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FACULTY OF MEDICINE

SYLLABUS

FOR

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

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 Licen 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, Mastocytosis 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 agents, 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 :-

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

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