



MGM INSTITUTE OF HEALTH SCIENCES

(Deemed University u/s 3of UGC Act, 1956)

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Syllabus for M. Ch. (Plastic Surgery)

{Approved as per BOM. 20/2011, dated 30.09.2011, Item 4.4 (2), MGMIHS, Navi Mumbai}



MGM Institute of Health Sciences, Navi Mumbai

Syllabus of M.Ch. Plastic Surgery

SYLLABUS MCH. PLASTIC SURGERY

MGM Institute of Health Sciences, Navi Mumbai

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. Shock and pulmonary failure, blood transfusions, ventilatory support and critical care
15. Assessment of trauma, vascular emergencies embolism

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 equipments
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. Meningomyelocele, encephalocele, spinal fusion defects, ventral defects, anorectal anomalies

Genitourinary

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

Hand

1. Embryology and anatomy of hand and upper extremity
2. Clinical examination of hand and general principles of hand surgery
3. Acute hand injuries
4. Tendon injuries
5. Nerve injuries
6. Brachial plexus injuries
7. Fractures and dislocations of hand
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. Vascular malformations, tumors
21. Reconstruction of thumb
22. Reconstruction of mutilated hand
23. Innervated flaps

Micro-surgery

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

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

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

M.CH. TRAINING IN PLASTIC SURGERY
Recommendations of the Association of Plastic Surgeons of India October 1999
Pre Requisites of a Training Centre In Plastic Surgery

1. Minimum beds 20

A) Burn beds extra

B) Separate facility for women and infants

2. Staff

A) Professor

1

B) Associate Professor/Reader

1

C) Assistant Professor/Lecturer

1

D) Service Doctors will be extra whether trainees or others

Qualifications & experience as per MCI rules

3. Independent Operation theatre with requisite staff

4. Should take emergencies directly for primary care of cases pertaining to:

A) Hand trauma

B) Faciomaxillary trauma

C) Soft tissue trauma

D) Acute burns

5. Supporting facilities:

A) Physiotherapy & Occupational therapy

B) Orthostatic section for splint fabrication

C) Photography

D) Library-with all relevant books & periodicals

E) Experimental surgery laboratory for research and for practicing
microvascular surgical techniques is desirables and recommended.

F) Facilities for cadaveric dissection

PERIODIC INSPECTION OF CENTRE AFTER 5 YEARS TO MONITOR
WHETHER FACILITIES CONTINUE TO EXIST OR NOT.

Curriculum for M.Ch. Plastic Surgery

1. Selection criteria

A) Eligibility D.N.B./M.S. (General Surgery)

B) Entrance test

Written MCQ, short answer questions

(As per Direction No. 01/2008 dtd. 26/05/2008)

C) Syllabus Basic principles of general surgery as
Applied to plastic surgery
Fundamentals of plastic surgery

Selection on merit

2. Duration of training 3 years

3. Objectives of training

A. At the end of comprehensive training candidate should have acquired knowledge and understanding of:

- i) General plastic surgery
- ii) Hand surgery including trauma
- iii) Facio-maxillary surgery
- iv) Soft tissue trauma
- v) Burn injuries & their sequel
- vi) Aesthetic surgery
- vii) Micro vascular surgery

B. Should have acquired competence & skills to be able to:

- i) Manage & operate independently all emergencies pertaining to above disciplines.
- ii) Manage & operate independently common plastic surgery problems.
- iii) Apply basic techniques & proceed methodically to manage complicated problems in plastic surgery.

C. Should have acquired training in basic techniques of microvascular surgery.

4. Training methodology

A) For acquiring knowledge, understanding & its application

Weekly:

- a) Seminars
- b) Journal review
- c) Treatment planning session
- d) Group discussion
- e) Tutorials
- f) Grand rounds

B) For acquiring competence in clinical & surgical skills.

Candidate should work as full time residents & should have

- i) Duties in wards, outpatient operation theatre
- ii) Should be on emergency duties in turns.
- iii) Should be involved in pre & post operative management of case and in treatment planning.

- iv) Should be given gradually increasing responsibility in operative management
 - a) 1st as observer
 - b) Next as assistant
 - c) Operating under guidance
 - d) Operating independently
- v) A minimum number of procedures a trainee should have done/operated should be laid down & of these records are kept by trainee

C) For attaining competence in research methodology & experience in teaching

- i) Dissertation to be submitted before end of 2nd year
- ii) Trainer facilitates preparations by candidates of papers and presentation at conference.
- iii) Trainee is encouraged to attend & participate in workshops/conferences & CME programs

5. Evaluation/Assessment

A) Internal assessment

- a) Continuous assessment during the course of training for assessment of
 - i) Gain in knowledge
 - ii) Acquisition of operative competence in management of plastic surgery problems including emergencies.
- b) Assessment to be carried out by all teachers involved in training.
- c) Candidates maintain a log book recording all procedures they have done & assisted
- d) Results of assessment to be communicated to trainees for feedback of students
- e) Final assessment for award of M.Ch. degree

Examination at end of 2 ½ years.

Those who pass becomes chief residents for next 6 months

Those who fail get a chance to improve their deficiencies while still working and appear again at 3 years.

B) Examiners

External – 2

Internal - 1 or 2

M.Ch. PLASTIC SURGERY

RULES OF DISSERTATION

1. Topic of dissertation should be assigned to a candidate by teacher within one year after registration for MD and MS and within 6 months for DM and M.Ch. Those who take MD/MS after passing diplomas in the subject should be assigned immediately
2. Candidate should submit title of dissertation and place of work to the university within the above stipulated time
3. Candidate should submit the dissertation to the university 6 months before he is due to appear for exams.

RULES FOR DISSERTATION – Reforms suggested

1. SELECTION OF TOPIC

- a. Topic (structured synopsis of intended research) selected to be communicated to a board which approves it
- b. If required ethics committee approval???
- c. No repetition topics in the same academic year
- d. The thesis shall present and account of the candidate's own research. In special cases work done conjointly with other persons may be accepted, provided the Committee is satisfied about the extent of the candidate's part in the joint research.

Every candidate registered for a post graduate degree program shall carry out research on assigned project under the guidance of a recognized teacher. The result of this research work should be recorded, analyzed, written up and submitted in the form of a thesis. The applicants should prepare the thesis as per guidelines laid down by university.

The research topic should have 30% component of basic sciences and 70% component related to applied clinical sciences. The research topic must consist of a reasonable sample size and sufficient number of variables to give training to the candidate to conduct research, to acquire and analyse data.

The thesis work is given with an aim to develop a spirit of enquiry besides exposing the candidate to techniques of research, analysis and acquaintance with recent advances and learning to review literature in a given topic. The thesis should be submitted one year before the final examination.

2. COMMUNICATION

- a. By 3 months it should be communicated to the university and by 6 months sanction to be obtained

3. DURATION OF STUDY

- a. 1 ½ years
- b. The progress of a candidate should be reviewed annually by a Committee (which includes the teacher/supervisor) following a report by the candidate.

4. LAST DATE OF SUBMISSION

6 months before exams

RULES FOR EXAMINATION SCHEME FOR SUPER-SPECIALITY COURSES (DM/MCh)

SCHEME OF EXAMINATION AND PASSING HEADS:

“The examinations shall be organised on the basis of ‘Grading’ or ‘Marking system’ to evaluate and to certify candidate's level of knowledge, skill and competence at the end of the training. Obtaining a minimum of 50% marks in ‘Theory’ as well as ‘Practical’ separately shall be mandatory for passing examination as a whole. The examination for M.D./ MS, D.M., M.Ch shall be held at the end of 3rd academic year (After 6 terms). An academic term shall mean six month's training period.”

1. EXAMINERS

- All the superspeciality examiners shall be recognised Post Graduate Teachers holding recognised Post Graduate qualifications in the subject concerned as defined by the Medical Council of India.
- For all superspeciality Examinations, the minimum number of Examiners shall be four, out of which at least two (50%) shall be External Examiners, who shall be invited from other recognised universities from outside the State. Two sets of internal examiners may be appointed one for M.D./M.S. and one for diploma.
- Under exceptional circumstances, examinations may be held with 3 (three) examiners provided that at least two of them are external and Medical Council of India is intimated the justification of such action prior to publication of result. Under no circumstances, result shall be published in such cases without the approval of Medical Council of India.

2. NUMBER OF CANDIDATES

The maximum number of candidates to be examined in Clinical / practical and Oral on any day shall not exceed eight for M.D./M.S. degree, eight for diploma and three for D.M./M/Ch examinations.

3. NUMBER OF EXAMINATIONS

The university shall conduct not more than two examinations in a year, for any subject, with an interval of not less than 4 and not more than 6 months between the two examinations.

4. EXAMINATION PATTERN

The examination shall consist of: The Examination consists of: (i) Theory and (ii)

4.1 WRITTEN EXAMINATION:

Theory There shall be four theory papers, one paper out of these shall be on Basic Medical Sciences, and another paper on Recent Advances. The theory examination will be held

sufficiently earlier than the Clinical and Practical examination, so that the answer books can be assessed and evaluated before the start of the clinical/Practical and Oral examination.

The general pattern of questions in each written paper will be as under:

| | |
|---|------------|
| ➤ Five out of Six SAQ (Short Answer Questions) of 10 marks each | 50 |
| ➤ <u>Two LAQ (Long Answer Questions) of 25 marks each</u> | <u>50</u> |
| Total | 100 |

4.2 CLINICAL / PRACTICAL AND ORAL

Practical examination shall consist of carrying out special investigative techniques for Diagnosis and Therapy. M.Ch candidates shall also be examined in surgical procedures. Oral examination shall be comprehensive to test the candidate's overall knowledge of the subject. A candidate shall secure not less than 50% marks in each head of passing which shall include (1) Theory (2) Practical including clinical and viva voce examination.

M.Ch (Plastic Surgery)

Paper distribution

| |
|---|
| (PAPER – I Basic Medical Sciences related to plastic surgery) |
| (PAPER – II Principles and Practice of Plastic Surgery) |
| (PAPER – III Principles and Practice of Plastic Surgery) |
| (PAPER – IV Recent advances) |

SCHEME OF PRACTICAL EXAMINATION

| Sr. No. | Heads | Description | Marks | Preparation time | Assessment time |
|---------|-------------------------|---|------------|----------------------|----------------------|
| 1 | Long Cases (one) | Clinical case based | 100 | 40 minutes | 20 minutes |
| 2 | Short Cases (Two) | Clinical case based | 100 | Each Case 20 minutes | Each case 10 minutes |
| 3 | Viva-Voce (Four Tables) | Operation/ procedure/ instruments | 50 | | 10 minutes |
| | | Surgical Pathology | 50 | | 10 minutes |
| | | Radiological Imaging | 50 | | 10 minutes |
| | | Research paper publications/ presentation & Recent Advances | 50 | | 10 minutes |
| | | TOTAL PRACTICAL MARKS | 400 | | |

Resolution passed in BOM – 48/2017, dated 24/01/2017

Item No. 5.10: BOS (Superspeciality) dated 16.09.2016

- d) **Superspeciality residents should be deputed for a period of three months in other Institutions for training**

Resolution No. 5.10(d): Superspeciality residents can be deputed in hospitals under MGMIHS for additional training if needed for skill enhancement.

Resolution No. 3.9.2 of BOM-52/2018: Resolved to accept the following in all Superspeciality University Theory examinations, with effect from batch appearing in University August 2018 examination onwards:

- Paper – I (100 marks) :10 short notes out of 11 (10 marks each)
- Paper – II (100 marks) :10 short notes out of 11 (10 marks each)
- Paper – III (100 marks) :10 short notes out of 11 (10 marks each)
- The existing pattern for paper IV to be followed.

Resolution No. 3.9.3 of BOM-52/2018: Resolved to have following pattern in all Superspeciality University Practical examinations, with effect from batch appearing in University August 2018 examination onwards, while keeping the remaining pattern same:

Long case : 1X100 =100 marks
Short case : 4X25 = 100 marks

Resolution No. 4.5.4.2 of BOM-55/2018: Resolved to have 10 short notes out of 11 (10 marks each) in all the papers in university examination for PG courses including superspeciality. To be implemented from batch appearing in April/May 2019 examination onwards for MD/MS/Diploma and August/September 2019 examination onwards for superspeciality.