies                                           | Application of Competency                               |
|-----------------|-----------------------------------------------------------------|---------------------------------------------------------|
| Medical Expert  | Assess vitals/EWS, wound & drains, analgesia, and fluids (I&O). | Supports early detection of deterioration and recovery. |
| Communicator    | Provide discharge teaching and safety-net advice.               | Improves adherence and reduces readmissions.            |
| Collaborator    | Coordinate with physiotherapy, pharmacy, and dietetics.         | Ensures holistic perioperative recovery.                |
| Health Advocate | Follow infection prevention, mobilization, and VTE basics.      | Prevents complications and promotes function.           |
| Leader          | Organize ward tasks and safe handovers using structured tools.  | Improves continuity and patient safety.                 |
| Scholar         | Use protocols for wound care, analgesia, and IV therapy.        | Aligns care with standards and documentation.           |
| Professional    | Document accurately and maintain privacy.                       | Meets legal and quality requirements.                   |

**Duration:** 2 weeks

**Setting:** Inpatient Unit

**Educational Activities:** • Bedside: dressings/drains; analgesia checks; I&O charts • Role-play: discharge education & safety-netting • CBD:



wound/analgesia/mobilization cases • AHD: documentation standards & escalation

**Assessment Tools:** • Mini-CEX • DOPS • CBD • ePortfolio

## Rotation 5 – General Surgery

### Introduction

Core general OR exposure. Trainees function as scrubs/circulators under supervision, set up trays and trolleys, perform skin preparation, draping, safe positioning, and specimen handling, and learn ESU/device checks.

| Role            | Enabling Competencies                                                                          | Application of Competency                               |
|-----------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Medical Expert  | Scrub/circulate under supervision; prepare trays, skin prep, draping, positioning; ESU checks. | Enables safe intraoperative flow and tissue protection. |
| Communicator    | Anticipate surgeon needs; confirm counts and specimen details aloud.                           | Enhances efficiency and patient safety.                 |
| Collaborator    | Work with anesthesia/CSSD to maintain readiness and sterility.                                 | Prevents delays and contamination.                      |
| Health Advocate | Apply SSI bundle, warming, and pressure-area prevention.                                       | Reduces complications and improves outcomes.            |
| Leader          | Lead/participate in brief/debrief; assign roles during crises.                                 | Builds team reliability and response.                   |
| Scholar         | Use current GS protocols and instrument lists; reflect on feedback.                            | Drives consistent, evidence-based practice.             |
| Professional    | Complete documentation and chain-of-custody for specimens.                                     | Upholds standards and traceability.                     |

**Duration:** 8 weeks

**Setting:** Main OR GS room

**Educational Activities:** • Intraoperative participation across major/minor GS cases • Workshops: tray setup; ESU checks; draping/positioning • Simulation: counts/RSI event; bleeding escalation • CBD/AHD: antibiotic timing; SSI prevention

**Assessment Tools:** • Mini-CEX • DOPS • OSCE station(s) • CBD • ePortfolio



## Rotation 6 – Orthopedic Surgery

### Introduction

Intro to ortho OR: positioning safety, tourniquet use, fracture/arthroscopy trays, implant/consumable checks, and safety counts.

| Role            | Enabling Competencies                                                                 | Application of Competency                              |
|-----------------|---------------------------------------------------------------------------------------|--------------------------------------------------------|
| Medical Expert  | Positioning/padding, tourniquet basics, arthroscopy/fracture sets, implant readiness. | Protects nerves/skin and ensures implant availability. |
| Communicator    | Explain positioning and restrictions to patients/families.                            | Improves adherence and safety.                         |
| Collaborator    | Coordinate with reps/CSSD for implants and sterile trays.                             | Prevents intraoperative delays.                        |
| Health Advocate | Apply warming/VTE prophylaxis basics and pressure care.                               | Reduces complications in long cases.                   |
| Leader          | Confirm time-out and equipment checks; escalate issues early.                         | Maintains safe workflow under pressure.                |
| Scholar         | Use current ortho positioning and tourniquet guidelines.                              | Ensures safe, evidence-based technique.                |
| Professional    | Record implant data and counts accurately.                                            | Ensures traceability and quality.                      |

**Duration:** 4 weeks

**Setting:** Main OR Ortho room

**Educational Activities:** • Workshops: positioning and tourniquet, tray setup • Shadowing: arthroscopy/ORIF preparation • Simulation: retained item scenarios • CBD/AHD: VTE and antibiotics basics

**Assessment Tools:** • Skills checklist • Mini-CEX • DOPS • ePortfolio

## Rotation 7 – Neurosurgery

### Introduction

Early exposure to neurosurgery OR: microscope/drill checks, pins/frames positioning (supervised), specimen workflows, and safe handovers.

| Role            | Enabling Competencies                                                                      | Application of Competency                      |
|-----------------|--------------------------------------------------------------------------------------------|------------------------------------------------|
| Medical Expert  | Perform microscope/drill checks; pins/frames positioning (supervised); specimen workflows. | Prevents device failure and protects patients. |
| Communicator    | Use closed-loop communication during crises and handovers.                                 | Improves team clarity and safety.              |
| Collaborator    | Align with anesthesia/ICU for neuro monitoring and transfer.                               | Ensures continuity in high-risk cases.         |
| Health Advocate | Pressure-area protection and temperature management.                                       | Prevents injury in long neurosurgical cases.   |
| Leader          | Assign roles for emergencies; confirm count strategy in micro-fields.                      | Elevates crisis preparedness.                  |
| Scholar         | Apply neurosurgical setup checklists; reflect on near-misses.                              | Strengthens reliability and learning.          |
| Professional    | Maintain confidentiality and precise documentation.                                        | Meets ethical and legal duties.                |

**Duration** :3 weeks

**Setting**: Main OR Neurosurgery room

**Educational Activities**: • Shadowing: cranial/spine setup • Workshop: frames/pins, microscope and drill checks • Simulation: crisis communication/role clarity • CBD/AHD: neurosurgery basics, ICP awareness

**Assessment Tools**: • Skills checklist • Mini-CEX • DOPS • ePortfolio





## Rotation 8 – ENT Surgery

### Introduction

Introduction to otolaryngology OR: airway surgery preparation, bleeding control readiness, tracheostomy set awareness, and specimen orientation.

| Role            | Enabling Competencies                                                                    | Application of Competency                 |
|-----------------|------------------------------------------------------------------------------------------|-------------------------------------------|
| Medical Expert  | Prepare airway/tracheostomy sets; manage suction/bleeding readiness; micro-field counts. | Mitigates airway risk and retained items. |
| Communicator    | Reassure patient/family and align expectations for ENT day-case.                         | Improves experience and consent.          |
| Collaborator    | Work with anesthesia on airway plans and suction strategies.                             | Prevents complications and delays.        |
| Health Advocate | Apply infection control and aspiration-risk reduction.                                   | Protects patients in airway procedures.   |
| Leader          | Coordinate time-out and debrief for small-field surgery.                                 | Drives precision and safety.              |
| Scholar         | Adhere to ENT protocols for packing, hemostasis, and specimen handling.                  | Ensures evidence-based care.              |
| Professional    | Document specimens and counts accurately.                                                | Maintains traceability and standards.     |

**Duration:** 3 weeks

**Setting:** Main OR ENT room

**Educational Activities:** • Workshops: tracheostomy and airway adjuncts; specimen orientation • Simulation: airway bleed/aspiration scenarios • Intraoperative participation (ENT day-case and major cases) • CBD/AHD: prophylaxis; airway safety

**Assessment Tools:** • Skills checklist • Mini-CEX • DOPS • ePortfolio

## Rotation 9 – Ophthalmology Surgery

### Introduction

Microsurgical setup awareness, eye preparation/positioning, and consent communication for ophthalmic procedures in the OR room

| Role            | Enabling Competencies                                                         | Application of Competency                 |
|-----------------|-------------------------------------------------------------------------------|-------------------------------------------|
| Medical Expert  | Set up microsurgical instruments; eye prep/draping; specimen/biopsy handling. | Prevents contamination and tissue damage. |
| Communicator    | Explain procedure flow and reassure anxious patients.                         | Improves cooperation and safety.          |
| Collaborator    | Coordinate with anesthesia for sedation and positioning.                      | Prevents intraoperative movement risks.   |
| Health Advocate | Maintain normothermia and protect pressure areas.                             | Promotes safe recovery.                   |
| Leader          | Verify time-out tailored to eye surgery; confirm micro-count plan.            | Reduces retained items in micro-fields.   |
| Scholar         | Apply ophthalmic prep standards; reflect on outcomes.                         | Assures consistent high-quality prep.     |
| Professional    | Maintain meticulous documentation and privacy.                                | Upholds professional standards.           |

**Duration:** 2 weeks

**Setting:** Main OR Ophthalmology room

**Educational Activities:** • Workshops: micro-instrument handling; draping for ophthalmology • Shadowing: cataract/retina flows • Simulation: microscope fault & conversion • CBD/AHD: prophylaxis; eye prep standards

**Assessment Tools:** • Skills checklist • Mini-CEX • DOPS • ePortfolio



## Rotation 10 – Urology Surgery

### Introduction

Exposure to cystoscopy/TURP sets, irrigation safety, and stone/endoscopic workflows, with emphasis on specimen handling and infection prevention.

| Role            | Enabling Competencies                                                                     | Application of Competency                |
|-----------------|-------------------------------------------------------------------------------------------|------------------------------------------|
| Medical Expert  | Prepare cystoscopy/TURP sets; irrigation safety; endoscopic workflows; specimen labeling. | Reduces bleeding/obstruction and errors. |
| Communicator    | Explain catheter/drain care and expectations.                                             | Improves adherence and comfort.          |
| Collaborator    | Coordinate with CSSD and anesthesia on endoscopic towers.                                 | Ensures smooth equipment flow.           |
| Health Advocate | Apply infection prevention and antibiotic timing.                                         | Reduces SSI and urosepsis.               |
| Leader          | Confirm time-out; escalate when irrigation issues arise.                                  | Prevents complications and delays.       |
| Scholar         | Adhere to urology setup checklists; review outcomes.                                      | Ensures reliable, evidence-based prep.   |
| Professional    | Maintain documentation and chain-of-custody.                                              | Meets legal and quality standards.       |

**Duration:** 3 weeks

**Setting:** Main OR Urology surgery room

**Educational Activities:** • Intraoperative participation (endoscopic and open urology) • Workshops: endoscopic towers; irrigation safety; trays • Simulation: bleeding/obstruction scenarios • CBD/AHD: prophylaxis; catheter policies

**Assessment Tools:** • Skills checklist • Mini-CEX • DOPS • ePortfolio

## Rotation 11 – PACU Fundamentals

### Introduction

Immediate post-anesthesia care fundamentals: airway support, monitoring, pain management, transfusion vigilance, and discharge criteria.

| Role            | Enabling Competencies                                                                                                        | Application of Competency                             |
|-----------------|------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| Medical Expert  | Support airway (OPA/NPA/LMA), oxygen therapy, nebulization; monitor vitals & neuro status; pain scoring; discharge criteria. | Prevents respiratory and hemodynamic compromise.      |
| Communicator    | Reassure patients emerging from anesthesia; provide clear updates.                                                           | Reduces anxiety and improves cooperation.             |
| Collaborator    | Work with anesthesia and surgery for escalation and handover.                                                                | Maintains continuity of safe care.                    |
| Health Advocate | Apply warming & pressure care; transfusion vigilance.                                                                        | Prevents hypothermia, pressure injury, and reactions. |
| Leader          | Coordinate response to deterioration and mock codes.                                                                         | Builds team readiness in emergencies.                 |
| Scholar         | Adhere to PACU protocols and sedation scales.                                                                                | Drives standardization and safety.                    |
| Professional    | Document accurately and adhere to discharge criteria.                                                                        | Ensures safe transitions and accountability.          |

**Duration:** 4 weeks

**Setting:** Main PACU

**Educational Activities:** • Bedside: airway support; pain/sedation scoring; drain/dressing checks • Mock code (awareness); transfusion reaction drill • CBD: discharge criteria and escalation • AHD/eLearning: PACU protocols; medication safety

**Assessment Tools:** • Mini-CEX • DOPS • OSCE station(s) • ePortfolio

## Rotation 12 – Plastic & Burn Surgery

### Introduction

Foundations of burn care and plastic surgery: Dressing and fluid calculation basics, graft handling, ESU/device safety, and respectful communication with patients/families.

| Role            | Enabling Competencies                                                                                    | Application of Competency               |
|-----------------|----------------------------------------------------------------------------------------------------------|-----------------------------------------|
| Medical Expert  | Perform burn assessment; assist with dressings; prepare graft/harvest sets; device (ESU/warming) checks. | Enables safe burn and graft care in OR. |
| Communicator    | Explain dressing plans and expectations to patients/families.                                            | Builds trust and adherence.             |
| Collaborator    | Coordinate with anesthesia and wound teams for timing and support.                                       | Optimizes care for complex wounds.      |
| Health Advocate | Apply infection prevention and fluid/warming strategies.                                                 | Reduces complications in burns.         |
| Leader          | Confirm time-out; assign roles in long cases.                                                            | Maintains safety and efficiency.        |
| Scholar         | Use burn formulas and graft protocols.                                                                   | Aligns care with evidence.              |
| Professional    | Maintain confidentiality for photos/specimens.                                                           | Upholds dignity and legal standards.    |

**Duration:** 4 weeks

**Setting:** Main OR GS room

**Educational Activities:** • Workshops: dressings, ESU checks, warming systems  
• Shadowing: graft/harvest preparation • Simulation: initial burn resuscitation (awareness) • CBD/AHD: infection prevention in burns

**Assessment Tools:** • Skills checklist • Mini-CEX • DOPS • ePortfolio

## Year 2 (D2)

### Rotation 1 – Research Refer to the (page 31 -35)

### Rotation 2 – Gynecology & Obstetrics

#### Introduction

Perioperative nursing for obstetric and gynecological procedures (e.g., cesarean section, hysterectomy, and laparoscopic gynecology). Anticipate uterotonics and emergency pathways; lead time-out/consent and family updates.

| Role            | Enabling Competencies                                                                                                          | Application of Competency                        |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| Medical Expert  | Prepare cesarean and gynecologic laparoscopic sets; manage uterotonics; ensure hemorrhage kits and rapid transfusion pathways. | Reduces PPH risk and supports timely escalation. |
| Communicator    | Discuss procedures and post-operative expectations with patients and families.                                                 | Builds trust and informed consent.               |
| Collaborator    | Work with anesthesia and neonatal teams for safe peripartum care.                                                              | Ensures coordinated responses to complications.  |
| Health Advocate | Protect privacy/dignity and follow antibiotic/VTE prophylaxis.                                                                 | Prevents harm and preserves dignity.             |
| Leader          | Lead time-out and organize resources during emergencies (PPH, eclampsia).                                                      | Improves team performance in crises.             |
| Scholar         | Apply current obstetric/gynecologic safety bundles.                                                                            | Aligns care with evidence.                       |
| Professional    | Maintain accurate specimen labeling and documentation.                                                                         | Upholds legal and ethical standards.             |

**Duration:** 2 weeks

**Setting:** MCH **Educational Activities:** • Practice obstetric time-out and cesarean setup • Simulation: PPH/MTP; eclampsia; neonatal handover • Workshops:



uterotonics; lithotomy safety; specimen handling • CBD/AHD: antibiotic timing;  
VTE prophylaxis **Assessment Tools:** • Mini-CEX • DOPS • OSCE/Simulation •  
CBD • ePortfolio

## Rotation 3 – Pre-Anesthesia Clinic

### Introduction

Advanced pre-anesthesia assessment with shared decision-making and structured risk optimization.

| Role            | Enabling Competencies                                                                  | Application of Competency                 |
|-----------------|----------------------------------------------------------------------------------------|-------------------------------------------|
| Medical Expert  | Perform comprehensive risk assessment, airway evaluation, and medication optimization. | Improves anesthesia safety and readiness. |
| Communicator    | Explain risks, benefits, and alternatives and obtain informed consent.                 | Ensures shared decisions.                 |
| Collaborator    | Coordinate referrals for high-risk patients and optimization plans.                    | Prevents cancellations and harm.          |
| Health Advocate | Reinforce NPO, glycemic control, and smoking cessation.                                | Reduces perioperative complications.      |
| Leader          | Streamline clinic flow and triage promptly.                                            | Enhances efficiency and patient safety.   |
| Scholar         | Use evidence-based perioperative guidelines and scores.                                | Supports consistent decision-making.      |
| Professional    | Verify identity and maintain confidentiality.                                          | Meets ethical and legal duties.           |

**Duration:** 2 weeks

**Setting:** OPD

**Educational Activities:** • Checklist practice, ID policy enforcement • Simulation: airway evaluation and consent • Bedside: H&P, medication reconciliation • CBD: risk stratification and optimization

**Assessment Tools:** • Mini-CEX • DOPS • CBD • ePortfolio





## Rotation 4 – Surgical Inpatient

### Introduction

Ward-based perioperative care with emphasis on drains/dressings, analgesia, deterioration recognition, and discharge education.

| Role            | Enabling Competencies                                                                                                                                                                                | Application of Competency                                                                               |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| Medical Expert  | Manage complex dressings, drains, analgesia, escalation for deterioration, and perform/assist with gastric lavage according to protocol (including NG placement confirmation and output monitoring). | Prevents complications, enables timely stabilization, and supports definitive endoscopic/surgical care. |
| Communicator    | Provide structured discharge planning and safety-net advice; explain gastric lavage indications/steps to patients/families when appropriate.                                                         | Improves understanding, consent, and adherence.                                                         |
| Collaborator    | Coordinate with surgery, gastroenterology, anesthesia, and endoscopy services for timely intervention and monitoring.                                                                                | Ensures seamless care and safe transitions.                                                             |
| Health Advocate | Apply infection prevention and aspiration-risk mitigation during and after lavage; monitor electrolyte/volume status.                                                                                | Reduces procedure-related harm and supports recovery.                                                   |
| Leader          | Standardize handovers using escalation tools; assign roles during urgent GI-bleed responses.                                                                                                         | Improves team coordination under pressure.                                                              |
| Scholar         | Adhere to institutional protocols for NG insertion and gastric lavage; reflect on outcomes to refine practice.                                                                                       | Builds reliable, evidence-based performance.                                                            |
| Professional    | Document procedure details, outputs, and patient response accurately while protecting privacy.                                                                                                       | Meets ethical, legal, and quality standards.                                                            |

**Duration:** 2 weeks

**Setting:** Inpatient Unit

**Educational Activities:** • Bedside: dressings, drips and drains • Role-play: discharge teaching and safety-netting • CBD: sepsis/analgesia/mobilization cases • AHD: documentation and escalation

**Assessment Tools:** • Mini-CEX • DOPS • CBD • ePortfolio

## Rotation 5 – Pediatric Surgery

### Introduction

Family-centered care with pediatric airway readiness, normothermia, safe positioning, weight-based dosing, and clear family communication.

| Role            | Enabling Competencies                                                                                    | Application of Competency               |
|-----------------|----------------------------------------------------------------------------------------------------------|-----------------------------------------|
| Medical Expert  | Prepare pediatric sets; maintain normothermia; manage pediatric airway readiness; dose/fluids by weight. | Prevents hypothermia and dosing errors. |
| Communicator    | Educate families with clear expectations and safety-netting.                                             | Builds trust and adherence.             |
| Collaborator    | Coordinate with anesthesia and PACU for pediatric transfers.                                             | Ensures continuity and safety.          |
| Health Advocate | Protect pressure areas and maintain privacy/dignity.                                                     | Prevents injury and distress.           |
| Leader          | Lead time-out adapted to pediatrics and assign roles in emergencies.                                     | Improves team reliability.              |
| Scholar         | Apply pediatric perioperative guidelines.                                                                | Aligns care with evidence.              |
| Professional    | Document meticulously and maintain confidentiality.                                                      | Upholds professional standards.         |

**Duration:** 4 weeks

**Setting:** MCH

**Educational Activities:** • Simulation: pediatric airway, warming, crisis drills • Workshops: weight-based dosing, pediatric positioning • Bedside: OR/PACU handovers, family briefing • CBD: pediatric safety bundles and escalation

**Assessment Tools:** • Mini-CEX • DOPS • OSCE/Simulation • CBD • ePortfolio

## Rotation 6 – Plastic & Burn Surgery

### Introduction

Grafts/flaps, burn resuscitation principles, device safety, and compassionate communication with patients and their families.

| Role            | Enabling Competencies                                                                                            | Application of Competency                      |
|-----------------|------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| Medical Expert  | Assist with grafts/flaps; manage burn dressing and resuscitation principles; ensure device safety (ESU/warming). | Supports complex reconstruction and burn care. |
| Communicator    | Explain wound and graft care plans to patients/families.                                                         | Enhances adherence and recovery.               |
| Collaborator    | Coordinate with anesthesia and wound services for timing and resources.                                          | Optimizes efficiency and outcomes.             |
| Health Advocate | Apply infection control and pressure prevention in long cases.                                                   | Reduces complications.                         |
| Leader          | Run brief/debrief; organize resources for long microsurgical cases.                                              | Strengthens team performance.                  |
| Scholar         | Use burn formulas and reconstructive protocols.                                                                  | Improves consistency and results.              |
| Professional    | Protect privacy/photos and manage specimen documentation.                                                        | Upholds ethics and legal standards.            |

**Duration:** 4 weeks

**Setting:** Main OR Plastic Surgery room

**Educational Activities:** • Intraoperative: grafts, flaps, micro-surgery assistance  
 • Workshops: dressing/graft care, hemostatic agents • Simulation: burn resuscitation, MTP; airway emergencies • CBD/AHD: fluid formulas, SSI prevention

**Assessment Tools:** • Mini-CEX • DOPS • OSCE/Simulation • CBD • ePortfolio

## Rotation 7 – Orthopedic Sports Surgery

### Introduction

Arthroscopy workflows, ligament repair, positioning safety, and tourniquet/implant readiness.

| Role            | Enabling Competencies                                                                             | Application of Competency                        |
|-----------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------|
| Medical Expert  | Set up arthroscopy towers/pumps/shavers; confirm implants; manage tourniquet and limb protection. | Prevents device/implant errors and nerve injury. |
| Communicator    | Explain post-op restrictions and rehab basics.                                                    | Improves outcomes through adherence.             |
| Collaborator    | Align with surgeon/rep/CSSD for implants and trays.                                               | Prevents delays and errors.                      |
| Health Advocate | Apply VTE and warming bundles; protect pressure areas.                                            | Prevents harm in prolonged cases.                |
| Leader          | Lead time-out and readiness checks; escalate early.                                               | Maintains safe flow under pressure.              |
| Scholar         | Use evidence-based positioning and implant verification.                                          | Ensures reliable techniques.                     |
| Professional    | Record implant details and counts consistently.                                                   | Ensures traceability and quality.                |

**Duration:** 3 weeks

**Setting:** Main OR Ortho room

**Educational Activities:** • Intraoperative: arthroscopy/ligament repair • Workshops: positioning & tourniquet, tower/pump checks • Simulation: retained item/guidewire, crisis leadership

• CBD/AHD: VTE prophylaxis, antibiotic timing, rehab basics

**Assessment Tools:** • Mini-CEX • DOPS • OSCE/Simulation • CBD • ePortfolio

## Rotation 8 – Dental Surgery

### Introduction

Dental OR/daycare procedures with airway preparedness, oral infection control, and biopsy/specimen handling.

| Role            | Enabling Competencies                                                                          | Application of Competency                |
|-----------------|------------------------------------------------------------------------------------------------|------------------------------------------|
| Medical Expert  | Prepare dental sets; manage suction and airway adjuncts; handle biopsies/specimens accurately. | Reduces aspiration and labeling errors.  |
| Communicator    | Reassure and educate patients about oral procedures and recovery.                              | Improves cooperation and outcomes.       |
| Collaborator    | Coordinate with anesthesia and day-care teams for safe flow.                                   | Supports efficient day-surgery turnover. |
| Health Advocate | Apply oral infection-control measures and aspiration risk mitigation.                          | Prevents harm in oral cases.             |
| Leader          | Verify time-out and equipment readiness; respond to bleeding quickly.                          | Increases safety and efficiency.         |
| Scholar         | Use oral prophylaxis protocols and biopsy handling standards.                                  | Improves consistency and accuracy.       |
| Professional    | Maintain privacy and chain-of-custody for specimens.                                           | Meets ethical/legal requirements.        |

**Duration:** 2 weeks

**Setting:** Main OR Dental surgery room / Day-care

**Educational Activities:** • Intraoperative: dental day-care cases • Workshops: dental sets, airway adjuncts, biopsy handling • Simulation: airway bleed/aspiration scenarios • CBD/AHD: antibiotic prophylaxis, oral infection prevention

**Assessment Tools:** • Mini-CEX • DOPS • OSCE/Simulation • CBD • ePortfolio

## Rotation 9 – Neurosurgery

### Introduction

Cranial and spinal procedures with equipment readiness, positioning of pins/frames, specimen workflows, and crisis leadership.

| Role            | Enabling Competencies                                                                                           | Application of Competency                       |
|-----------------|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| Medical Expert  | Prepare cranial/spinal setups with microscope/drill; support neuromonitoring; ensure specimen chain-of-custody. | Prevents device issues and traceability errors. |
| Communicator    | Use closed-loop communication during emergencies; clear handovers to ICU/PACU.                                  | Improves safety in high-risk cases.             |
| Collaborator    | Coordinate with anesthesia/ICU for complex transfers.                                                           | Ensures continuity and monitoring.              |
| Health Advocate | Maintain normothermia and pressure-area care in long cases.                                                     | Prevents injury and hypothermia.                |
| Leader          | Assign roles and manage escalation (MTP/arrest).                                                                | Improves crisis leadership.                     |
| Scholar         | Use neurosurgery checklists and reflect on outcomes.                                                            | Strengthens reliability.                        |
| Professional    | Accurate documentation and confidentiality.                                                                     | Meets standards of care.                        |



**Duration:** 4 weeks

**Setting:** Main OR Neurosurgery room

**Educational Activities:** • Intraoperative: cranial/spinal assistance • Workshops: frames/pins, microscope & drill setup • Simulation: airway/bleeding crisis, MTP triggers • CBD/AHD: neurosurgery monitoring basics, ICP pathways

**Assessment Tools:** • Mini-CEX • DOPS • OSCE/Simulation • CBD • ePortfolio

## Rotation 10 – OMF Surgery

### Introduction

Oral and maxillofacial trauma and reconstruction; difficult-airway readiness; implant/plate handling; tumor specimen orientation.

| Role            | Enabling Competencies                                                                                        | Application of Competency                           |
|-----------------|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| Medical Expert  | Prepare OMF trauma/reconstruction sets; manage difficult-airway readiness; orient tumor specimens precisely. | Enables safe reconstruction and accurate pathology. |
| Communicator    | Explain pre-/post-op oral care and restrictions.                                                             | Enhances adherence and safety.                      |
| Collaborator    | Coordinate with anesthesia for shared airway plans.                                                          | Prevents airway complications.                      |
| Health Advocate | Apply oral infection control and hemostasis strategies.                                                      | Reduces complications.                              |
| Leader          | Lead time-out tailored to OMF; escalate airway bleeding promptly.                                            | Improves team response.                             |
| Scholar         | Use OMF implant/plate handling protocols and specimen orientation standards.                                 | Ensures accuracy and outcomes.                      |
| Professional    | Maintain privacy and documentation integrity.                                                                | Upholds ethical and legal duties.                   |

**Duration:** 3 weeks

**Setting:** Main OR OMF room

**Educational Activities:** • Intraoperative: OMF trauma/reconstruction • Workshops: OMF sets, airway adjuncts, implant handling • Simulation: airway complications and bleeding control • CBD/AHD: antibiotic prophylaxis, specimen orientation

**Assessment Tools:** • Mini-CEX • DOPS • OSCE/Simulation • CBD • ePortfolio



## Rotation 11 – Cardiothoracic Surgery

### Introduction

High-risk CT cases (CABG, valves) with perfusion/transfusion readiness, anticoagulation coordination, and strict sterile discipline.

| Role            | Enabling Competencies                                                                                    | Application of Competency                |
|-----------------|----------------------------------------------------------------------------------------------------------|------------------------------------------|
| Medical Expert  | Assist in CABG and valve procedures; manage perfusion/transfusion readiness; coordinate anticoagulation. | Supports safe high-risk cardiac surgery. |
| Communicator    | Provide clear updates and team communication during critical phases.                                     | Improves coordination and outcomes.      |
| Collaborator    | Coordinate with perfusion and anesthesia to synchronize phases.                                          | Prevents delays and errors.              |
| Health Advocate | Maintain warming and pressure-area care during long surgeries.                                           | Prevents injury and hypothermia.         |
| Leader          | Lead time-out; manage MTP/arrest drills; ensure role clarity.                                            | Strengthens crisis performance.          |
| Scholar         | Apply cardiac surgery protocols and checklists.                                                          | Improves reliability and safety.         |
| Professional    | Ensure meticulous records and implant/specimen traceability.                                             | Meets regulatory standards.              |

**Duration:** 4 weeks

**Setting:** Main OR Cardiothoracic room

**Educational Activities:** • Intraoperative: CABG/valve assistance • Workshops: perfusion basics, MTP workflow • Simulation: arrest/bleeding, MTP activation • CBD/AHD: anticoagulation & transfusion safety

**Assessment Tools:** • Mini-CEX • DOPS • OSCE/Simulation • CBD • ePortfolio

## Rotation 12 – Vascular Surgery (Hybrid)

### Introduction

Open and endovascular procedures in a hybrid environment; anticoagulation protocols, radiation safety, device/guidewire handling, and accurate documentation.

| Role            | Enabling Competencies                                                                                                  | Application of Competency                           |
|-----------------|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| Medical Expert  | Prepare for open and endovascular procedures; manage anticoagulation, radiation safety, and device/guidewire handling. | Prevents thrombotic, bleeding, and radiation risks. |
| Communicator    | Confirm plan and device needs; communicate counts clearly.                                                             | Reduces device/guidewire incidents.                 |
| Collaborator    | Coordinate with radiology, anesthesia, and vascular teams in hybrid workflows.                                         | Ensures smooth multidisciplinary flow.              |
| Health Advocate | Apply contrast-safety and infection prevention measures.                                                               | Protects renal function and reduces SSI.            |
| Leader          | Run brief/debrief; escalate rapidly for bleeding/device events.                                                        | Improves crisis control.                            |
| Scholar         | Use endovascular protocols and radiation best practices.                                                               | Aligns with evidence and regulations.               |
| Professional    | Maintain implant/specimen documentation and traceability.                                                              | Upholds legal/ethical standards.                    |

**Duration:** 4 weeks

**Setting:** Main OR Vascular surgery room / Hybrid OR

**Educational Activities:** • Intraoperative: open/endovascular assistance, hybrid OR flow • Workshops: anticoagulation, device/guidewire handling, radiation safety • Simulation: retained device/guidewire, bleeding crisis • CBD/AHD: contrast safety, infection prevention

**Assessment Tools:** • Mini-CEX • DOPS • OSCE/Simulation • CBD • ePortfolio



## Rotation 13 – PACU

### Introduction

Immediate post-anesthesia care: airway support, hemodynamic/neurological monitoring, pain management, transfusion vigilance, and safe discharge criteria.

| Role            | Enabling Competencies                                                                                               | Application of Competency            |
|-----------------|---------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| Medical Expert  | Provide advanced airway/oxygen/CPAP support; monitor hemodynamics and neuro status; ensure safe discharge criteria. | Prevents post-anesthesia compromise. |
| Communicator    | Reassure patients and communicate plans effectively.                                                                | Improves experience and safety.      |
| Collaborator    | Work with anesthesia and surgery for escalation and transfers.                                                      | Ensures continuity of care.          |
| Health Advocate | Apply warming and transfusion vigilance.                                                                            | Prevents hypothermia and reactions.  |
| Leader          | Lead response to deterioration and mock codes.                                                                      | Enhances emergency readiness.        |
| Scholar         | Use PACU scoring systems and protocols.                                                                             | Standardizes safe discharge.         |
| Professional    | Document accurately and maintain privacy.                                                                           | Meets professional standards.        |

**Duration:** 2 weeks

**Setting:** Main PACU

**Educational Activities:** • Bedside: airway support, pain/sedation scoring, drain/dressing checks • Mock codes, transfusion reaction drill, CPAP practice • CBD: discharge criteria and escalation pathways • AHD/eLearning: PACU protocols, medication safety

**Assessment Tools:** • Mini-CEX • DOPS • OSCE/Simulation • CBD • ePortfolio

## VIII. CONTINUUM OF LEARNING

This section outlines the learning objectives for each key stage of progression within the Perioperative Nursing Care Diploma program. Trainees are reminded of the importance of lifelong continuous professional development (CPD), which is essential for all healthcare providers to maintain competence and meet professional standards. The Development of Clinical Competencies is guided by Benner's Stages of Clinical Competence (1948), which describes the progressive advancement from advanced beginner to expert in perioperative nursing practice.



# IX. EDUCATIONAL ACTIVITIES (TEACHING AND LEARNING STRATEGIES AND METHODS)

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## Teaching and Learning Approach

The teaching and learning approach of the Postgraduate Perioperative Nursing Care Diploma program is grounded in adult learning theory. This approach recognizes trainees as active participants in their learning, emphasizes the relevance of learning to professional practice, and encourages self-directed engagement with educational content.

The program applies adult learning principles across all educational activities, fostering learner responsibility for identifying learning needs, engaging in reflective practice, and actively contributing to knowledge and skill development. Trainees are encouraged to take ownership of their learning through participation in structured educational and clinical experiences aligned with program outcomes.

Formal training within the program comprises the following core teaching and learning activities:

- **Program-Specific Learning Activities**, including modules, academic half-day sessions, and supervised clinical practice.
- **Universal Topics**
- **General Learning Opportunities.**

## Teaching & Learning

### Clinical, Academic, and Scholarly Components of Program-Specific Learning Activities

Program-specific learning activities consisted of structured educational sessions designed to enhance trainees' knowledge, clinical skills, and professional competencies throughout the training period. These activities form an essential component of the curriculum and support the achievement of the program's learning outcomes.

Participation in program-specific learning activities was mandatory for all trainees. Non-attendance or inadequate participation may be addressed in accordance with the program's academic and professional-conduct policies. It is strongly recommended that engagement in these activities be integrated with formative assessment methods to support the continuous evaluation of trainee progress.

Program administration is responsible for ensuring the effective delivery of these activities by allocating protected educational time and facilitating an environment that enables trainees to attend, participate actively, and fully benefit from the learning experience.

## Educational Activities:

### Modules

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Weekly lectures, delivered for **six hours per day**, are provided to cover the theoretical content of each curriculum module. These sessions ensured a comprehensive coverage of program-specific theoretical subjects and supported the achievement of the defined learning outcomes.

The modular curriculum design enhances learning effectiveness by clearly identifying the topics in each module, enabling trainees to plan their study



activities in advance. This structure promoted active engagement and facilitates a thorough understanding of the program's theoretical components.

The program is structured into **10 modules each in the first and second year**, aligned with the overall educational framework of the Perioperative Nursing Care Diploma program.

| 1st Year   |                                                                                         |                      |
|------------|-----------------------------------------------------------------------------------------|----------------------|
| Module No. | Module Name                                                                             | Theoretical Duration |
| Module 1   | Anatomy And Physiology                                                                  | 1 Week               |
| Module 2   | Surgical Anatomy                                                                        | 1 Week               |
| Module 3   | Bio-Physics Chemistry                                                                   | 1 Week               |
| Module 4   | Anesthesia                                                                              | 1 Week               |
| Module 5   | Legal Responsibilities                                                                  | 1 Week               |
| Module 6   | Pharmacology                                                                            | 1 Week               |
| Module 7   | Microbiology                                                                            | 1 Week               |
| Module 8   | Care Of Dying Patients                                                                  | 1 Week               |
| Module 9   | OR Table and Organization                                                               | 1 Week               |
| Module 10  | Infection Control                                                                       | 1 Week               |
| 2nd Year   |                                                                                         |                      |
| Module 1   | Preparation and Assisting for Various Surgical Procedure as Circulating and Scrub Nurse | 1 Week               |
| Module 2   | Operating Microscopes                                                                   | 1 Week               |
| 2nd Year   |                                                                                         |                      |
| Module 3   | Suturing Materials, Needles, and Clinical Application                                   | 1 Week               |
| Module 4   | Endoscopic, Laparoscopic, and Robotic Surgical Techniques                               | 1 Week               |
| Module 5   | Bandages, Splints, Casts, and Traction                                                  | 1 Week               |

|           |                                                                  |        |
|-----------|------------------------------------------------------------------|--------|
| Module 6  | Postoperative Recovery and Surgical Intensive Care               | 1 Week |
| Module 7  | Principles of Fluid Therapy and Management in Perioperative Care | 1 Week |
| Module 8  | Supervision And Management                                       | 1 Week |
| Module 9  | Medico-Legal and Ethical Considerations in the Operating Room    | 1 Week |
| Module 10 | Research/Statistics                                              | 1 Week |





## Module 1: Anatomy and Physiology

- Musculoskeletal system
- Body fluids & electrolyte balance
- Respiratory system
- Cardiovascular system
- Central Nervous System
- Special Senses: Ear & Hearing, Eye & Vision (Elementary System)
- Metabolism & Nutrition – Vitamins – Minerals Blood
- Urinary System
- Skin

## Module 2 : Surgical Anatomy

- General Surgery: Abdominal procedures, including the anatomy of abdominal wall incisions; hernias; the alimentary tract; hepatobiliary system (gallbladder, bile ducts, liver); spleen and pancreas; surgical management of the head and neck, oral cavity, breast, and thyroid gland.
- Orthopedic Surgery: Disorders and surgical management of bones and joints.
- Urology: Surgical anatomy and procedures involving the kidneys, ureters, urinary bladder, prostate gland, and testes.
- Ear, Nose, and Throat (ENT): Surgical care related to the pharynx, larynx, nasal structures, and ear.
- Gynecology and Obstetrics: Surgical anatomy of the pelvic viscera and supporting structures, including the uterus, fallopian tubes, ovaries, cervix, and vagina.
- Cardiothoracic Surgery: Surgical anatomy and procedures involving the chest wall, heart, major blood vessels, trachea, bronchi, and lungs.
- Neurosurgery: Surgical management of the brain, spinal cord, peripheral nerves, and sympathetic nervous system.
- Pediatric Surgery: Surgical conditions affecting various body systems in pediatric patients.
- Ophthalmology: Surgical anatomy and procedures related to the eye.

| Module 3 : Bio-Physics Chemistry                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Practical                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>● <b>Measurement Units:</b> Fundamental units of measurement relevant to perioperative practice.</li> <li>● <b>Gas Laws:</b> Principles governing the behavior of gases and their application in the operating room environment.</li> <li>● <b>Heat:</b> Basic concepts of heat, temperature regulation, and their relevance to surgical care.</li> <li>● <b>Electrostatics:</b> Principles of electrostatics and their implications for operating room safety.</li> <li>● <b>Laser Applications in the Operating Room:</b> Principles and safe use of laser technology during surgical procedures.</li> <li>● <b>Chemicals Used in the Operating Room:</b> Commonly used chemicals, their functions, and safety considerations.</li> <li>● <b>Occupational Hazards in the Operating Room:</b> Identification, prevention,</li> </ul> | <ul style="list-style-type: none"> <li>- Operation table mechanics</li> </ul> |



control, and emergency management of occupational risks.

- **Radioactive Materials and Operating Room Mechanics:** Safe handling of radioactive materials, operation table mechanics, and patient positioning principles.
- **Principles Governing Surgical Equipment:** Fundamental concepts underlying the safe and effective use of various operating room devices and gadgets.

| Module 4 : Anesthesia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Practical                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• <b>Overview of Anesthesia:</b> Introduction to anesthesia concepts and clinical relevance.</li> <li>• Fundamental Principles of Anesthesia Practice. Classification and Stages of Anesthesia.</li> <li>• Routes and Techniques of Anesthetic Administration.</li> <li>• <b>Anesthesia Machines and Related Equipment:</b> Functions and safe operation.</li> <li>• Nursing Roles and Professional Responsibilities in Anesthesia Care.</li> <li>• Pharmacology of Anesthetic Drugs.</li> <li>• Types of Anesthetic Agents Used in Clinical Practice.</li> <li>• Mechanisms of Action, Clinical Effects, Adverse Effects, and Antidotes.</li> <li>• Enhanced Recovery After Surgery (ERAS) Principles.</li> <li>• Advanced Pain Management Techniques.</li> </ul> | <ul style="list-style-type: none"> <li>- Anesthesia Machine</li> </ul> |
| Module 5 : Legal Responsibilities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                        |
| <ul style="list-style-type: none"> <li>• Patient identification and verification</li> <li>• Surgical site and procedure confirmation</li> <li>• Informed consent principles</li> <li>• Handling of human tissues and organ transplantation</li> <li>• Management of dentures and prosthetic devices</li> <li>• Surgical counts and prevention of retained items</li> <li>• Prevention of perioperative adverse incidents</li> <li>• Operating theater documentation and medico-legal considerations</li> </ul>                                                                                                                                                                                                                                                                                            |                                                                        |

| Module 6 : Pharmacology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Practical                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| 1. Pharmacokinetics<br>2. Drug reactions and toxicity<br>3. Principles of drug administration and nursing responsibilities                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | - Drug Calculation<br>- Operation of Medication Delivery Devices |
| <ul style="list-style-type: none"> <li>Antiseptics and disinfectants</li> <li>Hypnotic, sedative, and tranquilizing agents</li> <li>Neuroleptic drugs and phenothiazines</li> <li>Barbiturates, including butobarbitone</li> <li>Anticonvulsant medications</li> <li>Analgesics and intraoperative pain management</li> <li>Nonsteroidal anti-inflammatory drugs (NSAIDs)</li> <li>Narcotic antagonists</li> <li>Intravenous induction agents</li> <li>Bronchodilators and respiratory stimulants</li> <li>Anti-dysrhythmic agents</li> </ul> | <ul style="list-style-type: none"> <li>Vasopressor and vasodilator agents</li> <li>Antihypertensive medications</li> <li>Ganglion-blocking agents</li> <li>Plasma expanders and volume replacement solutions</li> <li>Muscle relaxants</li> <li>Beta-adrenergic blockers</li> <li>Uterine stimulants and uterine relaxants</li> <li>Insulin and glucose-regulating agents</li> <li>Histamine and H1/H2 receptor antagonists</li> <li>Anticoagulant medications</li> <li>Anticholinergic drugs</li> <li>Drugs affecting ophthalmic and ENT systems</li> </ul> |                                                                  |

| Module 7 : Microbiology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Practical                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Inflammation, Infection, and Host Response</li> <li>• Principles of Aseptic Practice and Infection Prevention</li> <li>• Classification of Microorganisms and Patterns of Growth</li> <li>• <b>Sterilization and Disinfection:</b> Principles, methods, and applications in clinical practice</li> <li>• Diagnostic Microbiology Tests and Nursing Responsibilities</li> <li>• Standard Safety Precautions and Biomedical Waste Management</li> </ul>                                                                                                                                                                                                                            | <ul style="list-style-type: none"> <li>- Visit to CSSD</li> </ul>                                                          |
| Module 8 : Care of Dying Patients                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                            |
| <ul style="list-style-type: none"> <li>• Spiritual and psychosocial support at the end of life</li> <li>• Grief, grieving processes, and bereavement support</li> <li>• Organ donation processes and family counseling</li> <li>• Care of the deceased and post-mortem considerations</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                            |
| Module 9 : OR Table and Organization                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                            |
| <ul style="list-style-type: none"> <li>• Operating room equipment and facilities</li> <li>• Types of operating tables and related accessories</li> <li>• Organization and preparation of operating room tables and</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                            |
| Module 10 : Infection Control                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Practical                                                                                                                  |
| <ul style="list-style-type: none"> <li>• Nursing roles and responsibilities in equipment management</li> <li>• Environment: Cleaning, disinfecting OR Area, equipment's, air-conditioning system</li> <li>• Aseptic Techniques – hand washing, use of mask, gowning, gloving, head cover</li> <li>• Sterilization, preparing and packing of instruments, dressing materials, linen, suture materials, drainage tubes, and catheters, care of electro medical equipment's, handling and storing of sterilized material, equipment's, instruments</li> <li>• Collection of various specimens for laboratory tests</li> <li>• Bio medical waste management: Universal standards and its application in OR Nursing</li> </ul> | <ul style="list-style-type: none"> <li>- Hand Washing Techniques</li> <li>- Practice standard safety precaution</li> </ul> |



- |                                                                                   |  |
|-----------------------------------------------------------------------------------|--|
| <ul style="list-style-type: none"><li>• Nurses' role and responsibility</li></ul> |  |
|-----------------------------------------------------------------------------------|--|

| Module 11 : Preparation And Assisting for Various Surgical Procedure, as Circulating and Scrub Nurse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Practical                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>● Setting up of operation room and table</li> <li>● Setting up of trays and trolleys for various surgical procedures</li> <li>● Part preparation for surgical procedures</li> <li>● Positioning and draping according to the surgical procedures</li> <li>● Incisions for various surgical procedures</li> <li>● Minor surgeries – surgical instruments and suturing materials</li> <li>● Major surgeries – surgical instruments</li> <li>● General, gynecology</li> <li>● Obstetrics</li> <li>● Orthopedics</li> <li>● Plastic and Reconstructive Surgeries</li> <li>● Ophthalmic</li> <li>● Head and Neck</li> <li>● ENT</li> <li>● Cardiothoracic</li> <li>● Neurosurgery,</li> <li>● Pediatric</li> <li>● Dental</li> <li>● Laser and robotic surgery</li> <li>● Records and reports</li> <li>● Nurses role and responsibilities</li> </ul> | <ul style="list-style-type: none"> <li>- Postoperative unit</li> <li>- Dressing of all wounds</li> <li>- Scrubbing, gowning, gloving</li> </ul> |
| Module 12 : Operating Microscopes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>● Types, accessories, attachments, uses</li> <li>● Disinfection, maintenance, and storage</li> <li>● Equipment's and amenities</li> <li>● Different types of tables and accessories</li> <li>● Organization of table and equipment</li> <li>● Nurses' role and responsibilities</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                 |



| <b>Module 13 : Suturing Materials, Needles, and Clinical Application</b>                                                                                                                                                                                                                                                      | <b>Practical</b>                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Classification, clinical applications, disinfection practices, and storage requirements</li> </ul>                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>- Identify instruments and suturing materials for operations</li> </ul> |
| <b>Module 14 : Endoscopies</b>                                                                                                                                                                                                                                                                                                | <b>Practical</b>                                                                                               |
| <ul style="list-style-type: none"> <li>• Overview and definition</li> <li>• Classification and types</li> <li>• Clinical applications and uses</li> <li>• Maintenance, handling, and storage requirements</li> <li>• Patient preparation considerations</li> <li>• Nursing roles and professional responsibilities</li> </ul> |                                                                                                                |
| <b>Module 15 : Bandages, Splints, Casts, and Traction</b>                                                                                                                                                                                                                                                                     |                                                                                                                |
| <ul style="list-style-type: none"> <li>• Classification, clinical applications, preparation, maintenance, and storage</li> </ul>                                                                                                                                                                                              | <ul style="list-style-type: none"> <li>- Bandaging</li> </ul>                                                  |
| <b>Module 16 : Postoperative Recovery and Surgical Intensive Care</b>                                                                                                                                                                                                                                                         |                                                                                                                |
| <ul style="list-style-type: none"> <li>• Unit setup and organizational workflow</li> <li>• Postoperative patient management and monitoring</li> <li>• Clinical reporting and documentation</li> <li>• Safe transfer and transportation of patients</li> <li>• Nursing roles and professional responsibilities</li> </ul>      | <ul style="list-style-type: none"> <li>- Transferring of the patient</li> </ul>                                |

| Module 17 : Principles of Fluid Therapy and Management in Perioperative Care                                                                                                                                                                                                                                                                                                                                                                    | Practical                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Fluid and electrolyte balance</li> <li>• Blood and blood component therapy</li> <li>• Plasma products and volume replacement</li> <li>• Allergic responses and transfusion reactions</li> <li>• Care of high-risk patients</li> <li>• Recognition and management of anaphylactic shock</li> <li>• Clinical records and reporting</li> <li>• Nursing roles and professional responsibilities</li> </ul> | <ul style="list-style-type: none"> <li>- Fluid therapy in various disorders</li> <li>- Administration of blood and its components</li> </ul> |

| Module 18 : Supervision and Management                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Practical                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| <p><b>1. Operating Room Management</b></p> <ul style="list-style-type: none"> <li>• Overview, definitions, and core management principles</li> <li>• Key elements of operating room management, including planning, organizing, staffing, reporting, documentation, and budgeting</li> <li>• Management of operating room resources, including time, materials, and personnel</li> <li>• Physical design and layout of the operating room, including size, structure, color schemes, ventilation and air-conditioning systems, lighting, ultra-clean air systems, traffic flow patterns, risk zoning, and safety signage</li> </ul> <p><b>2. Clinical Supervision</b></p> <ul style="list-style-type: none"> <li>• Introduction to clinical supervision, including definitions, objectives, and scope</li> <li>• Principles and functions of effective supervision</li> <li>• Professional qualities and competencies of clinical supervisors</li> <li>• Roles and responsibilities of clinical supervisors in the operating room</li> </ul> | <ul style="list-style-type: none"> <li>- Preparation of SOPs</li> <li>- Performance appraisal tool</li> </ul> |

| Module 18 : Supervision and Management                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Practical |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <ul style="list-style-type: none"> <li>Professional practice standards for operating room nurses</li> <li>Development and implementation of policies, procedures, standing orders, and clinical protocols</li> <li>Orientation and induction programs for newly recruited staff</li> </ul> <p><b>3. Quality Assurance in the Operating Room</b></p> <ul style="list-style-type: none"> <li>Concepts and processes of quality assurance in perioperative nursing</li> <li>Nursing audit principles and practices</li> <li>Overview of accreditation standards, including ISO, CBAHI, and JCI</li> </ul> <p><b>4. Performance Appraisal</b></p> <ul style="list-style-type: none"> <li>Principles and objectives of performance evaluation</li> <li>Performance appraisal tools, including rating scales, checklists, peer review, and self-assessment methods</li> </ul> <p><b>5. Staff Development</b></p> <ul style="list-style-type: none"> <li>Introduction to staff development and its role in professional growth</li> <li>In-service education programs</li> <li>Continuing professional education and lifelong learning</li> </ul> |           |

## Module 19 : Medico-Legal and Ethical Considerations in the Operating Room

- Legal frameworks, legislation, and regulatory requirements governing operating room practice
- Patient rights and consumer protection principles, including relevant healthcare regulations
- Concepts of negligence, malpractice, and legal accountability in healthcare practice
- Legal responsibilities of nurses in the operating room, including:
- Patients' Bill of Rights
- Review and discussion of case studies related to negligence and legal judgments in hospital settings
  - Documentation, records, and reporting with medico-legal implications
  - The role of the nurse in managing legal and ethical issues within the operating room
- Professional practice standards and accountability in perioperative nursing
- Bioethical issues relevant to operating room practice
- Ethical principles guiding clinical decision-making
- Ethical considerations related to withholding and withdrawing treatment
- Ethical decision-making processes in the operating room environment
- Codes of professional conduct and standards of nursing practice



| Module 20 : Research/Statistics                                                                                                                                                                                                                                                                                                                                                                                                |                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| <ul style="list-style-type: none"> <li>- Introduction to Nursing Research</li> <li>- Types &amp; Designs of Research</li> <li>- Research Ethics</li> <li>- Sampling &amp; Data Collection</li> <li>- Basics of Biostatistics</li> <li>- Descriptive &amp; Inferential Statistics</li> <li>- Critical Appraisal of Articles</li> <li>- Evidence-Based Practice</li> <li>- Research Project Design &amp; Presentation</li> </ul> | Research proposal |

## Program Academic Half-day:

The educational framework for the diploma training programs in perioperative nursing care is grounded in the principles of adult learning theory. Trainees are expected to recognize the significance of their learning journey and assume an active role in both the content and processes of their education. Training programs implement the adult learning concept across most EAs, placing responsibility for learning requirements on the trainees themselves.

Through various EAs, perioperative nursing care aims to fulfill the competencies outlined in the curriculum. The program was designed to develop both cognitive and technical skills while fostering an understanding of their application in perioperative nursing care. Furthermore, training encompasses practical procedures and interpretative techniques delivered sequentially and in an integrated manner through lectures, tutorials, seminars, and hands-on apprenticeships.

EA plays a vital role in health-training programs by equipping health professionals with essential knowledge, values, and skills. Additionally, EA facilitates the dissemination of knowledge, encourages healthy practices, and enhances health professionals' competencies, ultimately contributing to improved overall wellbeing and safety.

Program administration should actively support EA by ensuring that protected time is allocated for trainees to attend and participate. Trainees should be encouraged to meaningfully engage in educational and scholarly activities as part of their professional development. The program's EA encompasses the following:

1. Academic Activity;
2. Practical-Based Learning;
3. Skills Training and Procedures;
4. Professional and Personal Development.

## Universal Topics

Universal topics are EA developed by the SCFHS and are intended for all specialties. Topics related to these qualities are prioritized:

- High value;
- Interdisciplinary and integrated;
- Expertise that may be beyond the availability of local clinical training sites.

Universal topics were developed by the SCFHS and are available through e-learning via personalized access for each trainee (to access online modules). Each universal topic is self-assessed at the end of each module. The universal topics were distributed throughout the training period.

## Perioperative Nursing Care Diploma Universal Topics

|    | Training Year | Modules  |                                  | Topics name |                                              |
|----|---------------|----------|----------------------------------|-------------|----------------------------------------------|
|    |               | Number   | Name                             | Number      | Name                                         |
| 1  | D1            | Module-1 | Introduction                     | Topic-1     | Safe drug prescribing                        |
| 2  | D1            | Module-1 | Introduction                     | Topic-2     | Hospital-acquired infections                 |
| 3  | D1            | Module-1 | Introduction                     | Topic-3     | Sepsis; SIRS; DIVC                           |
| 4  | D1            | Module-1 | Introduction                     | Topic-1     | Blood transfusion                            |
| 5  | D1            | Module-3 | Diabetes and Metabolic Disorders | Topic-14    | Abnormal ECG                                 |
| 6  | D1            | Module-5 | Acute Care                       | Topic-21    | Preoperative assessment                      |
| 7  | D1            | Module-5 | Acute Care                       | Topic-22    | Postoperative care                           |
| 8  | D1            | Module-5 | Acute Care                       | Topic-23    | Acute pain management                        |
| 9  | D1            | Module-5 | Acute Care                       | Topic-26    | Management of electrolyte imbalances         |
| 10 | D1            | Module-6 | Frail Elderly                    | Topic-28    | Mini-mental state examination                |
|    |               |          |                                  |             |                                              |
| 1  | D2            | Module-3 | Diabetes and Metabolic Disorders | Topic-13    | Comorbidities of obesity                     |
| 2  | D2            | Module-4 | Medical and Surgical Emergencies | Topic-15    | Management of acute chest pain               |
| 3  | D2            | Module-4 | Medical and Surgical Emergencies | Topic-16    | Management of acute breathlessness           |
| 4  | D2            | Module-4 | Medical and Surgical Emergencies | Topic-18    | Management of hypotension and hypertension   |
| 5  | D2            | Module-4 | Medical and Surgical Emergencies | Topic-19    | Management of upper GI bleeding              |
| 6  | D2            | Module-4 | Medical and Surgical Emergencies | Topic-20    | Management of lower GI bleeding              |
| 7  | D2            | Module-7 | Ethics and Healthcare            | Topic-32    | Patient advocacy                             |
| 8  | D2            | Module-7 | Ethics and Healthcare            | Topic-33    | Evidence-based approach to smoking cessation |
| 9  | D2            | Module-7 | Ethics and Healthcare            | Topic-34    | Ethical issues: transplantation/organ        |

|    | Training Year | Modules  |                       | Topics name |                                                     |
|----|---------------|----------|-----------------------|-------------|-----------------------------------------------------|
|    |               | Number   | Name                  | Number      | Name                                                |
|    |               |          |                       |             | harvesting; withdrawal of care                      |
| 10 | D2            | Module-7 | Ethics and Healthcare | Topic-35    | Ethical issues: treatment refusal; patient autonomy |

## General Learning Opportunities

Formal training time should be supplemented by other practice-based learning (PBL), such as:

- Involvement in quality improvement committees and meetings (a minimum of two meetings per session each year).
- Continuous professional activities (CPD) relevant to specialty conferences and workshops (minimum of one conference/workshop each year).
- Volunteering hours.

Trainees are expected to complete BLS + ACLS + Infection Control/OR Asepsis in the first year and Perioperative Nursing (AORN), Surgical Tech/Instrumentation, or Pain & Anesthesia Support in the second year. Completion of these courses is a requirement for the second-year exam and graduation from the program.

## Requirements to complete the General Learning Opportunities

| Activities                      | 1st year requirement                 | 2nd year requirement                 |
|---------------------------------|--------------------------------------|--------------------------------------|
| Oral Presentation               | Minimum 2 presentations              | Minimum 2 presentations              |
| Group Discussion And Reflection | Minimum 4 sensitive / ethical topics | Minimum 4 sensitive / ethical topics |
| Journal Club                    | Minimum 5 articles                   | Minimum 10 articles                  |





|                       |                                                            |                                                            |
|-----------------------|------------------------------------------------------------|------------------------------------------------------------|
| CBD                   | Minimum 15 CBD                                             | Minimum 15 CBD                                             |
| Clinical Competencies | 80% competences to be performed before training completion | 80% competences to be performed before training completion |

# X. ASSESSMENT AND EVALUATION

## 1. Purpose of Assessment

Assessments play a vital role in the success of postgraduate training. This assessment guides trainees and trainers in achieving defined standards, learning outcomes, and competencies. Simultaneously, assessment provides feedback to learners and faculty regarding curriculum development and implementation, teaching methods, and quality of the learning environment. A reliable and valid assessment is essential for examining curriculum alignment with respect to objectives, learning methods, and assessment tools. Finally, the assessment ensures that patients and the public can trust that health professionals are safe and competent.

Assessment serves the following purposes:

- a. **Assessment for learning**, also known as formative assessment, involves trainers using information from trainees' performance to diagnose their learning needs and tailor instruction to improve learning. This enables faculty members and educators to use information on the trainees' knowledge, understanding, and skills to deliver timely, specific, and constructive feedback. In addition, it fosters the development of trainees' metacognitive and practical skills, encourages reflection and self-regulated learning, and ultimately helps them become lifelong learners.
- b. **Assessment of learning** is also referred to as summative assessment. This approach is designed to evaluate whether trainees have achieved their intended learning outcomes. It is typically scored and contributes to



- c. **System of assessment** represents the relationship among multiple collated assessment methods, in which formative and summative assessments are integrated, complementary, and aligned throughout a specialty training program. It is blueprinted (mapped) against the curriculum roles, competencies, and outcomes. The overall system blueprint, which differs from the exam blueprint, articulates how diverse assessment tools collectively provide evidence of competence. It may include varying levels of detail according to its purpose and is also known as “assessment mapping.” This Mapping outlines the competencies to be assessed using all assessment methods to build a comprehensive, balanced, and fit-for-purpose assessment strategy, and helps identify areas where assessment is lacking or needs strengthening.
- d. **Feedback and evaluation**, as assessment outcomes, serve as quality metrics that enhance the learning experience. Moreover, it can be used to track training progress and to determine the suitability of different levels of summative assessment. High-quality feedback should be specific, actionable, and longitudinal, and it should promote self-assessment. Narrative and meaningful feedback on trainees’ performance in work-based assessment and evaluation forms should inform structured action plans, support deliberate practice, and facilitate trainee improvement and progression.

For the sake of the organization, assessments will be further classified into two main categories: *Formative* and *Summative*.

- a. to high-stakes decisions, including the progression, certification, or completion of training.

## 2. Formative Assessment

### 2.1 General Principles

Trainees, as adult learners, should seek feedback throughout their competency journey, from the “novice” to the “mastery” level. Formative assessment (also referred to as continuous assessment) is a component of assessment distributed throughout the academic year, primarily aimed at providing trainees with effective feedback.

#### **Purpose of formative assessment:**

Formative assessment aims to actively support trainees’ growth by guiding learning, verifying progress, and ensuring they acquire competencies essential to high-quality professional practice across all health disciplines.

- Enhance learning by offering trainees opportunities to practice, receive immediate feedback, measure their performance, and identify areas for further development and improvement.
- Drive learning and optimize the training process by clarifying trainees’ expectations and motivating them to actively pursue relevant training and experience.
- It provides robust, comprehensive evidence that trainees are progressing toward meeting curriculum standards throughout the training program.
- Ensure that trainees acquire the required competencies across all domains of effective healthcare practices.
- This confirms that trainees possess the essential foundational knowledge, skills, and professional attitudes required for their specialties.
- Confirm that trainees are advancing appropriately in their performance relative to their training stage.

Trainees, as adult learners, should actively seek feedback and use it to develop their performance throughout their journey from “novice” to “mastery” levels of competence. Formative assessment (also referred to as continuous or ongoing



assessment) is a component of assessment deliberately distributed across the academic year to provide trainees with timely, meaningful, and actionable feedback that drives learning and improvement.

Specified time should be allocated for trainees to meet with their program director or to review performance reports and logs (e.g., ITER, CBD, workplace-based assessment tools). Trainees are expected to assume ownership of their development through self-directed learning. The input from the formative assessment tools is integrated at the end of the year to inform decisions on whether individual trainees will advance to the next training level. The formative assessment instruments are periodically reviewed and updated as needed to ensure alignment with SCFHS guidelines and standards.

Consistent with best practices in health profession education, formative assessment will have the following features tailored to the targeted competencies:

- a. Multisource: Select all appropriate tools, including relevant workplace-based assessments, according to competency, training level, and rotation.
- b. Comprehensive: covering all learning domains (i.e., knowledge, skills, and attitude); Relevant: focused on workplace-based observations for performance in authentic practice settings.
- c. Milestone-oriented competency: This reflects trainees' expected competencies that match their developmental level.
- d. Professional behavior.

## 2.1 Work-based Assessment:

Work-based assessment (WBA) is occasionally used interchangeably with workplace-based assessment (WPBA), which refers to the direct observational assessment of a trainee in a real work environment. This has recently been referred to as a supervised learning event (SLE).

WBA is among the most recognized and widely utilized approaches for enhancing learning through formative assessment and feedback.

Numerous WBA tools assess a range of competencies, including communication and consultation skills, clinical decision-making and reasoning, and patient management in contexts where diagnostic uncertainty, resource constraints, and public health considerations may exist. Moreover, WBA tools facilitate the assessment of more complex domains, including professionalism, procedural skills, and the ethical and legal aspects inherent to clinical practice, which may not be adequately evaluated using traditional assessment methods.

## 2.2 Educational Activity (Non-WBA Assessment)

EAs are a part of a trainee training program that involves teaching and learning activities to acquire specialty competencies. Examples of contributions to EAs include, but are not limited to, presenting at journal clubs, lectures, morbidity and mortality rounds, and grand rounds, as well as research and scholarly activities.

All formative assessment tools **MUST** abide by the **Scoring Categories and Scaling Definitions** in the SCFHS policies.

To achieve unconditional promotion, the candidate must score at least “borderline pass” in all five components.

The program director can still recommend promoting candidates if the above criteria are not met in certain situations.

- If the candidate scores “borderline failure” in one or two components at maximum, these scores should not belong to the same area of



assessment (for example, both borderline failures should not belong to the skills area).

- The candidate must have passed all other components and scored a minimum clear pass for at least two components.

To attain the optimum training-level outcome, the candidate must complete the compulsory requirements for all selected formative assessment tools.

The following is a summary table of tools and their descriptions.

## Formative Assessment

| Gen./Sub                           | Level | Knowledge |                     |     |              | Skills    |          |      |              |         |          | Attitude |
|------------------------------------|-------|-----------|---------------------|-----|--------------|-----------|----------|------|--------------|---------|----------|----------|
|                                    |       | SOE       | Academic Activities | CBD | EYPT - Local | OSCE/OSPE | Research | DOPS | Volunteering | Logbook | Mini-CEX | ITERS    |
| Perioperative Nursing Care Diploma | D1    | ✓         | ✓                   | ✓   | ✓            | ✓         | ✓        | ✓    | ✓            | ✓       | ✓        | ✓        |
|                                    | D2    | ✓         | ✓                   | ✓   |              | ✓         | ✓        | ✓    | ✓            | ✓       | ✓        | ✓        |

**SOE:** Structured Oral Exam.

**EYPT-Local:** Progress Test.

**DOPS:** Direct observation of procedural Skills.

**OSCE:** Objective Structured Clinical Examination.

**CBD:** Case-based Discussion.

**OSPE:** Objective Structured Practical Examination.

**Mini-CEX:** Mini-Clinical Evaluation Exercise.

**ITER:** In-Training Evaluation Report.

Description Table of Formative Assessment Tools

| Learning Domains | Assessment/Educational Activity Tool | Requirements (Important Details, Description, and Total Frequency of the Tool/ Academic Year)                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Knowledge        | Academic Activities                  | D1–D2: Trainees are required to attend the weekly academic half-day (AHD) (40 AHD activities) during the Academic Activity sessions as per the curriculum. Trainees must attend the academic activities as scheduled. Any excused absentee must be approved by the program director.                                                                                                                                                                                                                                 |
|                  | EYPT-Local                           | D1: Trainees are required to take a written promotion Exam will be at the end of the 1st year.                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                  | CBD                                  | D1–D2: Trainees are required to complete a minimum of 15 CBD per academic year.                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                  | SOE                                  | D1–D2: Formative SOE is used as a structured oral formative assessment during training to evaluate the trainee's clinical reasoning, perioperative decision-making, patient safety awareness, infection control judgment, prioritization, communication, and professional response to perioperative clinical scenarios. It is intended for feedback, progress monitoring, and preparation for the final SOE.                                                                                                         |
| Skills           | Research                             | <p>D1–D2: Trainees are required to conduct one research project during their training. The research project is conducted over the 2 years of training as follows:</p> <p>First year (D1):</p> <ul style="list-style-type: none"> <li>- Planning: Engage in critical thinking around clinical questions and reviewing the literature and available resources.</li> <li>- Finalize the hypothesis for the research project and the research methodology.</li> <li>- Write the proposal and obtain approval.</li> </ul> |





| Learning Domains | Assessment/Educational Activity Tool | Requirements (Important Details, Description, and Total Frequency of the Tool/ Academic Year)                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                  |                                      | <p>Second year (D2):</p> <ul style="list-style-type: none"> <li>- Start working on the research project; collect the data and present it at meetings.</li> <li>- Complete the study.</li> <li>- Analyze the data.</li> <li>- Complete writing and provide evidence of submission to a journal at least three months before the exams.</li> <li>- Presentations/publications.</li> </ul>                                                                                                                                |
|                  | Mini-CEX                             | D1–D2: Trainees are required to complete a minimum of 15 Mini-CEX per academic year.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                  | Logbook                              | D1–D2: Trainees are required to maintain an approved clinical logbook throughout all clinical rotations. The logbook serves as an official record of clinical exposure, observed and performed procedures, case types, competency-related activities, dates, clinical setting, trainee role, level of supervision, supervisor feedback, and supervisor signature or approval. The logbook must be reviewed periodically and completed as a mandatory requirement for progression and completion of each training year. |
|                  | OSCE/ OSPE                           | D1–D2: Formative OSCE/OSPE is used during training through structured practical or simulation-based stations to assess perioperative nursing skills, including scrub and circulating nurse roles, aseptic technique, equipment preparation, specimen handling, PACU-related skills, documentation, communication, and patient safety. It is intended for feedback, skills development, and preparation for the final OSCE.                                                                                             |

| Learning Domains | Assessment/Educational Activity Tool | Requirements (Important Details, Description, and Total Frequency of the Tool/ Academic Year)                                         |
|------------------|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Attitude         | ITER                                 | D1–D2: All ITERs must be completed. ITERs are used as the end-of-rotation evaluation following SCFHS policies and criteria for ITERs. |

Note: SOE and OSCE/OSPE listed under Formative Assessment refer to structured formative encounters used for feedback, skills development, and progression monitoring. The final SOE and OSCE are addressed separately under Summative Assessment as end-of-program assessment tools for D2 trainees.

#### EA:

- Case Presentation D1–D2: Trainees are required to give at least four (4) presentations per academic year. *Results on the Case presentation are for formative feedback purposes.*
- Topic Special Assignments/ Journal club D1–D2:
- Trainees are required to present four (5) topics for **D1** and ten (10) topics for **D2** assignments/journal clubs (topics related to the specialty modules in the curriculum, e.g., articles and topic presentations), as assigned by the program director/trainer.
- Results on the topic assignment are intended for formative feedback.*
- Feedback should be provided for trainees' performance on case presentations and topic assignments.
- Quiz D1 –D2: Trainees were required to complete one (1) quiz after each module

### Important Notes:

All formative and work-based assessments should be conducted in accordance with the SCHFS definitions and methodologies. Not complying with these parameters will result in disciplinary actions per the SCFHS bylaws.

## Provides the Information on Assessment Mapping

### Evaluation:

Trainees should actively seek feedback throughout their training, and trainers are expected to provide timely formative assessments. The SCFHS provides an electronic system to facilitate communication and analysis of data from formative assessments. Both trainers and trainees are expected to adhere to requirements for the use of assessments and EAs, including specified forms, frequencies, distributions, and deadlines for implementing evaluation processes. To attain optimum training-level outcomes, trainees must complete all training requirements.

Trainees are evaluated based on their program's specific requirements, which include EAs and assessment tools such as formative assessments and WBA. Each assessment is documented using standardized forms and reflected in evaluation reports that capture feedback, track improvements, and demonstrate progression. Trainees are expected to fully comply with their program's requirements and activities, and failure to do so may result in disciplinary action.

### Promotion of the Trainee:

Trainee promotion from one level to the next is determined in accordance with the SCFHS regulations and applicable bylaws. This is generally based on the successful completion of the curriculum's required assessments, EAs, evaluation forms, and specialty-specific requirements, as well as satisfactory overall performance and fulfillment of any remediation or action plans, if applicable. Furthermore, noncompliance with these requirements may result in disciplinary action under SCFHS regulations, including repeating the entire academic year or a portion thereof.



| D1 Promotion Exam       |            |                         |            |
|-------------------------|------------|-------------------------|------------|
| Module                  | Weight (%) | Module                  | Weight (%) |
| Anatomy & Physiology    | 10%        | Legal Responsibilities  | 5%         |
| Surgical Anatomy        | 10%        | Pharmacology            | 10%        |
| Bio-Physics & Chemistry | 5%         | Microbiology            | 10%        |
| Communication & IPR     | 5%         | Care of Dying Patients  | 5%         |
| Anesthesia (Basics)     | 10%        | OR Table & Organization | 15%        |
| Infection Control       | 15%        |                         |            |

## First Year Examination

This is a written exam that enables trainees to progress from the “D1” to the “D2” level of training. For additional details on the promotion written exam, please refer to the General Bylaws of Training in Postgraduate Programs and the General Assessment Bylaws (available online: [www.scfhs.org](http://www.scfhs.org)).

Blueprint Outlines: The following example is provided for illustrative purposes: Please refer to the updated version of the official SCFHS website.

## Final In-Training Evaluation Report (FITER)

FITER is a comprehensive final evaluation required at the end of training to determine trainees’ readiness for independent practice. Its format and content are governed by the SCFHS regulations and may evolve over time. Submission of the FITER is part of the process for certification eligibility in accordance with SCFHS requirements.

# Summative Assessment

## General Principles

*Summative* assessment is the assessment component primarily designed to make informed decisions regarding trainees' competence and readiness to progress or enter independent practice. Unlike formative assessment, it does not primarily aim to provide constructive feedback but rather to assess whether the required standards have been met. For additional details, please refer to the General Bylaws and Executive Policy of Assessment (available online at [www.scfhs.org](http://www.scfhs.org)).

To be eligible to sit for final examinations, trainees will be issued a "Certification of Training Completion" upon successful completion of all training rotations in accordance with the SCFHS regulations.

## Certification of Training Completion

The Certification of Training Completion and trainees' eligibility for final examinations are governed by the SCFHS regulations and policies. Trainees must fulfill all the requirements outlined by the SCFHS and their training program, including successful completion of rotations, assessments, and any additional mandated components (please refer to [www.scfhs.org](http://www.scfhs.org)). This certification is issued and approved by the supervisory committee or its equivalent in accordance with the SCFHS policies.

## Final Specialty Examinations

The Final Specialty Examination serves as a summative assessment component that grants trainees specialty certifications. It comprised the following two elements:

| D2 Final Exam                               |            |                               |            |
|---------------------------------------------|------------|-------------------------------|------------|
| Module                                      | Weight (%) | Module                        | Weight (%) |
| Preparation & Assisting (Circulating/Scrub) | 20%        | Fluid Therapy                 | 10%        |
| Operating Microscopes                       | 5%         | Supervision & Management (OR) | 5%         |
| Suture Materials & Needles                  | 5%         | Professional Trends           | 5%         |
| Endoscopies / Laparoscopic / Robotic        | 15%        | Medico-Legal Aspects          | 5%         |
| Bandages, Splints, Casts, Traction          | 10%        | Research / Statistics         | 10%        |
| Recovery Room / SICU                        | 10%        |                               |            |

- a) Final written examination: Eligibility to appear for this exam requires trainees to obtain “certification for training completion.”
- b) Final clinical/practical examination: Eligibility to appear for this examination requires successful completion of the final written examination.

Blueprint Outline: The following table is provided for demonstration purposes. Please refer to the updated version of the SCFHS website.

The blueprints for the final written, clinical, and practical examinations are shown in the following table:

| Station | Type | Scenario / Focus                  | Competencies Assessed                                                                                                                       | Assessment Criteria                                                                                                                                                                     |
|---------|------|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | SOE  | Infection Control & Sterilization | <ul style="list-style-type: none"> <li>- Aseptic techniques</li> <li>- Sterilization methods</li> <li>- Specimen handling</li> </ul>        | <ul style="list-style-type: none"> <li>- Explains aseptic principles</li> <li>- Identifies sterilization techniques</li> <li>- Discusses specimen fixation &amp; endorsement</li> </ul> |
| 2       | SOE  | Perioperative Patient Safety      | <ul style="list-style-type: none"> <li>- Patient ID &amp; Preoperative checklist</li> <li>- WHO Surgical Safety</li> </ul>                  | <ul style="list-style-type: none"> <li>- Explains preoperative assessment</li> <li>- Applies safety checklist</li> <li>- Ensures patient identity verification</li> </ul>               |
| 3       | SOE  | Airway & Anesthesia               | <ul style="list-style-type: none"> <li>- Airway devices (OPA, ETT, CPAP)</li> <li>- Anesthesia preparation</li> </ul>                       | <ul style="list-style-type: none"> <li>- Explains airway management</li> <li>- Describes steps of intubation</li> <li>- Identifies complications</li> </ul>                             |
| 4       | SOE  | Critical Care Emergencies         | <ul style="list-style-type: none"> <li>- ALS &amp; Defibrillation</li> <li>- Burn fluid calculation</li> <li>- Blood transfusion</li> </ul> | <ul style="list-style-type: none"> <li>- Outlines ALS algorithm</li> <li>- Calculates Parkland formula</li> <li>- Explains transfusion safety</li> </ul>                                |
| 5       | OSCE | Scrub & Circulating Nurse Role    | <ul style="list-style-type: none"> <li>- Scrubbing, gowning, gloving</li> <li>- Setting trays/trolleys</li> </ul>                           | <ul style="list-style-type: none"> <li>- Performs scrub correctly</li> <li>- Maintains sterile field</li> <li>- Organizes instruments properly</li> </ul>                               |
| 6       | OSCE | Airway & Ventilation              | <ul style="list-style-type: none"> <li>- O2 therapy</li> <li>- OPA insertion</li> <li>- Nebulization</li> </ul>                             | <ul style="list-style-type: none"> <li>- Selects correct device</li> <li>- Applies safely</li> <li>- Monitors patient</li> </ul>                                                        |
| 7       | OSCE | Specimen Handling                 | <ul style="list-style-type: none"> <li>- Receiving specimen intraoperative</li> <li>- Labeling &amp; fixation</li> </ul>                    | <ul style="list-style-type: none"> <li>- Labels correctly</li> <li>- Uses correct container</li> <li>- Endorses appropriately</li> </ul>                                                |





| Station | Type | Scenario / Focus | Competencies Assessed                                                                                                                    | Assessment Criteria                                                                                                                                   |
|---------|------|------------------|------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8       | OSCE | PACU Care        | <ul style="list-style-type: none"> <li>- Airway monitoring</li> <li>- Pain &amp; vital signs</li> <li>- IV fluids &amp; blood</li> </ul> | <ul style="list-style-type: none"> <li>- Assesses airway &amp; pain</li> <li>- Applies oxygen if needed</li> <li>- Documents interventions</li> </ul> |

For additional details on the final examinations, please refer to the General Bylaws of Training in Postgraduate Programs and General Assessment Bylaws (available online: [www.scfhs.org](http://www.scfhs.org)).

| Learning Domain  | Summative Assessment Tools                                                                                                                          | Passing Score                                                                                                                     |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| <b>Knowledge</b> | <ul style="list-style-type: none"> <li>- Final Written Examination</li> </ul>                                                                       | At least borderline pass in each tool according to the standard setting method used by the executive administration of assessment |
| <b>Skills</b>    | <ul style="list-style-type: none"> <li>- Objective Structured Clinical Examinations (OSCE)</li> <li>- Structured Oral Examinations (SOE)</li> </ul> | At least borderline pass in each tool according to the standard setting method used by the executive administration of assessment |
| <b>Attitude</b>  | FITER: In-Training Evaluation Report                                                                                                                | Successfully pass FITER                                                                                                           |

# XI. PROGRAM AND COURSE EVALUATION

The SCFHS applies various measures to evaluate the implementation of this curriculum. The training outcomes of this program were reviewed using the quality assurance framework endorsed by the Central Training Committee of the SCFHS. The trainee assessment results (both formative and summative) were analyzed and mapped against the curriculum content. Additional indicators incorporated into the evaluation process included the following:

- Annual trainees' satisfaction survey reports.
- Reports from trainees' evaluation of faculty members.
- Reports from trainees' evaluation of training rotations.
- Annual survey data from program directors.
- Data obtained through program accreditations and accreditation review reports.
- Reports gathered from direct field communications with trainees and trainers.
- Quality reports and metrics from Standard & Quality Departments (e.g., Scientific Council reports, Training Center Reports, Code Blue data and reports, and related surveys).

**Goal-Based Evaluation:** The achievement of the intended outcomes or competencies will be evaluated at the end of each stage to assess the effectiveness of curriculum delivery. Any deficiencies will be addressed in the subsequent stage by utilizing the time allocated for training on selected topics and professional sessions.



In addition to expert subject-matter input and best practices drawn from benchmarked international programs, the SCFHS will apply a robust approach to ensure that this curriculum incorporates all relevant data available at the time of future revisions.

## XII. POLICIES AND PROCEDURES

This curriculum outlines the means, materials, and learning objectives that trainees and trainers will use to achieve the identified educational outcomes. The SCFHS maintains a comprehensive set of “General Bylaws of Training in Postgraduate Programs” and “Executive Policies” published on the official SCFHS website that govern all training-related processes. These include, but are not limited to, General Bylaws of training, assessment, and accreditation, as well as executive policies on admission, registration, formative assessment and promotion, examination, trainees’ representation and support, duty hours, and leaves, all of which are examples of regulations that must be implemented. Under this curriculum, trainees, trainers, and supervisors are required to adhere to the most current versions of these bylaws and policies, which are accessible online through the official SCFHS website.



## XIII. APPENDICES

- A. Assessment Mapping**
- B. Academic Half-Day Topics**
- C. CBD Requirements**
- D. Examples: Simulation**
- E. References**



As part of the resources provided to support curriculum planning, an example of a curriculum mapping table from McMaster University (developed by Drs. Lori Whitehead and Som Mukherjee, Faculty of Health Sciences, 2021) is included in both the accompanying documents and other documents.

## Appendix B (Academic Half-Day Topics)

These tables list the official Academic Half-Day topics for the Perioperative Nursing Care Diploma—40 weekly sessions per year (D1 and D2). D1 builds core perioperative knowledge and skills; D2 advances to specialty and complex practice, all aligned with program mapping and competencies.

| <i>Academic Half-Day Topics – Level D1 (Year 1 – 40 Weeks)</i> |                    |                   |                                             |
|----------------------------------------------------------------|--------------------|-------------------|---------------------------------------------|
| <i>Academic Week</i>                                           | <i>Rotation</i>    | <i>Section</i>    | <i>Sessions</i>                             |
| 1                                                              | General Surgery    | Fundamentals      | Welcome / OR Roles / Infection Control      |
| 2                                                              | General Surgery    | Patient Safety    | WHO Checklist / Wrong Site Surgery Case     |
| 3                                                              | General Surgery    | Anesthesia Basics | Airway Management / Monitoring              |
| 4                                                              | General Surgery    | Journal Club      | Evidence-based Perioperative Practice       |
| 5                                                              | General Surgery    | Fundamentals      | OR Setup for Fracture Fixation              |
| 6                                                              | General Surgery    | Skills            | Joint Replacement Nursing Care              |
| 7                                                              | General Surgery    | Specialty Basics  | Cataract Surgery / ENT Case                 |
| 8                                                              | General Surgery    | Specialty Basics  | TURP Nursing Care / Cesarean Section        |
| 9                                                              | Orthopedic Surgery | Skills Lab        | Draping / Positioning / Instrument Handling |
| 10                                                             | Orthopedic Surgery | Simulation        | Cardiac Arrest in OR / Debriefing           |
| 11                                                             | Orthopedic Surgery | Case Study        | Perioperative Diabetes Care                 |
| 12                                                             | Orthopedic Surgery | Specialty Focus   | Perioperative Medications                   |





*Academic Half-Day Topics – Level D1 (Year 1 – 40 Weeks)*

| <i>Academic Week</i> | <i>Rotation</i>      | <i>Section</i> | <i>Sessions</i>                    |
|----------------------|----------------------|----------------|------------------------------------|
| 13                   | Orthopedic Surgery   | Basics         | Sterilization / Aseptic Technique  |
| 14                   | Orthopedic Surgery   | Case Study     | Abdominal Emergencies              |
| 15                   | Ophthalmology & ENT  | Journal Club   | Safety & Quality Article Review    |
| 16                   | Ophthalmology & ENT  | Fundamentals   | Documentation / Legal Aspects      |
| 17                   | Ophthalmology & ENT  | Case-Based     | Polytrauma OR Nursing              |
| 18                   | Ophthalmology & ENT  | Specialty      | Retinal Surgery Basics             |
| 19                   | Urology & Gynecology | Specialty      | Airway Emergencies in OR           |
| 20                   | Urology & Gynecology | Specialty      | Kidney Stone Surgery / Lithotripsy |
| 21                   | Urology & Gynecology | Specialty      | Hysterectomy Nursing Care          |
| 22                   | Urology & Gynecology | Specialty      | Pediatric Hernia Repair            |
| 23                   | Anesthesia           | Simulation     | Malignant Hyperthermia Scenario    |
| 24                   | Anesthesia           | Specialty      | Burn Grafts / Reconstructive Care  |
| 25                   | Pediatrics           | Fundamentals   | Intro to Research / Statistics     |
| 26                   | Pediatrics           | Fundamentals   | Communication / Team Roles         |
| 27                   | Plastic Surgery      | Case Study     | Appendectomy / Cholecystectomy     |

*Academic Half-Day Topics – Level D1 (Year 1 – 40 Weeks)*

| <i>Academic Week</i> | <i>Rotation</i>      | <i>Section</i>           | <i>Sessions</i>                                |
|----------------------|----------------------|--------------------------|------------------------------------------------|
| 28                   | Plastic Surgery      | Case Study               | Arthroscopy Case                               |
| 29                   | Endoscopy            | Basics                   | Craniotomy Introduction                        |
| 30                   | Endoscopy            | Basics                   | Thoracotomy / CABG Intro                       |
| 31                   | Multidisciplinary    | Basics                   | Aneurysm Repair Intro                          |
| 32                   | Multidisciplinary    | Skills                   | GI Endoscopy Nursing Care                      |
| 33                   | Multidisciplinary    | Journal Club             | Patient Safety in OR                           |
| 34                   | Multidisciplinary    | Multidisciplinary        | Retained Surgical Item Crisis                  |
| 35                   | Multidisciplinary    | Professionalism          | Ethical Dilemmas in OR                         |
| 36                   | Review & Integration | Mock OSCE                | Comprehensive practice exam                    |
| 37                   | Review & Integration | Reflection & Feedback    | Discussion of performance and lessons learned  |
| 38                   | Journal Club         | Scholar                  | Perioperative Nursing Article Critique         |
| 39                   | Simulation           | Multidisciplinary        | Infection Control Breach & Root Cause Analysis |
| 40                   | Final Evaluation     | Comprehensive Assessment | End-of-Year Formal Evaluation                  |



*Academic Half-Day Topics – Level D2 (Year 2 – 40 Weeks)*

| <i>Academic Week</i> | <i>Rotation</i>         | <i>Section</i>      | <i>Sessions</i>                          |
|----------------------|-------------------------|---------------------|------------------------------------------|
| 1                    | Cardiothoracic          | Advanced OR Nursing | CABG / Valve Replacement                 |
| 2                    | Cardiothoracic          | Advanced            | Craniotomy / Spine Surgery               |
| 3                    | Cardiothoracic          | Specialty           | Burn Management / Pediatric Emergencies  |
| 4                    | Cardiothoracic          | Advanced            | Aneurysm Repair / Endovascular Surgery   |
| 5                    | Cardiothoracic          | Specialty           | Role in Robotic Surgery                  |
| 6                    | Cardiothoracic          | Specialty           | Specimen Handling in Cancer Surgery      |
| 7                    | Neurosurgery            | Simulation          | Massive Hemorrhage Protocol              |
| 8                    | Neurosurgery            | Advanced            | High-Impact OR Nursing Paper             |
| 9                    | Neurosurgery            | Professionalism     | Team Communication & Conflict Resolution |
| 10                   | Neurosurgery            | Scholar Role        | Research Design & Audit                  |
| 11                   | Neurosurgery            | Advanced            | Colorectal / Bariatric Nursing Role      |
| 12                   | Neurosurgery            | Advanced            | Joint Replacement Complications          |
| 13                   | Vascular & Endovascular | Specialty           | Complex Retinal Surgery                  |
| 14                   | Vascular & Endovascular | Specialty           | Cochlear Implant Nursing Care            |
| 15                   | Vascular & Endovascular | Specialty           | Nephrectomy / Prostatectomy              |

*Academic Half-Day Topics – Level D2 (Year 2 – 40 Weeks)*

| <i>Academic Week</i> | <i>Rotation</i>            | <i>Section</i>  | <i>Sessions</i>                  |
|----------------------|----------------------------|-----------------|----------------------------------|
| 16                   | Vascular & Endovascular    | Advanced        | Oncologic Gyne Surgery           |
| 17                   | Oncology                   | Advanced        | Congenital Anomalies             |
| 18                   | Oncology                   | Advanced        | Reconstructive Micro-Surgery     |
| 19                   | Oncology                   | Case Study      | Complications of CABG            |
| 20                   | Oncology                   | Case Study      | Traumatic Brain Injury           |
| 21                   | Robotic & Laparoscopic     | Crisis          | Airway Fire in OR                |
| 22                   | Robotic & Laparoscopic     | Journal Club    | Surgical Innovation Paper        |
| 23                   | Robotic & Laparoscopic     | Advanced        | OR Management & Scheduling       |
| 24                   | Robotic & Laparoscopic     | Professionalism | End-of-life Issues in OR         |
| 25                   | General Surgery (Advanced) | Scholar         | Critical Appraisal of OR Studies |
| 26                   | General Surgery (Advanced) | Simulation      | Cardiac Arrest in Pediatric OR   |
| 27                   | General Surgery (Advanced) | Case Study      | Emergency Laparotomy             |
| 28                   | General Surgery (Advanced) | Case Study      | Polytrauma with Pelvic Injury    |
| 29                   | Orthopedics (Advanced)     | Case Study      | Glaucoma Surgery                 |
| 30                   | Orthopedics (Advanced)     | Case Study      | Airway Tumor Surgery             |



*Academic Half-Day Topics – Level D2 (Year 2 – 40 Weeks)*

| <i>Academic Week</i> | <i>Rotation</i>            | <i>Section</i>           | <i>Sessions</i>                                |
|----------------------|----------------------------|--------------------------|------------------------------------------------|
| 31                   | Orthopedics (Advanced)     | Case Study               | Kidney Transplant                              |
| 32                   | Ophthalmology & ENT (Adv.) | Case Study               | Complex Hysterectomy                           |
| 33                   | Ophthalmology & ENT (Adv.) | Case Study               | Neonatal Surgery                               |
| 34                   | Ophthalmology & ENT (Adv.) | Case Study               | Major Burns Reconstruction                     |
| 35                   | Simulation                 | Multidisciplinary        | Disaster Drill in OR                           |
| 36                   | Review & Integration       | Mock SOE/OSCE            | Structured Oral & Clinical Simulation          |
| 37                   | Review & Integration       | Reflection & Feedback    | Discussion of performance and program insights |
| 38                   | Research                   | Scholar                  | Trainee-Led Project Presentation               |
| 39                   | Simulation                 | Multidisciplinary        | Complex OR Crisis (Multi-specialty Trauma)     |
| 40                   | Final Evaluation           | Comprehensive Assessment | End-of-Program Formal Evaluation               |

## Appendix-C (CBD Requirements)

The following is for illustrative purposes only. The details of cases/logs, frequency, levels, and years must be clearly outlined and aligned with the mapping.

### Top Conditions and Procedures in the Specialty

| Top Conditions and Procedures in the Specialty |                                        |           |            |
|------------------------------------------------|----------------------------------------|-----------|------------|
| Top 10 Causes of Mortality in Saudi Arabia*    |                                        |           |            |
| Disease; Conditions                            |                                        | Relative  | Cumulative |
|                                                |                                        | Frequency | Frequency  |
| 1.                                             | Cardiovascular diseases                | 37.1%     | 37.1%      |
| 2.                                             | Neoplasms (Cancers)                    | 14.6%     | 51.7%      |
| 3.                                             | External causes (Accidents & Injuries) | 12.4%     | 64.1%      |
| 4.                                             | Endocrine & metabolic (Diabetes etc.)  | 9.8%      | 73.9%      |
| 5.                                             | Respiratory diseases                   | 7.5%      | 81.4%      |
| 6.                                             | Digestive diseases                     | 5.2%      | 86.6%      |
| 7.                                             | Genitourinary diseases                 | 3.7%      | 90.3%      |
| 8.                                             | Nervous system diseases                | 3.2%      | 93.5%      |
| 9.                                             | Infectious & parasitic diseases        | 2.8%      | 96.3%      |
| 10.                                            | Perinatal conditions                   | 2.1%      | 98.4%      |



## Top Conditions and Procedures in the Specialty

### Top 10 Cancers

| Disease; Conditions     | Relative  | Cumulative |
|-------------------------|-----------|------------|
|                         | Frequency | Frequency  |
| 1. Breast cancer        | 17.2%     | 17.2%      |
| 2. Colorectal cancer    | 12.9%     | 30.1%      |
| 3. Thyroid cancer       | 9.4%      | 39.5%      |
| 4. Leukemia             | 8.8%      | 48.3%      |
| 5. Non-Hodgkin lymphoma | 7.6%      | 55.9%      |
| 6. Prostate cancer      | 6.9%      | 62.8%      |
| 7. Liver cancer         | 6.0%      | 68.8%      |
| 8. Lung cancer          | 5.3%      | 74.1%      |
| 9. Bladder cancer       | 4.7%      | 78.8%      |
| 10. Cervical cancer     | 4.2%      | 83.0%      |

## Top Conditions and Procedures in the Specialty

### Top 10 Causes of Outpatient Consultations Related to the Specialties in Saudi Arabia

| Disease; Conditions      | Relative  | Cumulative |
|--------------------------|-----------|------------|
|                          | Frequency | Frequency  |
| 1. Physiotherapy visits  | 22%       | 22%        |
| 2. Diabetes clinics      | 18%       | 40%        |
| 3. ENT & Hearing clinics | 12%       | 52%        |
| 4. Ophthalmology clinics | 10%       | 62%        |
| 5. Dialysis (HD & PD)    | 9%        | 71%        |
| 6. Orthopedics & rehab   | 8%        | 79%        |
| 7. Oncology follow-ups   | 7%        | 86%        |
| 8. Dermatology           | 6%        | 92%        |
| 9. Pediatrics            | 5%        | 97%        |
| 10. Other specialties    | 3%        | 100%       |





## Top Conditions and Procedures in the Specialty

### Top 10 Causes of Inpatient Admissions Related to the Specialties in Saudi Arabia

| Disease; Conditions       | Relative  | Cumulative |
|---------------------------|-----------|------------|
|                           | Frequency | Frequency  |
| 1. Respiratory diseases   | 19.9%     | 19.9%      |
| 2. Digestive diseases     | 19.9%     | 39.8%      |
| 3. Endocrine & metabolic  | 15.7%     | 55.5%      |
| 4. Circulatory diseases   | 13.6%     | 69.1%      |
| 5. Pregnancy & childbirth | 11.4%     | 80.5%      |
| 6. Genitourinary diseases | 7.8%      | 88.3%      |
| 7. Eye diseases           | 5.6%      | 93.9%      |
| 8. Infectious diseases    | 5.1%      | 99.0%      |
| 9. Neoplasms              | 0.6%      | 99.6%      |
| 10. Musculoskeletal       | 0.4%      | 100%       |

## Top Conditions and Procedures in the Specialty

### Top 10 Procedures/Surgeries Performed by the Specialty

| Name of Procedures/ Surgeries                                              | Approximate Frequency |
|----------------------------------------------------------------------------|-----------------------|
| General Surgery (appendectomy, hernia repair, cholecystectomy)             | 20%                   |
| Obstetrics & Gynecology (C-sections, hysterectomy, ovarian surgery)        | 17%                   |
| Orthopedic Surgery (fracture fixation, joint replacement, arthroscopy)     | 15%                   |
| Ophthalmology Surgery (cataract, glaucoma, retinal detachment)             | 12%                   |
| ENT Surgery (tonsillectomy, sinus surgery, cochlear implant)               | 9%                    |
| Cardiothoracic Surgery (CABG, valve replacement, thoracotomy)              | 7%                    |
| Neurosurgery (craniotomy, spine surgery)                                   | 6%                    |
| Urology Surgery (TURP, nephrectomy, lithotripsy)                           | 5%                    |
| Plastic & Reconstructive Surgery (burn grafts, cosmetic procedures)        | 5%                    |
| Pediatric Surgery (congenital anomalies, hernia, appendectomy in children) | 4%                    |



### Examples of Core Specialty Topics: Case Discussions; Interactive Lectures

| Topics                                                                              | Comments                                                                  |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Surgical patient safety & WHO surgical checklist                                    | Case-based discussion on real OR incidents and near-miss reporting.       |
| Instrumentation and sterilization protocols                                         | Interactive lecture + demo of instrument handling and aseptic technique.  |
| Perioperative pharmacology (anesthesia drugs, antibiotics)                          | Case scenarios on drug errors, interactions, timing of prophylaxis.       |
| Infection control in OR (airflow, attire, aseptic field)                            | Problem-solving workshop with simulated breaches in protocol.             |
| Care of patient with comorbidities (diabetes, cardiac, renal) during surgery        | Case discussion on complications and perioperative planning.              |
| Documentation and medico-legal aspects in OR                                        | Role play and scenario-based discussion of incomplete OR records.         |
| Handling surgical specimens                                                         | Interactive demo with case-based errors in labeling/fixation/endorsement. |
| Communication & teamwork in surgical team                                           | Simulation of OR crisis management (bleeding, cardiac arrest).            |
| Advances in minimally invasive & robotic surgery                                    | Lecture + group discussion on implications for OR nursing role.           |
| Ethical dilemmas in perioperative care (DNR, consent, refusal of blood transfusion) | Debate and reflective group discussion.                                   |

## Appendix D (provides detailed appendices for selected educational activities, e.g., Universal Topics, Simulation)

All sessions below are designed as four-hour Academic Half-Day (AHD) activities with a 1:5 instructor-to-learner ratio. Learner levels map to D1 (Junior) and D2 (Senior). Scenarios integrate CRM (communication, leadership/followership, role clarity, situational awareness, shared mental model).

## Simulation Program Perioperative Nursing Care Diploma

| Theme                               | Learners    | Objectives                                                                                                                                                                                                                                                                       | Simulation Modality / Challenges                                                                       |
|-------------------------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Surgical Safety & Time-Out          | D1 (Junior) | Lead the WHO Surgical Safety Checklist and confirm site, side, and procedure<br>Escalate and resolve count discrepancies (sponges/instruments/needles)<br>Maintain sterile field and document safety checks                                                                      | High-Fidelity OR mock-up, Standardized Team; Count-trainer; Incident escalation drill                  |
| Airway Crisis in OR (CICO support)  | D1–D2       | Prepare airway cart and assist during failed intubation algorithm<br>Support front-of-neck access setup; maintain sterile field and equipment readiness<br>Coordinate roles and call for help early (anesthesia/ENT)                                                             | High-Fidelity Airway Manikin, Video laryngoscopy trainer, Cricothyroidotomy task trainer (assist role) |
| Malignant Hyperthermia (MH)         | D1–D2       | Recognize early signs (ETCO <sub>2</sub> rise, rigidity, tachycardia) <ul style="list-style-type: none"> <li>• Activate MH protocol and prepare/assist Dantrolene mixing and delivery</li> <li>• Implement active cooling, monitor labs, and coordinate MTP if needed</li> </ul> | High-Fidelity Anesthesia Sim; MH cart drill; Time-based Dantrolene mixing challenge                    |
| Massive Hemorrhage / MTP Activation | D2 (Senior) | Trigger Massive Transfusion Protocol and ensure sample labeling/traceability<br>Coordinate rapid infuser, cell saver, and warming devices<br>Anticipate coagulopathy and communicate with blood bank                                                                             | High-Fidelity OR Sim, Blood-product workflow trainer; Communication with blood bank (SP)               |

| Theme                                         | Learners    | Objectives                                                                                                                                                                                                                        | Simulation Modality / Challenges                                                 |
|-----------------------------------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Electrosurgery & OR Fire Safety               | D1–D2       | <p>Apply fire triad prevention (oxidizer, fuel, ignition)</p> <p>Manage airway fire and surgical field fire with immediate sequence</p> <p>Inspect ESU grounding and prevent burns</p>                                            | High-Fidelity OR Sim; ESU safety trainer; Fire drill with extinguishing protocol |
| Perioperative Anaphylaxis                     | D1–D2       | <p>Recognize peri-induction anaphylaxis and start treatment bundle</p> <p>Prepare/assist epinephrine dosing and airway support</p> <p>Document adverse reaction and prepare allergy alert for future care</p>                     | High-Fidelity Anesthesia Sim; Medication safety station                          |
| Transfusion Reaction (Intraoperative)         | D1–D2       | <p>Detect acute hemolytic reaction signs and stop transfusion immediately</p> <p>Follow reaction workup: return blood, labs, and documentation</p> <p>Communicate with anesthesia/surgeon and blood bank</p>                      | Task trainer (IV/line setup), Process simulation with blood bank (SP/phone)      |
| Specimen Handling & Chain of Custody          | D1 (Junior) | <p>Label and verify patient/specimen details with two identifiers</p> <p>Select correct fixative and container; manage fresh/frozen specimens</p> <p>Ensure handover to pathology per policy and log documentation</p>            | Specimen workflow bench; Labeling/IT system sandbox; Error-trap challenges       |
| Patient Positioning & Nerve Injury Prevention | D1–D2       | <p>Set up positioning devices (lithotomy, prone, beach-chair, lateral)</p> <p>Pad pressure points and protect nerves (ulnar, peroneal, brachial plexus)</p> <p>Perform safety re-checks at critical intraoperative milestones</p> | OR bed trainer, Positioning mannequins; Checklist-based assessment               |

| Theme                                       | Learners    | Objectives                                                                                                                                                                                              | Simulation Modality / Challenges                                                                                      |
|---------------------------------------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Retained Surgical Item (RSI) Sentinel Event | D2 (Senior) | Run escalation pathway for discrepant counts<br>Coordinate intraoperative imaging and field search<br>Lead debrief, documentation, and incident reporting                                               | High-Fidelity OR mock-up; Count-trainer; Imaging request and escalation drill                                         |
| Robotic/Laparoscopic Conversion to Open     | D2 (Senior) | Prepare robotic docking/undocking and conversion tray<br>Anticipate equipment changes and suction/lighting needs<br>Maintain sterile field while reconfiguring room efficiently                         | Dry lab with robotic arms (demo) + OR mock-up; Time-pressured conversion drill                                        |
| Obstetric Hemorrhage (Cesarean)             | D1–D2       | Recognize PPH risk factors and prepare uterotonics and blood products<br>Assist in balloon tamponade setup and surgical hemostasis<br>Coordinate neonatal team readiness and maternal safety checks     | High-Fidelity Birth Manikin; PPH toolkit; Team communication with NICU (SP)                                           |
| Pediatric Airway & Emergence                | D1–D2       | Assist with pediatric airway equipment sizing and preparation<br>Support emergence agitation management and PACU handover<br>Apply safeguarding and family-centered communication                       | Pediatric airway manikin; PACU handover role play (SBAR)                                                              |
| Thoracotomy (Emergency Setup & Assistance)  | D2 (Senior) | Prepare thoracotomy set and chest retractor; ensure suction and light<br>Anticipate instruments and chest tube setup; maintain counts<br>Assist with sterile field expansion and crisis role assignment | Chest wall task trainer / 3D-printed thorax; OR mock-up<br>(Note: model substitutes for “Need Model for Thoracotomy”) |

| Theme                                                     | Learners    | Objectives                                                                                                                                                                                                     | Simulation Modality / Challenges                                                                                                |
|-----------------------------------------------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Ultrasound-Guided Pericardiocentesis – Nursing Assistance | D2 (Senior) | <p>Prepare ultrasound, sterile tray, and emergency medications</p> <p>Maintain sterile field; monitor vitals and document events</p> <p>Coordinate post-procedure care and specimen labeling (if aspirate)</p> | <p>Cardiac phantom/gel model with US; Task trainer</p> <p>(Note: model substitutes for 'Need Model for Pericardiocentesis')</p> |
| PACU Airway & Pain Crisis                                 | D1–D2       | <p>Recognize airway obstruction and hypoventilation in PACU</p> <p>Implement oxygen therapy, airway maneuvers, and call for help</p> <p>Apply multimodal analgesia escalation and monitor side effects</p>     | <p>High-Fidelity PACU bay sim; Monitoring simulator; SP interactions</p>                                                        |



## Universal Topics – Communication, Consent, and Human Factors (Micro-Sim Sessions)

| Theme                          | Learners | Objectives                                                                                                                                                               | Modality / Notes                                       |
|--------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| Consent & Disclosure           | D1–D2    | Obtain informed consent with risks/benefits/alternatives<br>Perform structured disclosure of adverse events<br>Document consent and disclosure per policy                | Standardized Patients (SPs); Checklist; Policy mapping |
| Handover & Team Communication  | D1–D2    | Use SBAR for OR↔PACU handover<br>Lead briefings/debriefings and clarify roles<br>Close the loop on critical tasks                                                        | SPs / Team role play; Timer-based drills               |
| Conflict Resolution & Advocacy | D2       | Escalate safety concerns assertively (CUS/Two-Challenge rule)<br>Mediate intra-team conflict under time pressure<br>Advocate for patient safety in hierarchical settings | SPs; Scenario-based feedback; Reflection prompts       |

## Appendix-E

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