

**STUDY GUIDELINES FOR**  
***PLASTIC SURGERY RESIDENTS***  
**AT UNIVERSITY OF CHILD HEALTH SCIENCES**

## Course Overview

- Duration: 3.5 years
- Eligibility: MBBS degree from a recognized medical college plus 18 months G surgery
- Admission: Through entrance exams ( central induction policy)

## Study Materials

### **1. Textbooks:**

- "Plastic Surgery" by Peter C. Neligan
- "Grabb and Smith's Plastic Surgery" by Charles H. Thorne
- "Atlas of Plastic Surgery" by Samuel Noor

### **2. Journals:**

- Journal of Plastic, Reconstructive & Aesthetic Surgery (JPRAS)
- Plastic and Reconstructive Surgery (PRS)
- Annals of Plastic Surgery

### **3. Online Resources:**

- American Society of Plastic Surgeons (ASPS) website
- International Society of Aesthetic Plastic Surgery (ISAPS) website
- Plastic Surgery Education Network (PSEN)

# **FIRST YEAR STUDY MATERIAL**

## Key Topics

## **Clinical Component**

### **I. Basic Science**

1. Embryology and development of human tissues
2. Genetics and congenital abnormalities
3. Mechanism of healing of tissues, factors affecting the healing
4. Infection and its management
5. General principles of Surgery
6. The suture materials and suture techniques
7. Clinical examination of various systems and clinical photography
8. General anesthesia pre and post-operative care for general anesthesia
9. Local, regional and other nerve blocks
10. Hypotensive and hypothermic anesthesia
11. Management of benign and malignant lesions
12. Wound healing, wound care, dressings and splints
13. Fluid and electrolyte balance, acid base balance
14. Blood transfusions, ventilator support and critical care
15. Assessment of trauma, vascular emergencies embolism

### **II. General Topics**

1. History of Plastic Surgery
2. Scope of Plastic Surgery
3. Tissue distortion, tissue loss and its management
4. Tissue culture, Transplantation biology and its applications
5. Plastic Surgery instruments and equipment's
6. Maintenance of medical records, informed consent
7. Applications of computer and related programs
8. Social psychological, ethical and medico legal aspects communication  
Skills
9. Implants, orthotics and prosthesis and applied to Plastic Surgery
10. Tissue expansion and tissue distraction
11. Management of Leprosy, leprosy deformities and leprosy reconstructive surgery

12. Endoscopic Plastic Surgery
13. Advances, recent advances and current trends in Plastic Surgery
14. Principles of surgical audit, understanding journal and review articles, text books and reference books, critical assessment of articles
15. Research methodology and biostatistics
16. Arteriovenous malformations, varicose veins, chronic venous insufficiency
17. Meningomyelocoele, encephalocoele, spinal fusion defects, ventral defects, anorectal anomalies

### **III. Principal aspects of Plastic Surgery**

#### **Skin**

1. Anatomy and functions of skin
2. Diseases and other conditions affecting skin
3. Skin grafts, its take and behavior
4. Scars, unstable scars and scar contracture
5. Hypertrophic scars and Keloids
6. Flaps, anatomy and physiology, classification and applications
7. Pedicled skin flaps and tube pedicle

#### **Burns**

1. Thermal, Electrical, Chemical, Radiation, Burns
2. Burns shock, Pathophysiology, treatment, wound care, nutrition, sequel
3. Post burn contractures, deformities and its management
4. Tangential excision, skin cover, allograft, homograft, xenograft and its application in burns
5. Planning for burns care in disaster
6. Organization of Burns care unit
7. Rehabilitation following burns, psychological and social impact

## **SECOND YEAR STUDY MATERIAL**

## **Head and Neck**

1. Embryology, anatomy, growth and development of face and facial skeleton
2. Structure and development of teeth
3. Temporomandibular joint and its dysfunction
4. Fractures of facial skeleton, management, sequel and subsequent surgery
5. Reconstruction of ear, eyelid, lip, nose, cheek and soft tissues of face
6. Congenital deformities of face and syndromes
7. Cleft lip and palate, embryogenesis, management, orthodontics, velopharyngeal incompetences and speech therapy
8. Craniofacial abnormalities, clefts, syndromes, microsomia, synostosis and hypertelorism Ptosis of eyelids
9. Facial Paralysis
10. Orthognathic surgery
11. Surgery of neck associated with congenital and acquired deformities
12. Rhinoplasty – corrective, aesthetic and reconstructive
13. Benign and malignant lesions and tumors of head and neck, tumor biology, management including chemotherapy, adjuvant therapy and radiotherapy
14. Reconstruction of mandible, maxilla and other bony defects
15. Prosthetic rehabilitation
16. Reconstruction of upper aero digestive system

## **Thorax**

1. Congenital and acquired defects of thorax and abdomen and its reconstruction
2. Breast, anatomy, physiology, growth, development hormone influence, abnormalities, diseases, surgery and reconstruction, Gynecomastia
3. Reconstruction of full thickness defects of thorax and abdomen

## **Lower extremity**

1. Anatomy and biomechanics of locomotor system

2. Functional anatomy of foot
3. Congenital and acquired deformities of lower extremity
4. Management of tissue defects following trauma
5. Vascular and lymphatic's malformations of lower limb

### **Genitourinary**

1. Embryology and anatomy of the male and female genitourinary system and genitalia, undescended testis
2. Hypospadias, epispadias and ectopiavesicae, urinary diversion
3. Reconstruction of external genitalia
4. Vaginoplasty
5. Intersex
6. Infertility, vasectomy, tuboplasty, reconstruction

### **Upper limb**

1. Embryology and anatomy of hand and upper extremity
2. Clinical examination of hand and general principles of upper limb surgery
3. Acute hand injuries
4. Tendon injuries
5. vascular and Nerve injuries including brachial plexuses
6. congenital upper limb anomalies
7. Fractures and dislocations of hand and wrist
8. Injuries and disorders of nail
9. Electro diagnostic tests
10. Ischemic conditions and vasospastic disorders
11. Nerve compression syndromes
12. Surgery of spastic and tetraplegic hand
13. Infections and diseases of hand and its management
14. Congenital abnormalities of hand and its management
15. Tendon transfers
16. Lymphoedema
17. Benign and malignant tumors of hand
18. Rehabilitation of hand, physiotherapy, occupation therapy, splintage and

prosthesis

19.Rheumatoid arthritis

20.Common Tumors of upper limb

21.Reconstruction of thumb

22.Reconstruction of mutilated hand

23. Innervated flaps

**Third year Study material**

**Micro-surgery**

1. Principles of micro-surgery, micro vascular surgery and its applications
2. Replantations and revascularization surgery
3. Microvascular tissue transfer

**Aesthetic Surgery**

1. Chemical peeling, dermabrasion, laser treatment
2. Blepharoplasty
3. Surgery of ageing face
4. Body contouring, liposuction, abdominoplasty, hernioplasty
5. Reduction and augmentation mammoplasty
6. Hair transplant
7. Orthognathic aesthetic surgery

**Paediatric Plastic Surgery**

1. General principles of cleft lip and palate management
2. General principles of craniofacial surgery
3. General principles of hypospadias management
4. General principles of congenital hand surgery
5. Prominent ears

**Exam Preparation**

1. Intermediate Module:

- Pattern: Multiple Choice Questions (MCQs)
- Syllabus: General Surgery plus Basic plastic surgery

2. Exit Exam:

- Pattern: MCQs and Clinical Cases
- Syllabus: Entire MS Plastic Surgery curriculum

Tips

1. Create a study group
2. Set realistic goals and deadlines
3. Practice with sample questions
4. Attend workshops and conferences
5. Stay updated with recent advancements

Rotations:

1. General Surgery (18 months)
2. Burns Unit and Mayo hospital (6 months each)
3. Plastic Surgery Ward (2 years)

Key Topics:

1. Wound healing and management
2. Skin anatomy and physiology
3. Basic surgical skills (knot-tying, suturing)
4. Reconstructive surgery principles
5. Aesthetic surgery basics

Surgical Exposure:

1. Assist in minor procedures (e.g., skin biopsies, wound closures)
2. Observe major procedures (e.g., reconstructive surgeries, aesthetic surgeries)

Assessments:

1. Written exams (theory)
2. Practical exams (surgical skills)
3. Case presentations

## Year 2: Core Knowledge Year

Objective: Develop in-depth knowledge and skills in Plastic Surgery.

### Rotations:

1. Reconstructive Surgery (6 months)
2. Aesthetic Surgery (3 months)
3. Microsurgery (3 months)

### Key Topics:

1. Flap physiology and design
2. Reconstructive surgery techniques (e.g., skin grafting, flap coverage)
3. Aesthetic surgery procedures (e.g., facelift, breast augmentation)
4. Microsurgical techniques (e.g., nerve repair, vessel anastomosis)
5. Craniofacial surgery principles.

### Surgical Exposure:

1. Perform minor procedures (e.g., skin biopsies, wound closures)
2. Assist in major procedures (e.g., reconstructive surgeries, aesthetic surgeries)

Assessments:

1. Written exams (theory)
2. Practical exams (surgical skills)
3. Case presentations
4. Journal club participation

Year 3: Advanced Training Year

Objective: Refine skills and develop expertise in Plastic Surgery.

Rotations:

1. Advanced Reconstructive Surgery (6 months)
2. Advanced Aesthetic Surgery (3 months)
3. Research and Academic (3 months)

Key Topics:

1. Complex reconstructive cases (e.g., trauma, cancer reconstruction)
2. Advanced aesthetic procedures (e.g., body contouring, facial rejuvenation)
3. Research methodology and academic writing
4. Leadership and management in Plastic Surgery

### Surgical Exposure:

1. Perform major procedures (e.g., reconstructive surgeries, aesthetic surgeries)
2. Mentor junior residents

### Assessments:

1. Written exams (theory)
2. Practical exams (surgical skills)
3. Case presentations
4. Research project presentation
5. Exit exam (theory and practical)

### Additional Requirements:

1. Attend conferences and workshops like micro course, paps annual conference, hand surgery conference.
2. Participate in journal clubs and academic discussions
3. Complete a research project
4. Present cases at national/international meetings

Certification:

1. Complete MS Plastic Surgery thesis
2. Pass exit exam (theory and practical)
3. Acquire degree from university