



General Surgery

Description:

- Attend outpatient clinics in General surgery, Urology, Neuro and Orthopaedics.
- Observe Outpatient procedures like OGD scopies, catheterisations, suturing etc.
- Attend Ward rounds with consultants .
- History taking and physical examinations in clinics and in the wards.
- Order relevant investigations, present cases as bedside clinics and monitor the progress of patients.
- Observe various Open and Laparoscopic surgeries in operation theaters.

Modules:

Essential Surgical Skills & Clinical Decision Making

Target Audience: Final Year MBBS Students (Phase III, Part II)

Department: General Surgery

Duration: 6 Weeks (6 Modules)

Pedagogical Framework: Competency-Based Medical Education (CBME) – Emphasis on “Knows How” “Shows How” and “Does”. Nature of learning will be Supervised, Experiential, Immersive & Self Directed.

Preceptors: Faculty of the Surgery Department

Number of Students: 3-5

1. Prerequisites for Joining

To ensure students can actively participate in clinical duties, candidates must have:

- Successfully completed **MBBS Phase III Part I**.
- Cleared the **General Surgery** clinical posting of the previous academic year.
- Basic certification in **BLS (Basic Life Support)** is desirable but not mandatory (can be covered in Week 1).
- Submission of a "Statement of Purpose" (150 words) explaining their interest in surgery.

2. Specific Learning Objectives (SLOs)

The elective targets the three domains of learning:

A. Knowledge (Cognitive Domain)

- **Anatomy & Pathology:** Correlate surgical anatomy with pathology for common conditions (Appendicitis, Cholecystitis, Hernias, Breast lumps).
- **Physiology:** Explain the physiological basis of shock, fluid & electrolyte balance, and the metabolic response to trauma.
- **Decision Making:** Formulate a differential diagnosis for an "Acute Abdomen" and justify the choice of investigation (USG vs. CT).

Guidelines: Describe the WHO Surgical Safety Checklist and antibiotic prophylaxis guidelines.

B. Skills (Psychomotor Domain)

- **Basic Skills:** Demonstrate correct hand-washing (surgical scrub), gowning, and gloving techniques.
- **Procedural:** Perform basic suturing (simple interrupted, mattress), knot tying (one-hand/two-hand), and suture removal on mannequins/patients under supervision.
- **Clinical:** Perform a complete focused surgical examination (Abdominal, Hernia, Thyroid, Breast, Peripheral Vascular).
- **Ward Procedures:** Insert a Nasogastric (Ryle's) tube and a urinary catheter (Foley's) in a simulation or supervised clinical setting.
- **Documentation:** Write a correct admission note, operation note, and discharge summary.

C. Attitude, Ethics & Communication (Affective Domain)

- **Consent:** Demonstrate the ability to obtain informed consent for a minor procedure, explaining risks and benefits in the patient's local language.
- **Empathy:** Communicate effectively and empathetically with patients and relatives, especially when breaking bad news or discussing complications.
- **Teamwork:** Demonstrate respect for all OT staff (nurses, technicians) and adhere to OT discipline.

3) Weekly Module Structure

a) Modules

- i) Fundamentals of Surgical Practice & Asepsis
- ii) Perioperative Care & Fluid Management
- iii) The Acute Abdomen (Emergency Surgery)
- iv) Trauma, Burns & Wound Management
- v) Surgical Oncology & Hernias
- vi) Minimal Access Surgery & Endoscopy

b) Timetable of Activities

Daily Schedule:

- 09:00 – 10:00: Morning Rounds / Case Discussion
- 10:00 – 13:00: OT Assist / OPD / Ward Procedures
- 14:00 – 16:00: Skills Lab / Simulation / Tutorial

Week 1: Fundamentals of Surgical Practice & Asepsis

Goal: Master sterility and basic OT behavior.

| Day | Clinical Activity (09:00 - 13:00) | Academic/Skills Session (14:00 - 16:00) |
|-----|---|--|
| Mon | Dept Orientation: Intro to faculty/residents. Tour of OT complex (Zones, Sterilization area). | Theory: Principles of Asepsis, Sterilization methods (Autoclave, ETO), and Universal Precautions. |
| Tue | OT Observation: Observe OT workflow, anesthesia induction, and patient positioning. | Skills Lab: Hand washing (Surgical Scrub), Gowning, and Gloving (Closed/Open methods). |
| Wed | Minor OT: Observe minor procedures (Lipoma excision, I&D). Introduction to surgical instruments. | Skills Lab: Knot Tying (Reef knot, Surgeon's knot) on boards (One-hand & Two-hand techniques). |
| Thu | Ward Rounds: Wound dressing, trolley setup. Observe dressing changes. | Skills Lab: Basic Suturing on foam pads (Simple Interrupted, Mattress sutures). |
| Fri | Pre-Op Ward: Patient preparation for surgery (Consent, marking, NBM). | Simulation: WHO Surgical Safety Checklist role-play. BLS Refresher. |

Week 2: Perioperative Care & Ward Procedures

Goal: Manage patient fluids, tubes, and basic ward interventions.

| Day | Clinical Activity (09:00 - 13:00) | Academic/Skills Session (14:00 - 16:00) |
|-----|---|---|
| Mon | PAC Clinic: Pre-Anesthetic Checkup. History taking for fitness (ASA grading). | Theory: Physiology of Fluid & Electrolyte balance. Maintenance vs. Replacement fluids. |
| Tue | Post-Op Ward: Assess vitals, urine output, and drain charts of post-op patients. | Skills Lab: IV Cannulation and Phlebotomy techniques on mannequin arms. |
| Wed | Ward Procedures: Observe/Assist Ryle's Tube insertion. | Skills Lab: Nasogastric (Ryle's) Tube insertion steps and indications. |
| Thu | Ward Procedures: Observe/Assist Foleys Catheterization. | Skills Lab: Male & Female Urinary Catheterization (Foley's) on mannequins. |
| Fri | Discharge Planning: Drafting Discharge Summaries and advice on discharge. | Case Discussion: Complications of IV therapy (Phlebitis, Extravasation) & Blood Transfusion protocols. |

Week 3: The Acute Abdomen (Emergency Surgery)

Goal: Diagnose and triage surgical emergencies.

| Day | Clinical Activity (09:00 - 13:00) | Academic/Skills Session (14:00 - 16:00) |
|-----|---|---|
| Mon | Emergency Ward: Triage of acute pain patients. History taking: Pain analysis (SOCRATES). | Theory: Differential Diagnosis of RIF pain (Appendicitis) vs. Upper Abdominal pain (Cholecystitis/Pancreatitis). |
| Tue | Radiology Rounds: Review X-rays (Gas under diaphragm, Air-fluid levels) & USG films. | Tutorial: Interpretation of Plain Abdominal X-rays and Contrast CT scans. |
| Wed | Emergency OT: Shadow Registrar for emergency appendectomy or perforation closure. | Case Scenario: Management of Intestinal Obstruction (Conservative vs. Surgical). |
| Thu | Ward Follow-up: Monitor non-operative management (e.g., Pancreatitis). | Theory: Gastrointestinal Bleeding (Upper vs. Lower) – Initial resuscitation. |
| Fri | Grand Rounds: Bedside presentation of an Acute Abdomen case. | Assessment: DOPS - Abdominal Examination. |

Week 4: Trauma, Burns & Wound Management

Goal: Apply ATLS principles and manage wounds.

| Day | Clinical Activity (09:00 - 13:00) | Academic/Skills Session (14:00 - 16:00) |
|-----|--|--|
| Mon | Trauma Bay/Casualty: Primary Survey (ABCDE) observation on arrival of trauma victims. | Theory: ATLS Principles: Primary vs. Secondary Survey. Shock classification. |
| Tue | Septic Ward: Diabetic foot ulcers assessment and dressing. | Skills Lab: Wound Debridement principles. Vacuum-Assisted Closure (VAC) demo. |
| Wed | Burns Unit: Burn depth assessment, TBSA calculation (Rule of 9s). | Tutorial: Fluid Resuscitation in Burns (Parkland Formula). |
| Thu | Minor OT: Suturing of lacerations (under supervision) or suture removal. | Skills Lab: Advanced suturing (Subcuticular) and Suture Removal techniques. |
| Fri | Trauma Team: FAST Scan demonstration (Focused Assessment with Sonography for Trauma). | Ethics: Medico-legal aspects of trauma documentation (MLC). |

Week 5: Surgical Oncology & Hernias

Goal: Evaluation of swellings and lumps.

| Day | Clinical Activity (09:00 - 13:00) | Academic/Skills Session (14:00 - 16:00) |
|-----|--|---|
| Mon | Surgical OPD: History and Exam of Inguinal/Ventral Hernias. | Theory: Anatomy of Inguinal Canal. Types of Hernias and Repairs (Mesh vs. Non-mesh). |
| Tue | Surgical OPD: Breast Clinic – Triple Assessment of breast lumps. | Skills/Demo: FNAC technique vs. Tru-cut Biopsy (Indication & Interpretation). |
| Wed | Surgical OPD: Thyroid swelling examination. Check for pressure symptoms. | Theory: Approach to a Neck Swelling / Thyroid Nodule (Bethesda system). |
| Thu | Elective OT: Observe Hernioplasty or Mastectomy/Thyroidectomy. Specimen handling. | Pathology Visit: Observe frozen section processing or grossing of specimens. |
| Fri | Tumor Board: Observe Multidisciplinary Team (MDT) discussion on cancer cases. | Student Presentation: Case presentation on a Hernia or Breast Lump. |

Week 6: Minimal Access Surgery & Endoscopy

Goal: Introduction to modern surgical technology.

| Day | Clinical Activity (09:00 - 13:00) | Academic/Skills Session (14:00 - 16:00) |
|-----|--|--|
| Mon | Laparoscopic OT: Intro to the "Tower" (Camera, Light source, Insufflator). | Theory: Physiology of Pneumoperitoneum. Basics of Laparoscopy. |
| Tue | Skills Lab: Laparotrainer exercises – Hand-eye coordination, Peg transfer. | Skills Lab: Continued Laparotrainer practice (Camera navigation). |
| Wed | Laparoscopic OT: Assist (Camera holding) for Lap Cholecystectomy or Appendectomy. | Video Session: Review of surgical videos to identify anatomy and complications. |
| Thu | Endoscopy Suite: Observe Upper GI Endoscopy and Colonoscopy. | Theory: Indications for Endoscopy (Diagnostic vs. Therapeutic). |
| Fri | Final Assessment: Review of Logbook/Portfolio. Exit Interview. | Feedback: Course feedback and Certificate Distribution. |

4. Integration with the Surgery Team

- **Unit Assignment:** The student will be attached to one surgical unit (e.g., Unit II) for continuity.
- **Responsibilities:**
 - Attend daily morning rounds.
 - Present 1 case per week during grand rounds.
 - Scrub in for surgeries (holding retractors, cutting sutures, camera holding in laparoscopy).
 - Follow up on patients' lab reports and radiology.

5. Learning Resources

- **Textbooks:** Bailey & Love's Short Practice of Surgery, SRB's Manual of Surgery.
- **Online:**
 - *SurgicalCore* (or institutional library access).
 - *Geeky Medics* (for OSCE guides).
 - *NPTEL/Swayam* Medical lectures.

Departmental: Skills Lab Mannequins, Suture pads, Laparotainers.

6. Assessment of the Student

Assessment will be formative. The student must maintain a **Logbook/Portfolio** containing:

1. **Daily Activity Log:** Brief entry of cases seen/assisted.
2. **DOPS (Direct Observation of Procedural Skills):** Minimum 3 procedures signed off by faculty (e.g., Suturing, Catheterization, Ryle's Tube).
3. **Case Reflections:** Two written reflections (approx. 500 words) on ethical dilemmas or complex cases observed.
4. **End-of-Elective Case Presentation:** A formal presentation of one case including literature review.

Grading: Satisfactory / Unsatisfactory (based on 75% attendance and completion of Portfolio).

7. Program Evaluation

The Elective Program will be evaluated by a systematic process of collecting and analysing information to judge a program's worth, effectiveness, and efficiency, determining if it achieves its goals, how it functions, and where improvements are needed for better outcomes and resource use. Feedback will be taken from all stakeholders (Students, Faculty, Administration & Management) about implementation, impact, and value of the electives. Research methods will be used to assess the program's design, processes, and results, guiding decisions on funding, continuation, or modification.

- **Student Feedback:** Anonymous survey at the end of Week 6 regarding module content, faculty availability, and skill acquisition utility.

- **Faculty Feedback:** Review of the student's integration into the team and professional conduct.

8. Certificate Format

Logos of SMCW SUHRC, SIU & Department of General Surgery

CERTIFICATE OF ELECTIVE COMPLETION IN SURGERY

This is to certify that **Mr./Ms. [Student Name]** (*Roll No.* _____) has successfully completed the Elective Rotation in "**Essential Surgical Skills & Clinical Decision Making**" held from **[Start Date]** to **[End Date]**.

During this period, the student completed **6 Modules** covering Fundamentals of Surgical practice & Asepsis, Perioperative Care, Emergency Surgery, Trauma burns & Wound Management, Surgical Oncology & Hernias and Minimal Access Surgery & Endoscopy. They have demonstrated satisfactory proficiency in the assigned learning objectives, including basic surgical skills, patient communication, and clinical care.

Performance Summary:

- Attendance: [Percentage]%
- Portfolio Assessment: Satisfactory
- DOPS Completed: Suturing, Catheterization, Wound Care.

Date: _____

Dean SMCW & SUHRC

Faculty Mentor

Head of Department (Signature & Seal) (Signature & Seal) Department of General Surgery