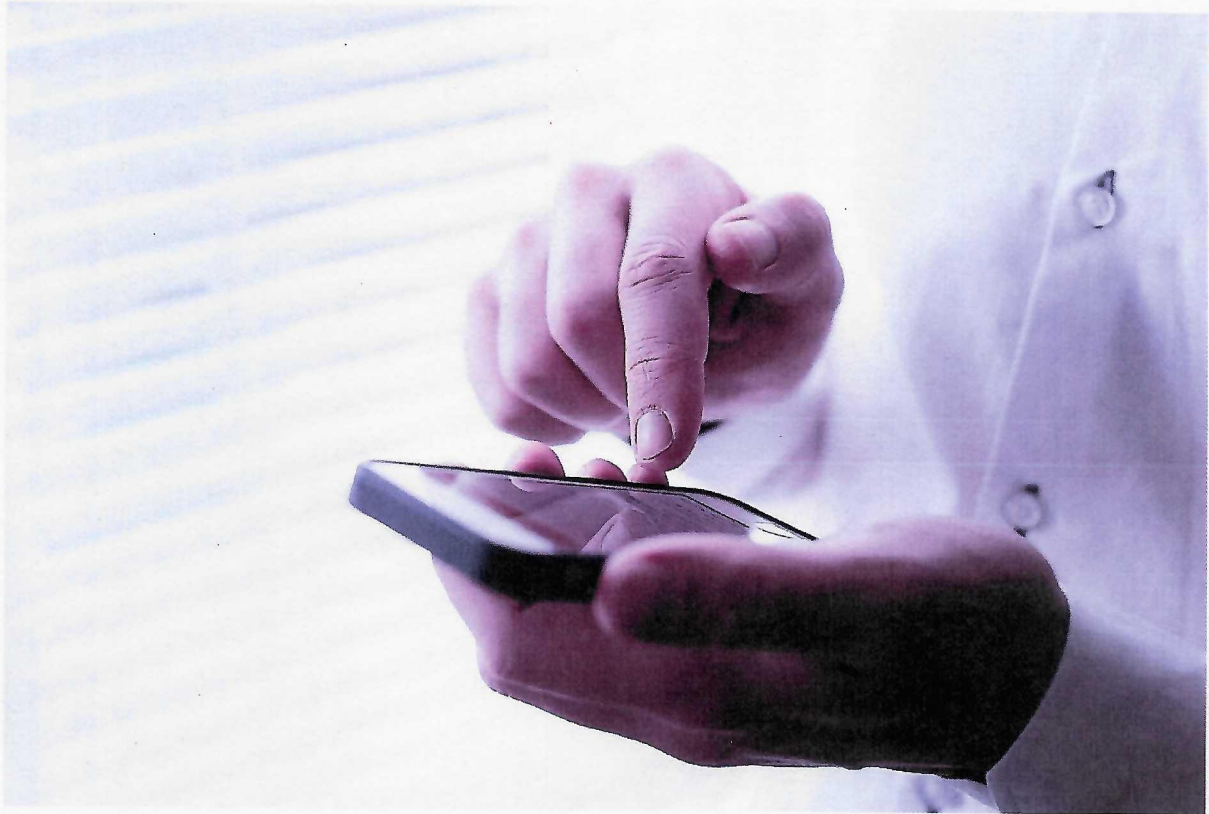


Syllabus for MD (Dermatology) Programme



Guru Gobind Singh Indraprastha University

A State University established by the Govt. of NCT of Delhi

University School of Medicine and Allied Health Sciences

Annexure I

MD (Dermatology, Venereology and Leprology)

Programme Objectives

At the end of postgraduate training the student should be able to:-

1. Practice his speciality ethically
2. Demonstrate sufficient understanding of basic sciences related to his specialty
3. Diagnose and manage majority of conditions in his speciality (clinically and with the help of relevant investigations)
4. Plan and advice measures for the prevention and rehabilitation of patients belonging to his speciality
5. Play the assigned role in the implementation of National Health Programs (including STD, NACP, NLEP)
6. Demonstrate competence in basic concepts or research methodology
7. Develop good teaching skills

Specific learning objectives

- a) **Theoretical knowledge:** A student should have fair knowledge of basic sciences (Anatomy, Physiology, Biochemistry, Microbiology, Pathology and Pharmacology) as applied to his speciality. He/she should acquire in-depth knowledge of his subject including recent advances. He should be fully conversant with the bedside procedures (diagnostic and therapeutic) and have knowledge of latest diagnostics and therapeutics available.
- b) **Clinical/Practical skills:** A student should be expert in good history taking physical examination, providing basic life support and cardiac life support, common procedures like FNAC, biopsy, aspiration from serous cavities, lumbar puncture etc. He/she should be able to choose the required investigations.
- c) **Research:** He/she should know the basic concepts of research methodology, plan a research project and should know how to consult library. Basic knowledge of statistics is also required.
- d) **Teaching:** Should learn the basic methodology of teaching and develop competence in teaching medical/paramedical students.

Postgraduate Training

Didactic lectures are of least importance; seminars, journal clubs, symposia, reviews and guest lectures should get priority for theoretical knowledge. Bedside teaching, grand rounds, interactive group discussions and clinical demonstrations should be the hallmark of clinical/practical learning. Student should have hand-on training in performing various procedures (medical/surgical concerning his subject) and ability to interpret various tests/investigations. Exposure to newer specialized diagnostic/therapeutic procedures concerning his subject should be given.

Clinical Postings

1. A major tenure of posting should be in Dermatology. It should include care of in-patients, out-patients, special clinics and maintenance of case records for both indoor and outdoor patients.
2. Some exposure to General Medicine should be given. It may be a short posting for 6 weeks in Medicine Deptt.
3. Some exposure to finer surgical skills as applicable to Dermatology. A short posting of 3 weeks in Plastic Surgery and posting of 3 weeks in the department of Pathology (with a stress on Histopathology & Microbiology) to learn the relevant aspects as applicable to Dermatology, STD and leprosy.

Clinical meeting

There should be sufficient intra- and inter-departmental meetings for discussing the uncommon / interesting medical problems.

Each student must be asked to present a specified number of cases for clinical discussion, perform procedures / tests / operations / present seminars / review articles from various journals in inter-unit / interdepartmental teaching sessions. They should be entered in a Log Book and signed by the authorized teacher and HOD. Emphasis should also be given to develop good oration skills.

Thesis writing:

Thesis writing is compulsory

Presentation / publication of papers in conferences will be desirable

Teaching:

Each PG student will be required to teach undergraduate (clinical demonstration) – at least 15 sessions

PAPER (Theory)

- 1 Basic sciences in relation to Dermatology – Anatomy, Physiology, Biochemistry, Microbiology, Pathology, Pharmacology
- 2 Principles of Dermatology, diagnosis and therapeutics including Principles and Practice of Medicine (Therapeutics applied to Dermatology)
- 3 STD and Leprosy
- 4 Recent Advances

Clinical / Practical

3-4 Long cases (General dermatology, STD and Leprosy), 10-12 short cases with emphasis on clinical diagnosis and differential diagnosis and an approach to arrive at the correct diagnosis, knowledge of instruments, assessment of clinical knowledge with the help of case cards with or without photographs, laboratory reports or any other clue for diagnosis, radiological and biochemical investigations, histopathology slides etc.

Viva-voce

Due weight age should be given to Log Book Records and day-to-day observation during the training.

Course Contents (Components of curriculum): No limit can be fixed and no fixed number of topics can be prescribed as course contents. He is expected to know his subject in depth, however, emphasis should be on the diseases / health problems most prevalent in that area. Knowledge of recent advances and basic sciences as applicable to his / her specialty should get high priority. Competence in surgical skills commensurate with the specialty (actual hand on training) must be ensured.

1

1

1

1

PAPER I : TOPICS RELATED TO ALLIED BASIC SCIENCES

- The structure, functions and development of human skin
- Ultra structural aspects of epidermis, epidermal appendages, dermo-epidermal junction, dermis, and sub-cutis
- Immunology, molecular biology and genetics in relation to the skin
- Epidermal cell kinetics and keratinization
- Lipids of epidermis and sebaceous glands
- Percutaneous absorption
- Skin as an organ of protection and thermoregulation
- Biology of eccrine and apocrine sweat glands
- Biology of melanocytes and melanin formation
- Biology of hair follicles, sebaceous glands and nails
- Epidermal proteins
- Dermal connective tissue: collagen, elastin, reticulin, basement membrane and ground substance
- Metabolism of carbohydrates, proteins, fats and steroids by the skin
- Cutaneous vasculature and vascular reactions
- Mechanism of cutaneous wound healing
- Cellular and molecular biology of cutaneous inflammation and arachadonic acid metabolism
- Immunologic aspects of epidermis
- HLA system
- Immunoglobulins
- Cytokines and chemokines
- Lymphocytes, neutrophils, eosinophils, basophils and mast cells
- Complement system
- Hypersensitivity and allergy
- Cutaneous carcinogenesis (chemical, viral & radiation)

- Basics of cutaneous bacteriology, mycology, virology, parasitology and host resistance
- Common laboratory procedures, stains and culture media etc. related to the cutaneous diagnosis
- Basic pathologic patterns and reactions of skin
- Common laboratory stains and procedures used in the histopathologic diagnosis of skin diseases and special techniques such as immunofluorescence, immunoperoxidase and other related techniques

PAPER II: CLINICAL DERMATOLOGY

EPIDEMIOLOGY AND PRURITIS

- Epidemiology of cutaneous diseases
- Psychologic aspects of skin disease and psycho cutaneous disorders
- Pathophysiology, clinical aspects and management of pruritus

PAPULOSQUAMOUS DISEASES

- Psoriasis, Pityriasis rubra pilaris, pityriasis rosea
- Parapsoriasis, Lichen Planus, Lichen nitidus
- Palmo-plantar keratodermas, Darier's disease, Porokeratosis
- Ichthyosis and ichthyosiform dermatoses
- Perforating skin disorders

VESICULO – BULLOUS DISORDERS

- Erythema multiforme, Stevens-Johnson syndrome, Toxic epidermal necrolysis
- Bullous pemphigoid, Pemphigus
- Chronic bullous disease of childhood
- Herpes gestationis (pemphigoid gestationis)
- Hereditary epidermolysis bullosa
- Epidermolysis bullosa acquisita
- Dermatitis herpetiformis
- Familial benign pemphigus
- Subcorneal pustular dermatosis
- Pustular eruptions of palms and soles

DISORDERS OF EPIDERMAL APPENDAGES AND RELATED DISORDERS

- Disorders of hair and nails

X

- Disorders of sebaceous glands
- Rosacea, Perioral dermatitis, Acne
- Disorders of eccrine and apocrine sweat glands
- Follicular syndromes with inflammation and atrophy

EPIDERMAL AND APPENDAGEAL TUMOURS

- Precancerous lesions, squamous cell carcinoma and Basal cell carcinoma
- Keratoacanthoma, Benign epithelial tumours, Appendageal tumours
- Merkel cell carcinoma, Paget's disease

DISORDERS OF MELANOCYTES

- Disorders of pigmentation, Albinism, Benign neoplasia and hyperplasia of melanocytes, Dysplastic melanocytic nevi, cutaneous malignant melanoma.

INFLAMMATORY AND NEOPLASTIC DISORDERS OF THE DERMIS

- Acute Febrile Neutrophilic dermatosis (Sweet syndrome)
- Erythema Elevatum Diutinum
- Cutaneous Eosinophilic Diseases
- Granuloma Faciale
- Pyoderma Gangrenosum
- Erythema annulare centrifugum and other Figurative Erythemas
- Granuloma Annulare
- Malignant Atrophic Papulosis (Dego's Disease)
- Neoplasms, Pseudo neoplasms and Hyperplasias of the Dermis
- Vascular Anomalies
- Kaposi's Sarcoma
- Anetoderma and other Atrophic Disorders of the skin
- Ainhum and Pseudoainhum
- Neoplasias and Hyperplasias of Neural and Muscular origin

LYMPHOMAS, PSEUDOLYMPHOMAS AND RELATED CONDITIONS

Disorders of Subcutaneous Tissue

- Panniculitis
- Lipodystrophy

[Handwritten signature]

Handwritten notes on the left margin:
 1. ...
 2. ...
 3. ...

- Neoplasms of the subcutaneous fat

Disorders of the Mucocutaneous Integument

- Biology and Disorders of the oral mucosa
- Disorders of the anogenitalia of males and females

CUTANEOUS CHANGES IN DISORDERS OF ALTERED REACTIVITY

- Genetic Immunodeficiency Diseases
- Acquired Immuno Deficiency Syndrome (definition, diagnostic criteria, management, post exposure prophylaxis, immune mediated reconstitution syndrome)
- Urticaria and Angioedema
- Disorders associated with Complement Abnormalities
- Graft-versus-Host Disease
- Muco-cutaneous Manifestations in Immunosuppressed host other than HIV-infection.
- Contact Dermatitis
- Auto Sensitization Dermatitis
- Atopic Dermatitis (Atopic Eczema)
- Nummular Eczematous Dermatitis
- Seborrhoeic Dermatitis
- Vesicular Palmoplantar Eczema

SKIN CHANGES DUE TO MECHANICAL AND PHYSICAL FACTORS

- Occupational skin disease
- Radiobiology of the skin
- Skin problems in Amputee
- Sports Dermatology
- Water borne skin diseases including diseases in swimmers
- Skin problems in war field and nuclear radiation exposure
- Decubitus Ulcers

PHOTOMEDICINE, PHOTO BIOLOGY AND PHOTO IMMUNOLOGY IN RELATION TO SKIN.

- Acute and chronic effects of Ultraviolet Radiation and sun light on the skin.

DISORDER DUE TO DRUGS AND CHEMICAL AGENTS

- Cutaneous reactions to Drugs

- Muco cutaneous Complicaton of Anti-neoplastic Therapy
- Cutaneous Manifestations of Drug Abuse

DERMATOLOGY AND THE AGES OF MAN AND IMMUNOCOMPROMISED HOST

- Neonatal dermatological problems
- Pediatric and adolescent dermatological problems
- Ageing of skin
- Geriatric dermatological problems
- Diagnosis of skin problems in an immuno compromised individual
- Drug interaction with immunosuppressive drugs

BACTERIAL DISEASES WITH CUTANEOUS INVOLVEMENT

- General Considerations of Bacterial Diseases
- Pyodermas : Staphylococcus aureus, Streptococcus, and others
- Staphylococcal Scalded Skin syndrome
- Soft Tissue Infections : Erysipelas, Cellulitis, and Gangrenous Cellulitis
- Gram Negative infections
- Bartonellosis
- Miscellaneous Bacterial Infections with Cutaneous Manifestations
- Tuberculosis and Atypical Mycobacterial infections
- Actinomycosis, Nocardiosis, and Actinomycetoma
- Lyme diseases, Borreliosis
- Kawasaki Disease

FUNGAL DISEASES WITH CUTANEOUS INVOLVEMENT

- Superficial Fungal Infection: Dermatophytosis, Tinea Nigra, Piedra
- Yeast Infections : Candidiasis, Pityriasis (Tinea) Versicolor
- Deep Fungal Infections

VIRAL AND RICKETTSIAL DISEASE

- Viral Disease : General Consideration
- Rubella (German Measles)
- Measles

Handwritten signature

None

6/6/2023

Poonam Kaur

- Hand Foot and Mouth Disease
- Herpangina
- Erythema Infectiosum and Parvovirus B 19 infection
- Herpes simplex
- Varicella and Herpes Zoster
- Cytomegalovirus Infection
- Epstein – Barr Virus Infections
- Human Herpes virus 6 & 7 infections and Exanthem subitum
- Roseola Infantum or Sixth Disease
- Smallpox and Complications of small pox vaccination.
- Contagious Pustular Dermatitis, Contagious Ecthyma, Orf virus infection
- Molluscum Contagiosum
- Milker's Nodules
- Warts
- Human Retroviral Disease : Human T Lymphotropic Viruses

THERAPEUTICS

Topical Therapy

- Pharmacokinetics and Topical Applications of Drugs
- Principles of Topical Therapy

Topical Agents

- Glucocorticoids, Acne therapies, Analgesics, Anesthetics, Anti inflammatory, Anti hair loss, Anti microbial, Anti parasitic, Anti-perspirants, Antipruritic, Antiviral, Astringents, Bleaching agents, Keratolytics, Psoriasis therapies, Wart therapies, Topical Retinoids, Topical Antibiotics, Topical Antifungal Agents, Sun-protective Agents, Keratolytic Agents, Topical Cytotoxic Agents

Systemic Therapy

- Systemic Glucocorticoids, Sulfones, Aminoquinolines, Cytotoxic and Antimetabolic Agents, Oral Retinoids, Antihistamines, Antibiotics, Antiviral Drugs, Oral Antifungal Agents, Immunosuppressive and Immunomodulatory Drugs, Thalidomide, Photo chemotherapy and Photo therapy.

Handwritten signature

PAPER III: STD AND LEPROSY

STD

- Clinical approach to the patient of sexually transmitted disease
- Anatomy of male and female genitalia
- Epidemiological aspects of STD's
- Viral STD's including HIV, Herpes, HPV, Molluscum contagiosum, HSV etc.
- Bacterial STD'S : Syphilis, Gonorrhoea, Chancroid, Donovanosis
- Chlamydial infections : Lymphogranuloma venereum, urethritis, cervicitis, NGU, non-specific vaginitis etc.
- Fungal : Candidiasis
- Protozoal : Trichomoniasis
- Ectoparasitic : Scabies, Pediculosis infestations.
- Syndromic management of STD'S
- STD's and HIV
- Psycho Sexual disorders: Dhat Syndrome
- Prevention, counseling and education of different STD's including HIV
- National Control Programmes of STD's and HIV infection
- Medicolegal issues related to forced, unwilling sex
- Social aspects of STD's including psychological and behavioural abnormalities in STD patients

LEPROSY

- Approach to a patient with leprosy
- Epidemiological Aspects
- Structure, biochemistry, microbiology of *Mycobacterium leprae*
- Animal models
- Pathogenesis
- Classification
- Immunology and molecular biological aspects

- Histopathology and diagnosis including laboratory aids
- Clinical features
- Reactions in Leprosy
- Systemic involvement (ocular, bone, mucosa, testes and endocrine etc.)
- Pregnancy and leprosy
- HIV infection and leprosy
- Therapeutic aspects including newer drugs
- Immunotherapy – Vaccines in Leprosy
- Disabilities, deformities and Rehabilitation
- Prevention, education and counseling
- Drug resistance in Leprosy
- New treatment regimes in Leprosy
- National Leprosy Control and Elimination Programme

PAPER IV : SKIN AND SYSTEMIC SYSTEMS, NUTRITIONAL AND HEREDITARY DISEASES, DERMATOSURGERY AND COSMETOLOGY AND RECENT ADVANCES

SKIN LESIONS IN NUTRITIONAL METABOLIC AND HERITABLE DISORDERS

- Cutaneous changes in Nutritional Disease
- Acrodermatitis enteropathica and other metal deficiency disorders
- Cutaneous changes in Errors of Amino Acid Metabolism : Tyrosinemia II, Phenylketonuria, Arginino-succinic Aciduria, Alkaptonuria
- Amyloidosis of the skin
- The porphyrias
- Xanthomatosis and Lipoprotein Disorders
- Fabry's Disease, Galactosidase-A deficiency (Angiokeratoma Corporis Diffusum Universale)
- Lipoid Proteinosis
- Cutaneous mineralization and Ossification
- Heritable Disorders of Connective Tissue with skin changes
- Heritable Disease with increased Sensitivity to Cellular injury

Handwritten signature

- Basal Cell Naevus Syndrome

SKIN MANIFESTATIONS OF HEMATOLOGIC DISORDERS

- Skin changes in hematological Disease
- Cutaneous histiocytosis
- Cutaneous mastocytosis

SKIN MANIFESTATIONS OF SYSTEMIC DISEASE AND PREGNANCY

- The skin and disorders of the Alimentary Tract
- The Hepatobiliary system and the skin
- Cutaneous changes in renal disorders, cardiovascular, pulmonary disorders and endocrinal disorders
- Skin changes and diseases in pregnancy
- Skin changes in the Flushing Disorders and the Carcinoid syndrome

SKIN MANIFESTATIONS OF RHEUMATOLOGIC DISEASE

- Lupus Erythematosus
- Dermatomyositis
- Scleroderma
- Systemic Necrotizing Arteritis
- Cutaneous Necrotising venulitis
- Cryoglobulinemia and Cryofibrinogenemia
- Relapsing Polychondritis
- Rheumatoid Arthritis, Rheumatic Fever and Gout
- Sjogren's syndrome
- Raynaud's phenomenon and Raynaud's disease

CUTANEOUS MANIFESTATIONS OF DISEASE IN OTHER ORGAN SYSTEMS

- Sarcoidosis of the skin
- Cutaneous Manifestations of Internal Malignancy
- Acanthosis Nigricans
- Scleredema
- Papular Mucinosis
- Neurocutaneous Disease

Handwritten signature

- Neurocutaneous Disease
- Tuberous Sclerosis Complex
- The Neurofibromatosis
- Ataxia Telangiectasia
- Behcet's Disease

Recent advances in Dermatology, Dermatosurgery & Cosmetology & Investigative

- Cosmetics and skin care in practice
- Newer molecular diagnostic techniques
- Emergencies in dermatology
- Intensive care in dermatology
- Research in dermatology – melasma, vitiligo, psoriasis, leprosy, acne, hair diseases
- Vaccines in STD Control
- National programmes related to leprosy and STD
- New drugs in dermatology, leprosy and STD
- Dermatology and cosmetology interface
- Vitiligo surgery
- Keloid surgery
- Nail surgery
- Radiofrequency and electrocautery
- Chemical peels
- Fillers
- Botulinum toxin and its uses
- Mesotherapy
- Dermabrasion and microdermabrasion
- LASERS – principle, indications and complications
- Non ablative LASERS & light sources
- Ablative LASERS
- IPL - principle, indications and complications
- Micro-needling and collagen induction
- Ablative and non ablative skin resurfacing
- Hair surgery- Follicular unit implantation and follicular unit extraction
- Newer skin rejuvenation techniques
- Wound dressing

Handwritten signature

SUGGESTED READING

GENERAL DERMATOLOGY

- 1 Rook's Textbook of Dermatology, 8th Edition. Publisher: Blackwell publishing.
- 2 Fitzpatrick's Dermatology in General Medicine, 7th Edition. Publisher: Mc Graw Hill.
- 3 Lever's Histopathology of Skin, 10th Edition. Publisher: Lippincott Williams & Wilkins.
- 4 IADVL Textbook of Dermatology by R G Valia, Volumes 1 and 2.

STD

- 1 Sexually transmitted Diseases by King Holmes. 4th Edition. Publisher: Mc Graw Hill.
- 2 Sexually transmitted infections by Bhushan Kumar. 2005. Publisher: Elseiver Publication.
- 3 Sexually Transmitted Diseases And HIV/AIDS, 2 edition by Vinod K Sharma

LEPROSY

- 1 Hasting's textbook of Leprosy.
- 2 IAL Textbook of Leprosy by H.K. Kar. 1st Edition. Publisher: Jaypee brothers.
- 3 Handbook of Leprosy, 5th edition by W. H. Jopling & Ac Mc Dougall. Publisher: CBS.

JOURNALS

- 1 Journal of American Academy of Dermatology
- 2 British Journal of Dermatology
- 3 Archives of Dermatology
- 4 Leprosy Review
- 5 Indian Journal of Leprosy
- 6 STI
- 7 Indian Journal of Dermatology, STD and Leprosy

Handwritten signature