

**THE TAMILNADU DR.M.G.R. MEDICAL UNIVERSITY,
No.69, Anna Salai, Guindy, Chennai – 600 032.**

**D.M/ M.Ch
SUPER SPECIALTY DEGREE COURSE**



SYLLABUS AND CURRICULUM

2017-2018

**M.Ch - PLASTIC AND RECONSTRUCTIVE
SURGERY**

THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY, CHENNAI
Syllabus – M.Ch. Plastic and Re-constructive Surgery

AIMS&OBJECTIVES

The syllabus for M.Ch.(Plastic and Re-constructive Surgery) Course should comprehensively cover all the subjects in Plastic and reconstructive surgery during 3 years of study period. The student who undergoes the course should have an exposure to all the facets of plastic and reconstructive surgery and develop adequate knowledge and skill to treat the patients competently after acquiring the degree.

THEORY SYLLABUS

General Principles:-

1. History of Plastic Surgery and its broad scope at the present time.
2. Anatomy and functions of skin.
3. Split Skin Grafts and Full thickness Skin Grafts, their take and effects
4. Local skin flaps.
5. Pedicled skin flaps and tubed flaps.
6. Unstable scar and scar contracture.
7. Care of wounds, dressing, techniques and splints.
8. Wound healing.
9. Grafts – fat, fascia, tendon, nerve, cartilage, bone.
10. Infective skin gangrene.
11. Hospital infections.
12. Suture materials.
13. Surgical instruments.
14. Implant materials used in Plastic Surgery.
15. Principles of genetics and general approach to the management of congenital malformations.
16. Flaps-Fasciocutaneous muscle, musculocutaneous, osseocutaneous, free flaps.
17. Pre fabricated, Prelaminated, Chimeric flaps.
18. Local anaesthesia, nerve blocks, regional anaesthesia.
19. Principles of anaesthesia for infants, adults, hypothermia, hypotensive anaesthesia.
20. Tissue expansion.

21. Keloid, hypertrophic scars.
22. Endoscopy in Plastic Surgery.

Face:-

1. Growth and development changes in face, anatomy of facial skeleton.
2. Deformities of face in Hansen's disease.
3. Temporomandibular joint dysfunctions.
4. Fractures- nose, maxilla, mandible, zygoma, orbit-early management and treatment of sequelae.
5. Corrective Rhinoplasty.
6. Reconstructive Rhinoplasty.
7. Facial paralysis.
8. Reconstruction of external ear.
9. Reconstruction of eyelids, ptosis.
10. Congenital deformities of face and jaw bone.
11. Reconstruction of the lips.
12. Reconstruction of the scalp and calvarial defects.
13. Reconstruction of orbit.
14. Hemifacial atrophy.

Cleft Lip and Palate and Craniofacial Anomalies:-

1. Embryology of head and neck (excluding Central Nervous System).
2. Regional anatomy of head and neck.
3. Embryogenesis of cleft lip and palate.
4. Cleft lip and palate, alveolar clefts.
5. Velopharyngeal incompetence.
6. Orthodontics, speech therapy in cleft lip and palate.
7. Principles of craniofacial surgery.
8. Rare craniofacial clefts, Tessier's clefts.
9. Craniosynostosis, hypertelorism, craniofacial microsomia.

Tumours of Head and Neck and Skin:-

1. Vasoformative lesions of the skin and adenexa.
2. Jaw tumours.
3. Tumours of upper Aerodigestive system and Reconstruction.
4. Reconstruction of mandible.
5. Reconstruction of maxilla.

6. Malignant and benign tumours of head and neck.
7. Tumours of skin.
8. Principles of prosthetic replacement of Jaw defects.

Trunk:-

1. Reconstruction of full thickness defects of the abdomen and thorax.
2. Decubitus ulcer.
3. Breast reconstruction.
4. Reconstruction of defects over the spine.
5. Reconstruction of defects of Perineum.

Aesthetic Surgery:-

1. Chemical peeling and dermabrasion.
2. Blepharoplasty.
3. Face lift.
4. Abdominoplasty.
5. Body contouring, liposuction.
6. Reduction mammoplasty.
7. Augmentation mammoplasty.
8. Laser therapy.
9. Aesthetic Rhinoplasty.
10. Hair transplantation.
11. Fat grafting.
12. Botulinum toxin injection.
13. Skin needling.
14. Dermal fillers.
15. Gynaecomastia management.
16. Orthognathic Surgery.

Lower Extremity:-

1. Functional anatomy of foot.
2. Lymphedema.
3. Reconstructive surgery of lower extremity.
4. Deformities of leg and foot in Hansen's disease.
5. Diabetic Foot.

Genito Urinary:-

1. Embryology of the male and female external genitalia.
2. Anatomy of the male and female external genitalia.
3. Hypospadias.
4. Epispadias and ectopic vesicae.
5. Reconstruction of external genitalia.
6. Vaginoplasty.
7. Trans-sexualism (intersex).
8. Gender Reassignment Surgery.

Hand:-

1. Embryology of upper extremity.
2. Functional anatomy of hand.
3. Examination of hand.
4. General principles of hand surgery.
5. Treatment of acute hand injuries.
6. Finger tip injuries.
7. Flexor tendon injuries.
8. Extensor tendon injuries.
9. Principles of reconstruction in mutilating hand injuries.
10. Fractures of hand and dislocation of hand –metacarpals, phalanges.
11. Nail injuries, grafting.
12. Pollicisation.
13. Thumb reconstruction.
14. Peripheral nerve injuries, electro diagnostic tests.
15. Brachial plexus injury.
16. Innervated flaps.
17. Vascular malformations of upper extremity.
18. Lymphedema in upper extremity.
19. Compartment syndrome & Volkmann ischaemic contracture.
20. Ischaemic conditions of upper extremity.
21. Vasospastic conditions of upper extremity.
22. Nerve compression syndromes.
23. Surgery for spastic and tetraplegic hand.
24. Problems of small joints.
25. Dupuytren's disease.
26. Principles and treatment of old and neglected hand deformities.

27. Rheumatoid arthritis of hand.
28. Hand infections.
29. Congenital deformities of hand, finger, thumb.
30. Tendon transfers for radial, ulnar and median nerve injury.
31. Deformities of hand in Hansen's disease.
32. Benign and malignant tumours of hand.
33. Rehabilitation of hand, prosthesis.

Microvascular:-

1. Principles of microsurgery and its applications in plastic surgery.
2. Replantation and revascularization surgery.
3. Microvascular tissue transfers.
4. Composite Tissue Allotransplantation.

Burns:-

1. Thermal burns.
2. Electrical burns.
3. Chemical burns.
4. Radiation burn.
5. Pathophysiology of burn shock.
6. Nutrition in burns.
7. Facial burns.
8. Tangential excision and sequential excision.
9. Surgical reconstruction in Burns and its sequelae.
10. Burn wound infections and sepsis.
11. Principles of planning in event of burn disaster.
12. Organization of Burns Unit.
13. Skin Bank.

Bioethics

1. Respect human life and the dignity of every individual
2. Refrain from supporting or committing crimes against humanity and condemn all such acts
3. Treat the sick and injured with competence and compassion and without prejudice and to apply knowledge and skills when needed.
4. Protect the privacy and confidentiality of those for whom we care and breach that confidence only when keeping it would seriously threaten their

health and safety or that of others

5. Work freely with colleagues to discover, develop, and promote advances in medicine and public health that ameliorate suffering and contribute to human well being
6. Educate the public about present and future threats to the health of humanity
7. Advocate for social, economic, educational and political changes that ameliorate suffering and contribute to human well being.
8. Teach and mentor those who follow us, for they are the future of our caring profession.

CLINICAL TRAINING

The students will be clinically trained in parent department during the 3 years course.

Postings for 6 weeks at MCI Recognised centres for M.Ch. Plastic Surgery with more advanced management.

1. Burns: 2 weeks
2. Hand Surgery: 2 weeks
3. Facio-maxillary surgery: 2 weeks.

During II year, students are encouraged to undergo special postings for learning new advanced techniques / Procedure / Skills in institutions of higher repute where the requisite facilities are available without affecting the duties of the parent department.

SKILL TRAINING:

The student must have acquired certain surgical skills in a structured manner during the three year period of his course. These skills will be achieved by either assisting at the surgery or performing the surgery under the supervision of the teacher.

I year

Should have assisted at the following surgeries	Should have performed the following surgeries
Distant flaps	Skin grafting
Facial bone fracture fixation	Scar revision / Z plasty
Surgery for Burns Reconstruction	Wound dressing techniques

Management of Gynaecomastia Regional flaps Hand injury management – nerve, tendon repairs, hand bones fracture fixation	Local flaps
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II year

Should have assisted at the following surgeries	Should have performed the following surgeries
Tissue expansion surgery Reconstruction of defects on eyelids/nose/lip Microtia surgery Cleft lip and palate repair Post-oncological reconstruction with pedicled flaps Tendon transfer surgeries Replantation surgery – hand and fingers Reconstruction procedures on breast	Distant flaps Facial bone fracture fixation Surgery for Burns Reconstruction Management of Gynaecomastia Regional flaps Hand injury management nerve, tendon repairs, hand bones fracture fixation

III year

Should have assisted at the following surgeries	Should have performed the following surgeries
Hypospadias surgery Nerve surgery for Facial nerve paralysis Genital surgery Aesthetic surgery Microvascular Free flaps Brachial Plexus surgery	Tissue expansion surgery Reconstruction of defects on eyelids/nose/lip Microtia surgery Cleft lip and palate repair Post oncological reconstruction with pedicled flaps Tendon transfer surgeries Replantation surgery – hand and fingers Reconstruction procedures on breast

TEACHING METHODOLOGY

1. Planning session with entire Faculty and students – once in a week
2. OP clinics – 2 days/week
3. Ward rounds - 2 days/week
4. Wound care clinics - 2 days/week
5. Per-operative teaching sessions - 2 days/week
6. Classroom lectures - once in a week
7. Video teaching session - once in a week
8. Journal reading - once in a week
9. Symposium - once in a week
10. Guest lecture - once in 6 months

RESEARCH WORK

The candidate is introduced to the field of research in Plastic and reconstructive surgery; both at clinical and laboratory level.

The candidate will be trained in the ability to

- Frame a research question.
- Plan a study to answer the question.
- Collect the relevant information and
- Evaluate appropriately the collected data to draw a conclusion.

The candidate should become conversant with the reporting of these results as a research paper, in journals and as a presentation in conferences.

The activities would consist of:

Planning and organizing relevant studies to be submitted as a Research paper at the end of the course.

Students should compulsorily attend Research Methodology workshop conducted by the University within first six months of M.Ch Course.

LOG BOOK:

The Postgraduate student of a Postgraduate Degree Course in

Super specialties shall maintain Log Book of the work carried out by them and the training programme undergone during the period of training including details of surgical operations assisted or done independently by.

The Log Book shall be checked and assessed by the faculty members imparting the training.

Periodical evaluation of Log Book to be done by the Head of the Department as per 52nd SAB.

The Evaluation of the candidates in both theory and practical aspects will help the candidate in the improvement of his/her knowledge skills & attitude.

COMPETENCY ASSESSMENT:

Overall:

1. Communication / Commitment / Contribution / Compassion towards patients and Innovation	-	10 Marks
2. Implementation of Newly learnt techniques	-	10 Marks
3. Documentation of case sheets / discharge Summary / Review	-	10 Marks
4. Number of cases presented in Clinical Meetings/ Journal Clubs / Seminars / Papers presented in Conference.	-	10 Marks
5. No. Of Medals/ Certificates won in the conference / Quiz competitions and other academic meetings with details.	-	10 Marks
Total		----- 50 Marks -----

Assessment	I	- February	-	First Year
	II	- August	-	First Year
	III	- February	-	Second Year
	IV	- August	-	Second Year
	V	- February	-	Third Year
	VI	- May	-	Third Year

VIVA INCLUDING COMPETENCY ASSESSMENT – 100 Marks (50+50)

THEORY EXAMINATION

Paper I - Basic Sciences and General Principles in Plastic Surgery
 Paper II - Plastic Surgery – Regional
 Paper III - Plastic Surgery - Applied
 Paper IV - Plastic surgery as Applied to Allied Sciences and Recent Advances in Plastic Surgery

Each Paper will contain

1. Essay questions (2) - $2 \times 15 = 30$ Marks
2. Short Notes (10) - $10 \times 7 = 70$ Marks

 Total 100 Marks

PRACTICAL SCHEME:

Particulars	Time for candidate to examine the cases	Time for examiners to question the candidates	Maximum Marks
Long Case	1 Case x 60 Minutes	60 Minutes	100
Short Case	2 Cases x 15 Minutes	30 Minutes	100
Ward Rounds	3 Patients x 10 Minutes	30 Minutes	100
OSCE	5 Stations x 3 Minutes	15 Minutes	50
Viva Voce		15 Minutes	100
Log Book			50
Total			500

As per Medical Council of India Post Graduate Medical Education Regulations 2000 (amended upto 10th August 2016) clause **13.9**
A Postgraduate student of a Postgraduate degree Course in broad specialties/ Super Specialties would be required to present one poster presentation to read one paper at a National/State conference

and to present one Research paper which should be published/accepted for publication/sent for publication during the period of his Postgraduate studies so as to make him eligible to appear at the Postgraduate Degree Examination.

Apart from Poster/Oral paper presentation in National/State conferences, the Research paper published by the candidate in the University Journal of Medical Sciences will be considered as equivalent to the Research Paper as mentioned in 13.9. clause. Case Reports can also be published in University Journal of Medical Sciences but case reports will not be considered as Research Paper.

The candidate can also present Research Paper as per Clause 13.9 of Post Graduate Education Regulation 2000, and if the article sent for publication by the candidate as primary author or corresponding author which has not yet been published/accepted for publication, the candidate should submit a letter from the HOD, stating that the article sent for publication is of publishable merit and the proof of the Research Article submitted to the Journal for publication should be sent to the university forwarded through the HOD [as per 53rd SAB]

The student can submit articles for the University journal anytime from the time of registration till 6 months prior to theory examination.

OSCE: 5 stations

1. Clinical photograph of clinical scenario
2. Clinical photograph of clinical scenario
3. Clinical photograph or video of Operative surgery
4. Photograph of Recent Advances in Plastic Surgery or Equipment used in Plastic surgery
5. Photograph of Rehabilitation aids

REFERENCE BOOKS

1. Paediatric Burns-Total Management of the Burned Child by Marella L Hanumadass and K Mathangi Ramakrishnan
2. Grabb and Smith – Plastic Surgery
3. Mc Gregor: Fundamental Techniques of Plastic Surgery
4. Plastic Surgery by Peter C. Neligan
5. Green's Operative Hand Surgery

****Note:** The editions are as applicable and the latest editions shall be the part of the syllabi.

JOURNALS

1. BJPS: British Journal of Plastic Surgery
2. PRS: Plastic and Reconstructive Surgery
3. IJPS: Indian Journal of Plastic Surgery
4. JHS: Journal of Hand Surgery
5. Journal of Reconstructive Microsurgery
