

P.G. Curriculum M.D. Dermatology Index

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Curriculum MD Dermatology

The infrastructure and faculty will be as per MCI regulations.

1. Goal

The goal of MD course in Dermatology is to produce a competent dermatologist who:

- ❖ Recognizes the health needs of patients and carries out professional obligations in keeping with principles of National Health Policy and professional ethics;
- ❖ Has acquired the competencies pertaining to dermatology that are required to be practiced in the community and at all levels of health care system;
- ❖ Has acquired skills in effectively communicating with the patient, family & community.
- ❖ Is aware of the contemporary advances and developments in medical sciences as related to dermatology, STD & leprosy.
- ❖ is oriented to principles of research methodology; and
- ❖ Has acquired skills in educating medical and paramedical professionals.

2. Objectives

At the end of the MD course in Dermatology, the student should be able to

- ❖ Recognize the key importance of Skin, STD & leprosy in the context of the health priority of the country;
- ❖ Practice the specialty of dermatology in keeping with the principles of professional ethics;
- ❖ Identify social, economic, environmental, biological and emotional determinants of patients, and institute diagnostic, therapeutic, rehabilitative, preventive and promotive measures to provide holistic care to patients;
- ❖ Recognize the importance of growth and development as the foundation of Dermatology; and help each patient realize her/his optimal potential in this regard;
- ❖ Take detailed history, perform full physical examination, local examination & make clinical diagnosis;
- ❖ Perform relevant investigative and therapeutic procedures for the dermatology patient;
- ❖ Interpret important imaging and laboratory results;
- ❖ Diagnose illness based on the analysis of history, physical examination and investigative work up;
- ❖ Plan and deliver comprehensive treatment for illness using principles of rational drug therapy;
- ❖ Plan and advise measures for the prevention of infectious disease and disability;
- ❖ Plan rehabilitation of patient suffering from chronic illness and handicap, and those with special needs;
- ❖ Manage dermatological emergencies efficiently;
- ❖ Provide comprehensive care to normal, 'at risk' and sick patients.

- ❖ Demonstrate skills in documentation of case details, and of morbidity and mortality data relevant to the assigned situation;
- ❖ Recognize the emotional and behavioral characteristics of patients and keep these fundamental attributes in focus while dealing with them;
- ❖ Demonstrate empathy and humane approach towards patients and their families and respect their sensibilities;
- ❖ Demonstrate communication skills of a high order in explaining management and prognosis, providing counseling and giving health education messages to patients, families and communities;
- ❖ Develop skills as a self-directed learner, recognize continuing educational needs; use appropriate learning resources and critically analyze relevant published literature in order to practice evidence-based dermatology;
- ❖ Demonstrate competence in basic concepts of research methodology and epidemiology ;
- ❖ Facilitate learning of medical/nursing students, practicing physicians, para-medical health workers and other providers as a teacher-trainer ;
- ❖ Play the assigned role in the implementation of national health programmes, especially leprosy STD & AIDS effectively and responsibly ;
- ❖ Organize and supervise the desired managerial and leadership skills;
- ❖ Function as a productive member of a team engaged in health care, research and education ;

3. Syllabus

General Guidelines - During the training period, efforts should always be made that adequate time is spent in discussing health problems of public health importance in the country.

3.1. Theory

Approach to Important Clinical Problems & disorders (Definition, epidemiology, etio-pathogenesis, presentation, complications, differential diagnosis and treatment)

❖ Skin

- Anatomy, embryogenesis & functions of skin
- Diagnosis & Histopathology
- Molecular biology
- Inflammation & clinical immunology
 - ★ Genetics, genodermatosis & skin of neonate
 - ★ Pruritus- Pathophysiology, factors affecting, types & management
 - ★ Dermatitis- Atopic dermatitis, contact dermatitis- irritant & allergic, acute, subacute & chronic eczema, stasis eczema, lichenification & erythroderma
- Infections-
 - ★ Bacterial
 - Gram +ve (impetigo, cellulitis, ecthyma, erysipelas, SSSS, TSS, Anthrax) & G-ve infections, Anaerobic infections, Rickettsial Infections
 - ★ Viral
 - Herpes virus, human papilloma virus, Hemorrhagic fevers, PR
 - ★ Mycobacterial
 - Cutaneous TB- typical & atypical, MDT

- Leprosy- Types, reactions, Lab. investigations, management (MDT) & rehabilitation, NLEP
- Mycology- Superficial & cutaneous, Subcutaneous & deep mycoses
- ★ Parasitic, protozoal & arthropodal infection
 - Filariasis
 - Leishmaniasis
 - Larva migrans
 - Scabies
 - Pediculosis
- ★ Sexually Transmitted Diseases
 - Syphilis, gonorrhoea, NGU, donovanosis, chancroid, LGV, Herpes genitalis, Viral warts- diagnosis, treatment & prevention
 - HIV & AIDS- Cutaneous manifestations, Lab. Diagnosis & management, prevention, syndromic management, NACO guidelines
- Cutaneous photobiology
 - Polymorphic light eruption, actinic prurigo, solar urticaria , chronic actinic dermatitis
- Disorders of keratinization
 - Ichthyosis- congenital & acquired, erythrokeratoderma, PRP, Dariers Dis., Psoriasis
- Disorders of pigmentation
 - Melanogenesis, Hypermelanosis, hypomelanosis, melanocytic nevi, melanoma skin cancer
- Tumours of skin
 - ★ Malignant
 - Squamous Cell Carcinoma
 - Basal Cell Carcinoma
 - ★ Benign
 - Actinic keratosis
 - Bowen's disease
 - Seborrhoeic keratosis
 - Keratoacanthoma
 - Pilomatricoma
 - Cylindroma
 - Syringoma
 - Paget's disease
- Bullous disorders
 - ★ Congenital – Epidermolysis bullosa - simplex, junctional & dystrophic
 - ★ Immunobullous- Pemphigus & its variants, bullous pemphigoid, cicatricial pemphigoid, DH - Basis , clinical presentation, treatment and pulse therapy
- Disorders of sebaceous & sweat glands-
 - Acne & its variants, sebaceous gland disorders, rosacea, hyperhidrosis, miliaria
- Connective tissue disorders
 - Lupus erythematosus- DLE, SLE, systemic sclerosis, MCTD, Dermatomyositis, graft v/s host disease
- Urticaria
 - Types, urticarial vasculitis, angioedema, mastocytosis

- Purpura
Classification, diagnosis & management
 - Vasculitis & Neutrophilic Reactions
Small, medium & large vessel vasculitis, Sweet's syndrome, pyoderma gangrenosum, Erythema nodosum, Behcet's dis
 - Arterial, venous & lymphatic disorders
Arterial & peripheral ischemic disorders, venous thrombosis & ulceration, lymphedema
 - Psychocutaneous disorders
Trichotillomania, dermatitis artefacta
 - Immunological diseases
Lichen planus, lichenoid disease, sarcoidosis
 - Systemic diseases & skin
Cardiac, renal, GIT, markers of internal malignancy, nervous system
 - Ages of men & other dermatoses
- ❖ **Nail**
- Structure & function of nail
 - Disorders of nail development- Anonychia, pachyonychia
 - Nail infections- Paronychia, Onychomycosis
 - Dermatoses affecting nails- Psoriasis, Darier's dis., lichen planus, twenty nail dystrophy
 - Nail tumours- Koelan's tumour
 - Nail surgery- nail biopsy, surgery for in growing nail
- ❖ **Hair**
- Structure & cycle
 - Alopecia- Alopecia areata, androgenetic alopecia, cicatricial alopecia
 - Disturbances of hair cycle-Telogen effluvium
 - Scaling disorders of scalp
 - Hypertrichosis
 - Hirsutism
- ❖ **Mucosa**
- Oral
 - ★ Peutz-Jegher's syndrome, acrodermatitis enteropathica, aphthous stomatitis, Behcet's disease, lichen planus, pemphigus, lupus erythematosus, herpes simplex, candidiasis, hairy leukoplakia
 - Genital
 - ★ Non-STD lesions
- ❖ **Miscellaneous**
- Skin & eyes
 - ★ Seborrhoeic blepharitis, cicatricial pemphigoid, EM, TEN, HSV, Reiter's disease
 - Skin & ears
 - ★ Granulomatous disorders, perichondritis, otitis externa
 - Breast, perianal & umbilical disorders
 - ★ Gynecomastia, cracked nipples, lupus panniculitis, Mondor's disease, pruritus ani, hidradenitis suppurativa, AIN

❖ **Treatment**

- Principles
- Topical therapy
- Systemic therapy
- Drug reactions including EM,SJS/TEN, maculopapular rash, FDE.

❖ **Recent Advances**

- LASER & its applications
- Dermatosurgery & Cosmetology
 - ★ Punch grafting, suction blister grafting,chemical peels,cryotherapy,radiofrequency,chemical cautery

3.2. Practical

Semi- Long case

- Leprosy
- Sexually Transmitted diseases
- General Dermatology- Vesiculobullous diseases/ Connective tissue diseases/ Erythroderma
- ❖ Short Cases- Any 10 cases of the following:
 - Disorders of Keratinization
 - Genetics & Genodermatosis
 - Diseases of hair
 - Diseases of nail
 - Diseases of mucosa
 - Diseases of sebaceous & sweat glands
 - Dermatitis
 - Infections- viral, bacterial, mycobacterial, fungal
 - Disorders of pigmentation
 - Drug Reactions
 - Photodermatosis
 - Connective tissue diseases
 - Immunological diseases
 - Vasculitis
 - Leprosy
 - Sexually Transmitted diseases
- ❖ Histopathology
- ❖ Grand viva - voce including drugs, X-rays, Equipment & thesis discussion

3.3. Skills

- ❖ History and examination.
 - History taking including psychosocial history, general & systemic examination, local examination - skin & its appendages, mucosa.
- ❖ Bedside procedures
 - Monitoring skills: vitals recording, blood sampling.
 - Therapeutic & investigative skills: Dressing, administration of fluids & drugs, pulse therapy, skin & mucosal biopsy , abscess drainage and basic principles of rehabilitation.

- ❖ Bedside investigations
 - Woods lamp examination, dark ground illumination (DGI),urine: routine and Microscopic examination, KOH smear, Slit skin smear, Gram stain, ZN stain, tzanck smear, giemsa stain (tissue smear).
- ❖ Interpretation of X-rays of chest, abdomen,ECG.
- ❖ Understanding of Histopathology, Immunopathology, Immunohistochemistry.

3.4. Community and Social Dermatology

National programmes – TB, leprosy, STD, AIDS. Prevention of sexually transmitted diseases, contraception, government and non-government support services. General principles of prevention and control of infectious diseases, investigation of an outbreak in a community.

4. Teaching Program

4.1. General Principles

Acquisition of practical competencies being the keystone of postgraduate medical education, postgraduate training is skills oriented.

Learning in postgraduate program is essentially self-directed and primarily emanating from clinical and academic work. The formal sessions are merely meant to supplement this core effort.

4.2. Teaching Sessions

- ❖ Bedside Teaching Round
- ❖ Histopathology session
- ❖ Seminar
- ❖ Journal Club
- ❖ Case discussion

4.3. Teaching Schedule

In addition to bedside teaching rounds to be carried by consultants daily in the department there should be daily hourly sessions of formal teaching per week. The suggested teaching schedule will be as follows:

- | | | |
|--|-----|--------------|
| 1. Histopathology session | --- | Once a week. |
| 2. Seminar | --- | Once a week |
| 3. Journal Club. | --- | Once a week |
| 4. Bed side case discussion | --- | Once a week |
| 5. Seminar. | --- | Once a week |
| 6. Central session (regarding various topics like CPC, guest lectures, student seminars, grand round, sessions on basic sciences, biostatistics, research methodology, teaching methodology, health economics, medical ethics and legal issues). Presentation in central session whenever requested. | --- | Once a week |

Note:

- ❖ All sessions should be attended by the faculty members. All PGs are supposed to attend the sessions.

- ❖ All the teaching sessions are to be assessed by the consultants at the end of session and marks should be given out of 10 () and kept in the office for internal assessment.
- ❖ Attendance of the Residents at various sessions has to be at least 75%.

5. Postings

Ward :	1 st & 2 nd year for every 2 months
OPD:	3 rd year, 1 st & 2 nd year.
Minor O.T.	1 st & 2 nd Year.

6. Thesis

- ❖ Every candidate shall out work on an assigned research project under the guidance of a recognized Postgraduates Teacher, the project shall be written and submitted in the form of a thesis.
- ❖ Every candidate shall submit thesis plan to the University within the time frame specified by the university from the date of admission.
- ❖ Thesis shall be submitted to the University six months before the commencement of theory examination i.e. for examination May/June session, 30th November of the preceding year examination and for November/December session, 31st May of the year examination or as per time frame advised by the university.
- ❖ Identify a relevant research question : (ii) conduct a critical review of literature; (iii) formulate a hypothesis ; (iv) determine the most suitable study design: (V) state the objectives of the study: (vi) prepare a study protocol ; (vii) undertake a study according to the protocol; (viii) analyze and interpret research data, and draw conclusions ; (ix) write a research paper.

7. Assessment

All the PG residents has to be assessed daily for their academic activities and also periodically,

7.1. General Principles

- ❖ The assessment has to be valid, objective, and reliable.
- ❖ It should cover cognitive, psychomotor and affective domains.
- ❖ Formative, continuing and summative (final) assessment to be conducted in theory as well as practical/clinicals, in addition, thesis should also be assessed separately.

7.2. Formative Assessment

The formative assessment is to be continuous as well as end-of-term. The former has to be based on the feedback from the senior residents and the consultants concerned. End-of-term assessment should be held at the end of each semester (upto the 5th semester). Formative assessment will not count towards pass/fail at the end of the program, but will provide feedback to the candidate.

7.3. Internal Assessment

The performance of the Postgraduate student during the training period should be monitored throughout the course and duly recorded in the log books as evidence of the ability and daily work of the student. Marks should be allotted out of 100 as followed.

Sr. No.	Items	Marks
1.	Personal Attributes	20
2.	Clinical Work	20
3.	Academic activities	20
4.	End of term theory examination	20
5.	End of term practical examination	20

1. Personal attributes:

- ❖ **Behavior and Emotional Stability:** Dependable, disciplined, dedicated, stable in emergency situations, shows positive approach.
- ❖ **Motivation and Initiative:** Takes on responsibility, innovative, enterprising, does not shirk duties or leave any work pending.
- ❖ **Honesty and Integrity:** Truthful, admits mistakes, does not cook up information, has ethical conduct, exhibits good moral values, loyal to the institution.
- ❖ **Interpersonal Skills and Leadership Quality:** Has compassionate attitude towards patients and attendants, gets on well with colleagues and paramedical staff, is respectful to seniors, has good communication skills.

2. Clinical Work:

- ❖ **Availability:** Punctual, available continuously on duty, responds promptly on calls and takes proper permission for leave.
- ❖ **Diligence:** Dedicated, hardworking, does not shirk duties, leaves no work pending, does not sit idle, competent in clinical case work up and management.
- ❖ **Academic ability:** Intelligent, shows sound knowledge and skills, participates adequately in academic activities, and performs well in oral presentation and departmental tests.
- ❖ **Clinical Performance:** Proficient in clinical presentations and case discussion during rounds and OPD work up. Preparing Documents of the case history/examination and progress notes in the file (daily notes, round discussion, investigations and management) Skill of performing bed side procedures and handling emergencies.

3. **Academic Activity:** Performance during presentation at Journal club/ Seminar/ Case discussion/Stat meeting and other academic sessions. Proficiency in skills as mentioned in job responsibilities.
4. **End of term theory examination** conducted at end of 1st, 2nd year and after 2 years 9 months
5. **End of term practical/oral examinations** after 2 years 9 months.

Marks for **personal attributes** and **clinical work** should be given annually by all the consultants under whom the resident was posted during the year. Average of the three years should be put as the final marks out of 20.

Marks for **academic activity** should be given by the all consultants who have attended the session presented by the resident.

The Internal assessment should be presented to the Board of examiners for due consideration at the time of Final Examinations.

7.4. Summative Assessment

- ❖ Ratio of marks in theory and practical will be equal.
- ❖ The pass percentage will be 50%.
- ❖ Candidate will have to pass theory and practical examination separately

A. Theory Examination (Total =400)

Paper 1:	Basic sciences as related to dermatology	100
Paper 2:	Principles & practice of Dermatology, STD & Leprosy	100
Paper 3:	Histopathology, Leprology & Venereology	100
Paper 4:	Recent advances in Dermatology, Leprosy & Venereology and General Medicine as related to Dermatology	100
	Total	400

B. Practical & Viva-voce Examination (Total=400)

Two external and two internal examiners to conduct the examinations

Short Cases	10	(100 marks)
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Semi long cases Histopathology	3	(150 marks) (50 marks)
Grand viva – voce		(50 marks)
Thesis discussion, drugs, X-rays, equipment		(50 marks)
	Total	400

8. Job Responsibilities

- ❖ During first year the resident should work under direct supervision of the 2/3 year resident/senior resident and consultant on call. She/he has to be responsible for taking detailed history, examination of patients as per the file record and send appropriate investigations as advised by seniors. Initially all procedures are to be observed and then done under supervision of seniors and during 2/3rd year can do procedures independently.
- ❖ In 2nd year, resident to be posted in special clinics also.
- ❖ In 3rd year, resident should also be encouraged to make independent decisions in management of cases. She/he is also to be involved in teaching of undergraduate students.

❖

9. Suggested Books

9.1. Core Books

- ❖ Rook's Textbook of Dermatology 7th edition. Editors-Tony burns, stephen Breathnach Neil Cox
- ❖ Leprosy- Joplings
- ❖ STD's King K. Homles, P Frederick Sparling

9.2. Reference books

- ❖ Fitzpatrick's Dermatology in General Medicine
- ❖ STD's Kings and Nicholas
- ❖ Dermatology Moschella Samuel L.

9.3. Core Journals

- ❖ Indian Journal of Dermatology, Venereology & Leprology
- ❖ Indian Journal of Dermatology
- ❖ Indian Journal of STD & AIDS
- ❖ Indian Journal of Leprosy
- ❖ British Journal of Dermatology
- ❖ Journal of American Academy of Dermatology

9.4. Suggested Journals

- ❖ Archives of dermatology
- ❖ International Journal of Dermatology
- ❖ Dermatologic Clinics of North America
- ❖ Leprosy review
- ❖ British Journal of Venereal diseases

10. Model Test Papers

MODEL QUESTION PAPER

MD (Dermatology)
Paper-I

Basic Sciences as related to Dermatology, STD & Leprosy

Max. Marks:100

Time: 3 hrs

- **Attempt ALL questions**
 - **Answer each question & its parts in SEQUENTIAL ORDER**
 - **ALL questions carry equal marks**
 - **Illustrate your answer with SUITABLE DIAGRAMS**
-

- I Discuss the ultrastructure of Dermo-Epidermal Junction.
- II Describe basophils
- III Elaborate Arthus Reaction
- IV Explain role of interferons in dermatology
- V Discuss Epidermal Barrier
- VI Draw HIV structure
- VII Give a note on immunology of leprosy
- VIII Explain pathogenesis of psoriasis
- IX What are the antigenic determinants of Mycobacterium leprae
- X Outline role of PCR in skin diseases

MODEL QUESTION PAPER

MD (Dermatology)
Paper-II

Principles & Practice as related to Dermatology, STD & Leprosy

Max. Marks:100

Time: 3 hrs

- **Attempt ALL questions**
 - **Answer each question & its parts in SEQUENTIAL ORDER**
 - **ALL questions carry equal marks**
 - **Illustrate your answer with SUITABLE DIAGRAMS**
-

- I Discuss etiopathogenesis of contact dermatitis
- II Discuss oral lichen planus
- III Give an account of biological therapy for psoriasis
- IV Explain the causes of cicatricial alopecia
- V Elaborate KAWASAKI's Disease
- VI Write a short note on psuedolymphoma
- VII Discuss hyperhidrosis & its management
- VIII What is the impact of HIV on STDs
- IX Explain Naevus of OTA
- X Elaborate Behcet's syndrome

MODEL QUESTION PAPER

MD (Dermatology)
Paper-III

Histopathology, Leprology and Venereology

Max. Marks:100

Time: 3 hrs

- **Attempt ALL questions**
 - **Answer each question & its parts in SEQUENTIAL ORDER**
 - **ALL questions carry equal marks**
 - **Illustrate your answer with SUITABLE DIAGRAMS**
-

- I Outline Leprosy elimination- Present status & Strategies
- II Mention a note about newer drugs in Leprosy
- III Enumerate experimental animals in Leprosy
- IV Discuss serology of HIV
- V Explain bacterial vaginosis
- VI Mention a note on HPV vaccines
- VII Enumerate histopathological differences between Sarcoidosis & tuberculosis
- VIII Explain acantholysis and enumerate its dermatological conditions
- IX Draw histopathology of Paget's disease
- X Give an account on cell adhesion molecules

MODEL QUESTION PAPER

MD (Dermatology)
Paper-IV

Recent Advances in Dermatology, STD & Leprosy and General
medicine as related to Dermatology

Max. Marks:100

Time: 3 hrs

- ***Attempt ALL questions***
 - ***Answer each question & its parts in SEQUENTIAL ORDER***
 - ***ALL questions carry equal marks***
 - ***Illustrate your answer with SUITABLE DIAGRAMS***
-

- I Discuss the relationship of Leprosy & HIV
- II Outline Syndromic approach in genital ulcer disease
- III What is the role of miltefosine in dermatology
- IV Write short note on finasteride
- V Explain Narrow band UVB in dermatology
- VI Discuss lupus panniculitis
- VII Elaborate hairy leukoplakia
- VIII Enumerate AIDS defining illnesses
- IX Outline the treatment of acne scars
- X List indications of tacrolimus in dermatology