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**FACULTY OF MEDICINE**

**SYLLABUS**

**FOR**

**M.D. & DDVL IN DERMATOLOGY,  
VENEREOLOGY AND LEPROSY**

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**MAHARASHTRA UNIVERSITY OF HEALTH SCIENCES**

**NASHIK**

# DERMATOLOGY , VENEREOLOGY AND LEPROSY — M D & DDVL

Dermatology including Venereology (STD) and Leprology is one of the important basic clinical speciality. Considerable advances have taken place in the understanding of dermatological disorders and their treatment. Leprosy is still a public health problem of considerable magnitude in the country. The STDs are showing worldwide increase in incidence with new dimensions added to it.

There is a dearth of trained personnel in the speciality. Very few medical college in the country impart sufficient knowledge about these diseases at Undergraduate level and Postgraduate courses are not available in all medical colleges.

The curriculum of MD Dermatology has been made designed matching the other clinical specialities at the Institute. An attempt has been made to give a comprehensive training to the postgraduates including basic subjects and recent advances.

## OBJECTIVES

At the end of this training a candidate should be able to

1. Diagnose and manage independently common skin diseases, sexually transmitted diseases and leprosy.
2. Manage independently and efficiently all medical emergencies related with skin, leprosy and venereal disease.
3. Adopt preventive measures at individual and community levels against communicable skin, venereal diseases and leprosy.
4. Teach requisite knowledge and laboratory skills to other medical/paramedical team members.
5. Adopt a compassionate attitude toward towards the patients (and their families) under his/ her charge.
6. Critically evaluate and initiate investigation for solving problems relating to skin, venereal diseases and leprosy.

## SKILLS TO BE LEARNT

1. History taking for dermatology, venereology and leprosy
2. Describe cutaneous findings in dermatological terms in a systematic way.
3. Evaluate and manage the common diseases in dermatology and have a broad idea how to approach an uncommon diseases.
4. Evaluate and manage STD cases
5. Evaluate and manage HIV positive cases
6. Systemic examination relevant for dermatologic condition
7. Maintain basic skills like pulse, blood pressure chest and cardiac auscultation learnt in MBBS
8. Care of dermatologic emergencies like TEN, Pemphigus, necrotic ENL, angioedema, drug reactions etc.
9. Management of pediatric cases with skin diseases
10. To achieve adequate skills for tests done in side laboratory in day-to-day practice and be familiar with other sophisticated investigations.

## Fundamentals of Cutaneous Diagnosis-

Basic skin lesions, history taking, examination of the patient including relevant diagnostic, clinical tests and aids.

## **Duration of Course –**

Full Time: 3 Academic Years for PG Degree Course and Full Time 02 Academic Years for Diploma course.

## **SYLLABUS**

### **Topics Related to Allied Basic Sciences**

The structure, function and development of human skin. Skin as a barrier  
Ultra structural aspects of epidermis, epidermal appendages, dermoepidermal 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  
Biology of eccrine and apocrine sweat glands  
Biology of hair follicles, sebaceous glands and nails  
Biology of melanocytes and melanin formation  
Disorders of keratinisation  
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 responses  
Mechanism of cutaneous wound healing  
Cellular and molecular biology of cutaneous inflammation  
Immunologic aspects of skin  
HLA system, Immunoglobulins, cyto kines  
Complement system  
Hyper-sensitivity and allergy  
Cutaneous carcinogenesis  
Basic of cutaneous bacteriology, mycology, virology, parasitology and defence mechanism.  
Common laboratory procedures, stains culture media and related serological tests  
Basic pathologic reaction pattern in skin  
Common and special histopathological stains and procedures used in the diagnosis of skin diseases and Special techniques such as immunofluorescence, immunoperoxidase and other related techniques.

### **Clinical Dermatology**

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

### **Papulo-squamous Diseases**

Psoriasis, Pityriasis rubra pilaris, pityriasis rosea Lichen Planus, lichenoid eruptions  
Parapsoriasis, Palmoplantar Keratodermas.  
Darier.s disease. Prorokeratosis  
Ichthyoses and ichthyosiform dermatoses, Keratodermas

### **Vesiculo-bullous Disorders**

Pemphigus group of disorders  
Bullous pemphigoid

Chronic bullous disease of childhood  
Familial benign pemphigus  
Herpes gestationis  
Mechanobullous (hereditary and acquired)  
Epidermolysis bullosa acquisita  
Dermatitis herpetiformis  
Erythema Multiforme  
Subcorneal pustular dermatoses

### **Disorders of Epidermal Appendages**

Disorders of hair and nails  
Disorders of sebaceous glands : Acne  
Rosacea, Perioral dermatitis,  
Disorders of eccrine and apocrine sweat glands

### **Tumours**

Naevi and hamartomas  
Precancerous Skin lesions, Squamous cell carcinoma and Basal cell carcinoma, malignant melanoma.  
Pagets disease, Keratoacanthoma.  
Benign epithelial tumours, appendageal tumours

### **Disorders of pigmentation**

Vitiligo Albinism, Benign neoplasia and hyperplasias of melanocytes, Dysplastic melanocytic nevi, hyperpigmentation

### **Inflammatory Disorders of the Dermis**

Acute Febrile Neutrophilic dermatosis  
Erythema elevatum diutinum  
Cutaneous eosinophilic diseases  
Granuloma faciale  
Pyoderma gangrenosum  
Erythema annulare centrifugum and other Figurate Erythemas  
Granuloma annulare  
Malignant atrophic papulosis  
Neoplasms, Pseudo neoplasms and Hyperplasias of the Dermis  
Vascular Anomalies, Kaposi.s Sarcoma  
Anetoderma and other Atrophic Disorders of the skin  
Neoplasias and hyperplasias of Neural and Muscular origin  
Elastosis Perforans Serpiginosa, Reactive Perforating Collagenosis, Kyrle.s disease

### **Lymphomas, Pseudolymphomas and Related Conditions**

### **Disorders of Subcutaneous Tissue**

Panniculitis  
Lipodystrophy  
Neoplasms of the subcutaneous Fat

### **Disorders of the Mucocutaneous Integument.**

Biology and disorders of oral mucosa  
Disorders of anogenitalia of males and females

## **Cutaneous changes in disorders of altered reactivity**

Genetic Immunodeficiency Disease  
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 plantar eczema  
Erythrodermas

## **Skin Changes Due to Mechanical and Physical Factors**

Occupational skin disease  
Radiobiology of the skin.  
Skin problems in amputee.  
Sports Dermatology.  
Skin problems in war field.  
Decubitus ulcers.  
Radiation to the skin  
Skin diseases due to cold, heat

## **Photobiology of skin**

Normal reaction to ultra violet rays and sun exposure

## **Disorders Due to Drugs and Chemical Agents**

Erythema multiforme, Stevens-Johnson syndrome, toxic epidermal necrolysis and  
Cutaneous reactions and mucocutaneous reactions to chemicals and drugs  
Pathological response to UVR and sun exposure  
Cutaneous manifestations of drug Abuse

## **Abnormal vascular response**

Erythemas including annular erythemas  
Urticaria  
Vasculitis

## **Dermatology and age of man**

Ageing of skin  
Neonatal dermatological problems  
Pediatric and adolescent problems  
Geriatric dermatological problems

## **Skin Lesions in nutritional, heritable and metabolic disorders**

Cutaneous Changes in nutritional disorders.  
Acrodermatitis enteropathica and zinc deficiency disorders.  
Cutaneous Changes in errors of amino acid metabolism

Porphyrias  
Xanthomas  
Disorders of lipid metabolism and storage  
Mucinoses  
Amyloidosis  
Angiokeratoma corporis diffusum  
Lipid proteinosis  
Malabsorption  
Vitamin and mineral deficiency and excess

### **Skin Manifestations of systemic disorders**

Skin and disorders of the alimentary tract  
Hepatobiliary system and the skin  
Cutaneous changes in renal disorders, cardiovascular, pulmonary disorders and endocrine disorders  
Skin changes in pregnancy  
Cutaneous changes in haematological disease (Langerhans Cells and other cutaneous histiocytosis, Mastocytoses Syndrome)  
Cutaneous changes in endocrine disorder  
Flushing and carcinoid syndrome.

### **Genodermatosis**

Phacomatosis  
Tuberous sclerosis  
Incontinentia pigmentata  
Ectodermal dysplasia  
Xeroderma pigmentosum

### **Connective tissue disorder and Skin manifestations of rheumatological diseases**

- Reiter's syndrome.
- Arteritis and venulitis.
- Lupus erythematosus
- Dermatomyositis
- Scleroderma
- MCTD (Mixed connective Tissue Disorders)
- Relapsing polychondritis
- Rheumatoid arthritis, rheumatic fever and gout
- Sjogren's syndrome
- Raynaud's phenomenon
- Multicentric reticulohistiocytosis

### **Cutaneous Manifestations of Disease in Other Organ Systems**

Sarcoidosis of the skin  
Cutaneous Manifestations of Internal Malignancy  
Acanthosis Nigricans  
Papular Mucinoses  
Neurocutaneous Disease  
Tuberous Sclerosis Complex  
Neurofibromatosis  
Ataxia Telangiectasia  
Bechet's Disease

## **Bacterial infections**

Pyodermas : Staphylococcus aureus, Streptococcus, and others  
Staphylococcal scalded-skin syndrome  
Soft tissue infections : Erysipelas, Cellulitis  
Systemic bacterial infections with cutaneous manifestations  
Cutaneous tuberculosis and atypical mycobacterial infections  
Actinomycetoma

## **Fungal infections**

Superficial fungal infection : (dermatophytosis, yeast, others)  
Deep fungal infections

## **Viral and rickettsial infections**

Herpes simplex virus infections  
Varicella . zoster infection  
Human papilloma virus  
Molluscum contagiosum  
Hepatitis B, C  
Rubella  
Measles

## **Parasitic and protozoal infestations**

Scabies  
Pediculosis.  
Arthropods and skin.

## **THERAPEUTICS**

### **Topical Therapy**

Pharmacokinetics and topical applications of drugs  
Principles of topical therapy, topical formulations

### **Topical Agents**

Glucocorticoids, analgesics, anesthetics, antiinflammatory, anti microbial, anti parasitic, antiperspirants, antipruritic, antiviral, astringents, bleaching agents, keratolytics and keratoplastic agents.  
Therapies, antiviral, topical antibiotics, topical antifungal agents, sunscreens, cytotoxic agents, retinoids, Vit D3 analogues, cosmetics and skin care in practice, emollients and moisturizer.

### **Systemic Therapy**

Systemic glucocorticoids, antibiotics, antileprosy and antituberculous agent, sulfones, aminoquinolines, cytotoxic and antimetabolic agents, oral retinoids, antihistamines, antiviral drugs, oral antifungal agents, immunosuppressive and immunomodulatory drugs, thalidomide. Antiparasitic drugs, antiandrogens, interferons, biologics, intravenous immunoglobulins, antiplatelet agents, psychotropic agents. other misc. systemic drugs

### **Dermatosurgery including Cosmetic dermatology**

Local anaesthesia and nerve blocks, electrosurgery/ cautery, vitiligo surgeries, cryotherapy, electrolysis, tattooing, intra-lesional injections, iontophoresis, dermabrasion, biopsy techniques, hair and nail minor surgeries, excision surgeries.  
Lasers in dermatology - for vascular, hair and pigmented disorders.

Skin resurfacing : chemical peels  
Skin resurfacing : dermabrasion  
Skin resurfacing : Laser  
Skin punch grafting  
Wound dressings  
Sclerotherapy for varicose and telangiectatic veins  
Botulinum injections.  
Tumescent liposuction  
Substances for soft tissue augmentation  
Hair transplantation and alopecia reduction  
Cryosurgery  
Mohs micrographic surgery  
Nail surgery

### **Photochemotherapy and Photo therapy including principles and use of Narrow band UVB, PUVA, UVB in Skin diseases.**

#### **STD**

Clinical approach to the patient with STD  
Anatomy of male and female genitalia  
Epidemiology of STD's  
Human Sexuality.  
Viral STD.s including HIV, HSV, HPV, Molluscum contagiosum, EBV etc.  
Bacterial STD.s : Syphilis, gonorrhoea, chancroid, donovanosis, bacterial vaginosis  
Chlamydial and mycoplasma infections : Lymphogranuloma venereum, urethritis, cervicitis, NGU  
Fungal : Candidiasis  
Protozoal : Trichomoniasis  
Ectoparasitic : scabies, pediculosis infestations.  
Syndromic management of STD.s  
STD.s in reproduction health and paediatrics  
STD.s and HIV  
Post exposure prophylaxis  
Prevention, counseling and education of different STD.s including HIV  
National control programmes of STDs and HIV infection  
Medicolegal, social aspects of STD.s including psychological and behavioural abnormalities in STD patients.

#### **Management of Antiretroviral Therapy of Adults and Adolescents.**

- Diagnosis of HIV Infection in Adults and Adolescents.
- Assessment of Adults and Adolescents with HIV Infection and pre- ART Care and Follow-up.
- Prophylaxis of Opportunistic Infections.
- ART in Adults and Adolescents.
- Routine Monitoring of Patients on ART.
- ART in pregnant Women, PPTCT and Previous Exposure to NVP.
- Considerations for Co-infection with HIV.
- Antiretroviral Drug Toxicity.
- ART Treatment Failure and When to Switch.
- Choice of ARV Regimens in the Event of Failure of First-line Regimens.
- Nutritional Aspects of HIV.
- Palliative Care in HIV.
- NACO Standardized Reporting and Recording System.

Management of Occupational Exposure including Post-exposure Prophylaxis.

Cutaneous Manifestation and Lab-diagnosis of HIV.

Prevention aspect of STD's (Condoms, Vaccines etc).

Prevention, counseling and education of different STD.s including HIV

National control programmes of STDs and HIV infection

Medicolegal, social aspects of STD.s including psychological and behavioural abnormalities in STD patients

## **LEPROSY**

Approach to the 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

Systemic involvement (ocular, bone, mucosa, testes and endocrine etc.)

Pregnancy and leprosy

HIV infection and leprosy

Therapeutic aspects including newer drugs

Immunotherapy,

Disabilities, deformities and rehabilitation

Prevention, education and counseling

National leprosy control and elimination programme

## **DIPLOMA IN VENEREOLOGY AND DERMATOLOGY PRACTICAL/ CLINICAL EXAMINATION :-**

<b>Sr. No.</b>	<b>Heads</b>	<b>Marks</b>
<b>1</b>	One Long Case	80
<b>2</b>	Two Short Cases	30×2=60
<b>3</b>	Viva	80
<b>4</b>	Spotters Ten	5×10=50
<b>5</b>	Histopath Slides	3×10=30
<b>Total Marks</b>	<b>300 Marks</b>	

## **Subheads to be added to Draft Syllabus for MD and DDVL**

Basics of Dermoscopy and Trichoscopy

Cosmetic Dermatology

Chemical Peels,  
Lasers,  
Botox and fillers,  
Facial rejuvenation

### **Continuing Medical Education:**

- 1) University should sponsor CMEs to be held by rotation in each of the medical colleges affiliated to the university on the subjects of (or related subjects)
  - a. Dermatopathology
  - b. Dermoscopy
  - c. Skin in internal medicine
  - d. Genodermatoses
  - e. Autoimmune diseases
  - f. Contact Dermatitis
  - g. Ultraviolet therapy
  - h. Vitiligo
  - i. Pigmentary diseases
  - j. Leprosy
- 2) Faculty development:
  - a. Faculty training: Each of the medical college departments may be identified as a training centre for one or two subspecialties mentioned above. Faculty from other medical colleges interested in getting trained in that department for that subject should be given the opportunity to attend the training for one to two weeks on deputation from their department under a university program. Faculty may also be encouraged to acquire experience in related fields by attending part time at an allied department in the same hospital.
  - b. Foreign Conferences - leave and support: Each senior faculty (Professor and Associate Professor), should be given 5 days leave once a year to attend a conference or training abroad. Financial assistance for such travel may be given if the faculty is invited to present a paper at the conference.
- 3) Books and journals: Currently students and teachers are unaware of the availability of digital resources provided by MUHS. Awareness drive should be held to improve visibility of this vital resource. Students should be given a handout of the facilities at the time of registration.
  - a. The number of books and journals provided in the MUHS digital library should be increased. I recommend the following additional journals:
    - Indian Journal of Dermatology
    - International Journal of Dermatology
    - Indian Journal of Sexually Transmitted Infections and AIDS
    - Journal of American Academy of Dermatology
    - Journal of European Academy of Dermatology and Venereology