MEENAKSHI ACADEMY OF HIGHER EDUCATION AND RESEARCH (Deemed To Be University U/S 3 OF UGC ACT, 1956) 12, Vembuliamman Koil Street, West K.K. Nagar, Chennai – 600 078

MEENAKSHI MEDICAL COLLEGE HOSPITAL AND RESEARCH INSTITUTE, ENATHUR, KANCHIPURAM



${\bf MASTER\ OF\ DERMATOLOGY, VENEREOLOGY, LEPROSY\ -M.D\ (DVL)}$

FACULTY OF MEDICINE

REGULATIONS AND SYLLABUS (REGULATIONS – 2019)

Effective from the Academic Year 2020-2021



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HOD-DERMATOLOGY

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^{*}All Red Contents to be changed ** Green contents- To be maintained same

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MEENAKSHI ACADEMY OF HIGHER EDUCATION AND RESEARCH MASTER OF DERMATOLOGY, VENEREOLOGY, LEPROSY –M.D (DVL) REGULATIONS -2019

I.VISION AND MISSION OF MAHER

VISION

To be a world-class institution, transforming society through value-based diverse programs and healthcare advancements, leading to the all-around development of human resources, knowledge, innovation, entrepreneurship, and research.

MISSION

To become an institute of eminence by developing world-class professionals in the field of healthcare, science, liberal arts, technology and research with a focus on the societal good.

To create an enabling state-of-the-art infrastructure, intellectual capital and provide best-in-class learning experience with a freedom to innovate and invent.

To foster values and ethics so as to develop students and learners into responsible citizens of the Nation and the world.

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MASTER OF DERMATOLOGY, VENEREOLOGY, LEPROSY –M.D (DVL)

REGULATIONS -2019

II.VISION AND MISSION OF MMCHRI

VISION

To provide global leadership in human development, excellence in education and quality health care.

MISSION

To train competent, compassionate and caring physicians through excellence in teaching, patient care and medical research

MEENAKSHI ACADEMY OF HIGHER EDUCATION AND RESEARCH

MASTER OF DERMATOLOGY, VENEREOLOGY, LEPROSY –M.D (DVL)

REGULATIONS -2019

III.VISION AND MISSION – DEPARTMENT OF DERMATOLOGY

VISION

To provide affordable and quality skin care and impart excellence in medical education and strive for a leprosy free society

MISSION

To train competent, compassionate and caring dermato, venereologists and leprologists through excellence in teaching, patient care and medical research. To provide uniform, standard training in Dermatology, Venereology and Leprosy to the candidates so that after 3 years of training they are able to acquire the necessary competence in the speciality to work as Senior Resident/ Junior and to progress further in their career.

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MASTER OF DERMATOLOGY, VENEREOLOGY, LEPROSY –M.D (DVL) REGULATIONS -2019

To able to diagnose all common dermatological conditions, identify cutaneous

IV.PROGRAM EDUCATIONAL OBJECTIVES (PEO's)

manifestation of systemic illness, should be able to perform bedside biopsy, slit skin smear examination, patch test, Tzanck smear, should be able to perform independently complete examination of suspected leprosy cases, able to do counselling and do complete genital examination, should have knowledge to do and interpret dark ground examination, wet mount, KOH smear and cultures to diagnose venereal disease, able to interpret HIV diagnostic testing and counsel patient for further treatment

Should be able to teach dermatology to undergraduates, postgraduates, nurses and paramedical staff including laboratory personnel.

PEO 3 Carry out research, systematically write a paper and publish in a journal, Able to present a paper in a conference through an oral presentation and poster presentation.

PEO 4 Should be able to function as a part of a team, provide leadership and inspire members of the team

PEO 5 Always adopt ethical principles and develop communication skills

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V. PROGRAM OUTCOMES (PO's)

- **PO 1: Acquisition of knowledge:** The student will be able to explain clearly concepts and principles of dermato-venereology and leprosy. The student will also be able to explain the disease evolvement and management protocols at each stage. She/he will be able to observe and assist in dermatosurgery and aesthetic procedures, in addition to clinical OPD procedures.
- **PO 2 Teaching and training:** The student will be able to effectively teach postgraduate students in medicine so that they become competent healthcare professionals and able to contribute to training of postgraduate trainees.
- **PO 3 Research:** The student will be able to carry out a research project (both basic and clinical) from planning to publication and be able to pursue academic interests and continue life-long learning to become more experienced in all the above areas and eventually be able to guide postgraduates in their thesis work.
- **PO 4 Critical thinking skill**: The student will be able to evaluate and manage the difficult situational cases and become competent in early management of such cases. They will be able to co-ordinate with super-speciality consultants and follow protocols based on the cases
- **PO 5 Technical skill:** The student will be able to assist and perform day-care, minor, major and emergency (Diagnostic & therapeutic) individualy under the supervision of senior faculty.
- **PO 6 Professional skill:** Recognize conditions that may be outside the area of his specialty/competence and refer them to the proper specialist

VI.PROGRAM SPECIFIC OUTCOMES (PSO's)

PSO1: Perform daily Outpatient services including patient screening and disease determination and Perform OPD investigative tests like skin scraping and KOH examination, Tzanck smear, bedside biopsy, Slit skin smear etc.,

PSO2: Ability to perform dermato-surgical and aesthetic procedures (independently/or as assistant)

PSO3: Participate in community outreach activities like camps, school screening and public education.

PSO4: Present academic papers in State/National conference. To do thesis work in the field of Dermatology, venereology, leprosy under guidance of senior faculty. Teach junior post graduates & undergraduates.

PSO5: To participate in department research activities and clinical audit.

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MASTER OF DERMATOLOGY, VENEREOLOGY, LEPROSY -M.D (DVL)

VII. REGULATIONS -2019

In exercise of the powers conferred by the Board of Management, Meenakshi academy of higher education and research, deemed to be University, Chennai hereby makes the following regulations:

1. SHORT TITLE

These Regulations shall be called "THE REGULATIONS FOR THE MASTER OF DERMATOLOGY, VENEREOLOGY, LEPROSY –M.D (DVL) PROGRAM OF MEENAKSHI ACADEMY OF HIGHER EDUCATION AND RESEARCH" deemed to be University.

2. COMMENCEMENT

They shall come into force from the academic year 2020-2021 onwards.

The Regulations and the Syllabus are subject to modification by the Academic council and board of studies from time to time.

3. TITLE OF THE PROGRAM

It shall be called Master of DERMATOLOGY, VENEREOLOGY and LEPROSY -M.D (DVL)

4. SYLLABUS

The syllabus is as prescribed according to the norms given by NMC and finalised with board of studies management by the university

5. ELIGIBILITY FOR ADMISSION

- 1) Candidates who have obtained minimum eligibility in qualifying exam
- 2) The reservation of seats and relaxation in the qualifying marks for SC/ST/OBC and other categories shall be as per the rules of the Central Government/State Government, whichever is applicable.

6. CRITERIA FOR SELECTION

Students for M.D DVL Degree Program shall be admitted based on performance at the Competitive Examinations held by the government.

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7. ADMISSION PROCEDURE

Admission shall be made as per the NMC and University norms.

8. ELIGIBILITY CERTIFICATE

No candidate shall be admitted to the MD DVL Program unless the candidate has obtained and produced an Eligibility Certificate issued by this University. The candidate has to make an application to the University with the Original and Xerox copies of the following documents along with the prescribed fee:

- 1) 10th and Higher Secondary or equivalent Examination Mark Sheets.
- 2) Transfer Certificate
- 3) MBBS Under graduate degree certificate and mark sheets.
- 4) Post graduate diploma DVL certificate if any and marksheets
- 5) Candidates should obtain an Eligibility Certificate before the last date for admission as notified by the University.

9. REGISTRATION

A candidate admitted to the M.D DVL Program of this University shall register by remitting the prescribed fees along with the application form for registration duly filled-in and forwarded to this University through the Head of the Institution within the stipulated date.

10. DURATION OF THE PROGRAM

The programme shall be of duration of three academic years.

11. FEES

The institution shall change only such a fee as prescribed by the university

12. COMMENCEMENT OF THE PROGRAM

The program shall commence from 1stMay of the Academic year.

13. CUT-OFF DATES FOR ADMISSION TO EXAMINATION

The candidates admitted from 1st May to 30th September of the academic year will be registered to take up their Final examination in May at the completion of 3rd year.

There will not be any admission after 30th September for the academic year.

14. LEAVE DAYS IN AN ACADEMIC YEAR

There shall be maximum of 15 days in a year exclusive of the period of admission and examination

15. ATTENDANCE REQUIRED FOR ADMISSION TO EXAMINATIONS

a) No candidate shall be permitted to write any one of the papers of M.D DVL examination unless he/ she has attended all the courses in the subject for the prescribed period and produces the necessary certificates of study and attendance from the Head of the Institution.

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- b) A candidate is required to put in a minimum of 80% of attendance in both theory and clinical separately in each year before admission to the examination.
- c) A candidate, who has not completed the program and not submitted the dissertation signed by the Head of the Department, will not be permitted to appear for the exam.
- d) Attendance earned by the student should be displayed on the Notice Board of the department every month and a copy of the same sent to the University for computerization and parents shall be informed regarding the shortage of attendance of their wards through email (if available) or by post by the Institution.

16. SUBMISSION OF LOG BOOK

- a. At the time of practical examination each candidate shall submit to the Examiners his / her log book duly certified by the Head of the Department as a bonafide record of the work done by the candidate.
- b. The log book shall be evaluated by the concerned member of the faculty and the external examiner (Internal and external Evaluation) the practical record marks shall be submitted to the University prior to the commencement of the theory examinations.

17. COMMENCEMENT OF THE EXAMINATIONS

- a. There shall be examinations at the end of 3rd year in the month of April/May. A candidate who does not pass the examination in any of the 4 papers shall be permitted to appear in all the final year papers in the subsequent examinations to be held in September or April/May.
- b. Candidates should get enrolled/register for the first semester examination. If enrolment/registration is not possible owing to shortage of attendance beyond condition limit/rules prescribed OR belated joining OR on medical grounds, such candidates shall redo the lost academic days in the subsequent term of shall be admitted to appear for exams, if he/she has successfully kept the term in first year or the university rules are followed.

18. EVALUATION

Attendance shall be taken as a component of continuous assessment. The students should have a minimum 80% attendance in each year. In addition to the continuous evaluation component, the end of program examination, which will be a written type examination of at least 3 hours duration, would also form an integral component of the evaluation. The evaluation of practical work will be at end of the program.

19. REVALUATION OF ANSWER SCRIPTS

There shall be no revaluation of answer papers of failed candidates in the examination

However re-totallingof answer papers is allowed once upon request by the students.

20. RE-ADMISSION AFTER BREAK OF STUDY

1) The calculation of the break of study of the candidate for re-admission shall be calculated from the date of first discontinuance of the program instead of from the date of admission.

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- 2) Candidates having break of study shall be considered for re-admission provided, they are not subjected to any disciplinary action and no charges are pending or contemplated against them.
- 3) All readmissions of candidates are subject to the approval of the Vice-Chancellor.
- 4) A candidate having a break of study of less than 6 months shall apply for re-admission for condonation to the Academic Officer of this University. The candidate may be re-admitted in the corresponding program of study. The candidate has to fulfil the attendance requirements of the University
- 5) A candidate having a break of study of more than 6 months but less than 2 years shall apply for readmission for condonation to the Academic Officer of this University. The candidate may be readmitted to the beginning of the academic year of the program. The candidate has to fulfil the attendance requirements of the University
- 6) A candidate having a break of study of more than 2 years and up to 5 years shall apply for the readmission for condonation to the Academic Officer of this University. The candidates may be readmitted in the corresponding program of study. The candidate has to fulfil the attendance requirements of the University and shall not be granted exemption in the subjects he has already passed.
- 7) Candidates having a break of study of 5 years and above from the date of discontinuance and more than two spells of break will not be considered for re-admission.

21. TRAINING PROGRAMME

Tentative Schedule for three years of MD training:

Dermatology opd including special clinics (psoriasis, vitiligo, pigment, bulla, dermatosurgery)	18 months
Std posting	6 months
Leprosy	3 months
Interdisciplinary posting (internal medicine, plastic surgery, pathology, microbiology)	2 months
External posting	2 months
In patient ward posting	5 months

Teaching activities

One teaching activity each day

- Journal club (once a week)
- STD/Leprosy discussion (once a week)

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- Short case and spotter presentations (twice a week)
- Seminars (at least once a week)
- Histopathology discussion (once a week)
- Clinical case discussion (once a week)
- Photo Quiz (monthly twice)
- Problem based learning
- Role play

22. MINIMUM PASSING STANDARD

The minimum passing standard for final Examinations shall be 50% i.e., each in theory and practical courses.

THEORY	PF	RACTICAL -20	VIVA VOCE,OSCE,THESIS- 200			
4 0 0	Long case	Short case	Spotter	Viva voice	Thesis	OSCE
	80	40+40	40	25	25	50

23. GRADE OF MARKS:

>/= 50% of total marks	Pass
>75% of total marks	Distinction
>90 % of total marks	Honours

24.AWARD OF DEGREE

The degree shall be awarded by the university only after the completion of thesis approval and of all four final year theory exams papers and practical examination.

VIII. Program level CO/PO and PSO matrix:

S.	Course	Course Name	PO	PO	PO	PO	PO	PO	PS	PS	PS	PS	PSO
No	Code		1	2	3	4	5	6	O1	O2	О3	O4	5
1.		Basics science	3	2.2	2.4	2.6	2.8	2	2.6	2.2	2.4	2.6	2.6
	1241	-				п							
2.	1242	Dermatology, venereology,	2.8	2.3	2.4	2	2.8	2.6	2	2.4	2.6	2.3	2.6

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		leprosy											
3.	1243	Systemic dermatology	3	2.2	2.4	2.6	2.8	2	2.6	2.2	2.4	2.6	2.6
4.	1244	Recent advances	3	2.3	2.5	2.5	2.6	2	2.3	2.1	2.5	2.6	2.6

1-low, 2-medium, 3-high

IX. PROGRAM AND COURSE DETAILS

PROGRAM SPECIFIC COMPETENCIES:

By the end of the program, the student should have acquired knowledge (cognitive domain), professionalism (affective domain) and skills (psychomotor domain) as given below:

A. Cognitive domain:

At the end of training of 3 years of MD (DVL) programme, the, the student should have acquired following theoreticalknowledge:

- 1. Describe structure, functions and development of human skin.
- 2. Describe ultrastructural aspects of epidermis, epidermal appendages, dermoepidermal junction, dermis, and sub-cutis.
- 3. Describe basic pathologic patterns and reactions of skin.
- 4. Demonstrate the knowledge of common laboratory stains and procedures used in the histopathologic diagnosis of skin diseases and special techniques such as immunofluorescence, immunoperoxidase and other related techniques.
- 5. Describe the basics of cutaneous bacteriology, mycology, virology, parasitologyand host resistance.
- 6. Describe papulosqamous and vesiculobullous disorders.
- 7. Describe disorders of epidermal appendages and related disorders.
- 8. Describe inflammatory and neoplastic disorders of dermis.
- 9. Describe skin lesions in nutritional, metabolic and heritable disorders.
- 10. Describe pharmacokinetics and principles of topical and systemic therapy.
- 11. Describe drug reaction, its diagnosis and management.
- 12. Describe cutaneous manifestations of systemic disorders.
- 13. Describe anatomy of male and female genitalia, epidemiological transmission, clinical aspects and management of STDs and HIV.
- 14. Describe clinical features, reactions, treatment and rehabilitation in leprosy.
- 15. Describe etiology, pathophysiology, principles of diagnosis and management of common problems in dermatology including emergencies in adults and children.
- 16. Describe indications and methods for fluid and electrolyte replacement therapyincluding blood transfusion in dermatological conditions.
- 17. Describe common dermatological malignancies in the country and theirmanagement including prevention.

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- 18. Should be expert in evaluation of ECG, chest X-ray (CXR), biochemical, haematology and immunology reports related to dermatology.
- 19. Acquire knowledge of the basics of laser operation and precautions which needs to be taken.
- 20. Demonstrate competence in basic concepts of research methodology and interpretation of data in medical literature/publications.
- 21. Skilled 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.
- 22. Should also have a broad idea how to approach an uncommon dermatological disease.

B. Affective Domain

At the end of training of 3 years of MD (DVL) programme, the student should have acquired the following attitudinal competencies:

- 1. Demonstrate self-awareness and personal development in routine conduct.
- 2. Behaviour and Emotional Stability: Dependable, disciplined, dedicated, stable in emergency situations and shows positive approach.
- 3. Motivation and Initiative: Is innovative, enterprising, does not shirk duties or leave any work pending and motivates team members.
- 4. Honesty and Integrity: Is truthful, admits mistakes, does not cook upinformation, has ethical conduct and exhibits good moral values.
- 5. Interpersonal Skills and Leadership Quality: Has compassionate attitudetowards patients and attendants, gets on well with colleagues and paramedical staff, is respectful to seniors, has good communication skills.
- 6. Should be able to maintain confidentiality with regards to history, physical examination and management of patients.
- 7. 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 at individual and community level against skin, venereal disease and leprosy.
- 8. Recognize the emotional and behavioural characteristics of patients and keep these fundamental attributes in focus while dealing with them.
- 9. Demonstrate empathy and humane approach towards patients and their families and respect their sensibilities.
- 10. Demonstrate communication skills of a high order in explaining management and prognosis, providing counseling and giving health education messages to patients, families and communities.
- 11. Organize and supervise the desired managerial and leadership skills.
- 12. Should be able to function as a part of a team, develop an attitude of cooperation with colleagues, and interact with the patient and the clinician or other colleagues to provide the best possible diagnosis or opinion.
- 13. Always adopt ethical principles and maintain proper etiquette in dealings with patients, relatives and other health personnel and to respect the rights of the patient including the right to information and second opinion.

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C. Psychomotor Domain

A student at the end of training of 3 years of MD (DVL)programme must acquire the following practical skills:

- 1. General medical skills as learnt in MBBS to be maintained
- 2. Should be able to provide basic life support (BLS).
- 3. Should be expert in blood pressure measurement, intravenous access, blood sampling, fluid electrolytes therapy, plerual and cerebrospinal; fluid (CSF) fluid examination.
- 4. Should be able to provide basic and advanced life-saving support services in emergency situations.
- 5. Should be able to undertake complete monitoring of the patient and identify social, economic, environmental and emotional determinants in a given case and take them into account for planning therapeutic measures.
- 6. Recognize conditions that may be outside the area of his specialty/competenceand refer them to the proper specialist.

DERMATOLOGY, VENEREOLOGY AND LEPROSY, HIV/AIDS SKILLS

A student at the end of training of 3 years of MD (DVL) programme must acquire the following skills:

Dermatology:

- 1. Acquire skills in history taking, physical examination, diagnosis and management of patients in dermatology, venereology and leprosy.
- 2. Be able to identify, classify and differentiate cutaneous findings in dermatological terms in a systematic way.
- 3. Be able to perform systemic examination (chest, cardiac, abdomen, neurological, genitals, oral, eye and gynaecological examination) relevant to dermatologic condition.
- 4. Be competent to manage dermatologic emergencies like angioedema, toxic epidernmal necrolysis (TEN), Stevens-Johnson syndrome (SJS), pemphigus, drug reaction and necrotic erythema nodosum leprosum (ENL).
- 5. Be able to plan and deliver comprehensive treatment for diseases using principles of rational drug therapy.
- 6. Be able to plan and advice measures for the prevention of infectious disease.
- 7. Be able to plan rehabilitation of patient suffering from chronic illness and disability and those with special needs like leprosy.
- 8. Demonstrate skills in documentation of case details and of morbidity/mortality data relevant to the assigned situation.

Laboratory Skills

- 1. The student: o Should be able to perform common laboratory procedures like potassium hydroxide (KOH) mount, Gram stain, Giemsa stain, acid fast bacilli (AFB) stain, Woods lamp examination, stains, culture media etc. related to the cutaneous diagnosis independently.
- 2. Should be able to order relevant investigations and interpret them to reach to a diagnosis.
- 3. Should be familiar with other recent investigations.

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Dermatopathology

- 1. Student should be competent enough to: To interpret histopathology of common skin diseases.
- 2. To diagnose common skin diseases by examining slides under microscope

Surgery in dermatology

- 1. Should able to give incisions, take stitches and sutures.
- 2. Should be trained in taking skin biopsy and nail biopsy.
- 3. Should be able to perform chemical peels, manual dermabrasion, skin punch grafting and wound dressing independently.
- 4. Should be able to perform cryosurgery, nail surgery and acne surgery.
- 5. Able to perform chemical cauterization, cryotherapy, patch and photopatch test, slit smears and tissue smears.

Venereology

- 1. Should be competent in the clinical approach to the patient of STDs and HIV/AIDS.
- 2. Should be able to interpret the histopathological diagnosis including laboratory aids related with venereology.
- 3. Able to perform dark ground illumination, gram stain, Bubo aspiration and tissue smear.
- 4. Able to manage the patient according to syndromic approach for treatment of STDs.

Leprosy

- 1. Able to diagnose and approach the case of leprosy.
- 2. Perform AFB smear.
- 3. Able to manage cases of lepra reaction.
- 4. Identify, judge and decide when to refer the patients at appropriate level for surgery or rehabilitation. Should able to manage pediatric cases with skin diseases.

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COURSE 1(1241)-TOPICS RELATED TO ALLIED BASIC SCIENCES

COURSE SPECIFIC OBJECTIVES:

- 1. Student should have knowledge of basic sciences (Anatomy, Physiology, Biochemistry, Microbiology, Pathology and Pharmacology) as applied to dermatology
- 2. Should be able to perform common laboratory procedures like potassium hydroxide (KOH) mount, Gram stain, Giemsa stain, acid fast bacilli (AFB) stain, Woods lamp examination, stains, culture media etc. related to the cutaneous diagnosis independently.
- 3. Should be able to order relevant investigations and interpret them to reach to a diagnosis. Should be familiar with other recent investigations.
- 4. To interpret histopathology of common skin diseases. To diagnose common skin diseases by examining slides under microscope.
- 5. Student should learn the basic methodology of teaching and develop competence in teaching medical/paramedical students.

COURSE CONTENTS:

Structure and functions of skin

The structure, function and development of human skin, Skin as a barrier, Ultra structural aspects of epidermis, epidermal appendages, dermoepidermal junction, dermis, and subcutis, Molecular biology and genetics in relation to the skin, Epidermal cell kinetics and Keratinization, Lipids of epidermis and sebaceous glands, Percutaneous absorption.

Skin appendages:

Biology of eccrine and apocrine sweat glands, Biology of hair follicles, sebaceous glands and nails, Biology of melanocytes and melanin formation, Disorders of keratinization, 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.

Wound healing and Immunology:

Mechanis of cutaneous wound healing, Cellular and molecular biology of cutaneous inflammation, Immunol ical aspects of skin, HLA system, Immunoglobulins, cytokines, Complement system, Hyper-se i ivity and allergy, Cutaneous carcinogens, and defence mechanism

Infection

Basics of a aneous bacteriology, mycology, virology, parasitology.

Microbiology and histopathology:

Common boratory 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.

Sexually transmitted disease:

Anatomy of male and female genitalia, Epidemiology of STD

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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

COURSE OUTCOMES

CO1	Describe structure, functions and development of human skin.
CO2	Describe ultra-structural aspects of epidermis, epidermal appendages, dermoepidermal junction, dermis, and sub-cutis.
CO3	Describe basic pathologic patterns and reactions of skin.
CO4	Demonstrate the knowledge of common laboratory stains and procedures used
	in the histopathologic diagnosis of skin diseases and special techniques such as
	immunofluorescence, immunoperoxidase and other related techniques
CO5	Describe disorders of epidermal appendages and related disorders

COURSE OUTCOME (CO) / PROGRAM OUTCOME(PO) AND PROGRAM SPECIFIC OUTCOME (PSO) MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PSO	PSO	PSO	PSO	PSO
							1	2	3	4	5
CO1	3	2	2	3	3	2	3	2	2	3	3
CO2	3	3	3	3	3	2	3	3	3	3	3
CO3	3	2	3	3	3	2	3	2	3	3	3
CO4	3	2	2	1	3	2	1	2	2	1	1
CO5	3	2	2	3	2	2	3	2	2	3	3
AVERAGE	3	2.2	2.4	2.6	2.8	2	2.6	2.2	2.4	2.6	2.6

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COURSE 2 (1242) – GENERAL AND TOPICAL DERMATOLOGY INCLUDING LEPROSY, VENEREOLOGY AND SOCIAL ASPECTS

COURSESPECIFIC OBJECTIVES:

- 1. Critically evaluate, initiate investigation and clinically manage cases in Dermatology, Venereology and Leprosy with the help of relevant investigations.
- 2. Should plan and advise measures for the prevention and rehabilitation of patients with various dermatological conditions.
- 3. Student should have acquired practical and procedural skills related to the course
- 4. Student should learn the basic methodology of teaching and develop competence in teaching medical/paramedical students.
- 5. Should have acquired Problem Solving skills

COURSE CONTENTS:

Bacterial infections

Pyodermas: Staphylococcus, 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 infection

Viral and rickettsial infections

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

Psychocutaneous disorder

Psychological 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, Darier's disease. Porokeratosis, Ichthyoses and ichthyosiform dermatoses, Keratodermas

Vesiculo-bullous Disorders

Erythema multiforme, Stevens-Johnson syndrome, toxic epidermal necrolysis and pemphigus group of disorders, Bullous pemphigoid, Chronic bullous disease of childhood, Herpes gestationis, Mechanobullous (hereditary and acquired), Epidermolysis bullosa acquisita, Dermatitis herpetiformis, Subcorneal pustular dermatoses.

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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, Benign epithelial tumours, appendageal tumours

Disorders of pigmentation

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

Inflammatory Disorders of the Dermis

Acute Febrile Neutrophilic dermatoses, Erythema elevatum diutinum, Cutaneous eosinophilic diseases, Granuloma faciale, 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, Neoplasia and hyperplasias of Neural and Muscular origin, Elastosis Perforans Serpiginosa, Reactive Perforating Collagenosis, Kyrle's disease

Lymphomas, Pseudolymphomas and Related Conditions Disorders of Subcutaneous TissuEe - Panniculitis, Lipodystrophy, Neoplasms of the subcutaneous Fat

Disorders of the Mucocutaneous Integument, dermatitis & eczemas

Biology and disorders of oral mucosa, Disorders of ano-genitalia of males and females, 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 palmoplantar eczema, Erythrodermas

Skin Changes Due to Mechanical and Physical Factors

Occupational skin disease, Radiation to the skin, Skin diseases due to cold, heat

Photobiology of skin-Normal reaction to ultraviolet rays and sun exposure

Disorders Due to Drugs and Chemical Agents

Cutaneous reactions and mucocutaneous reactions to chemicals and drugs, Pathological response to UVR and sun exposure, Cutaneous manifestations of drug Abuse

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Abnormal vascular response

Erythemas including annular erythemas, Urticaria, Vasculitis

Dermatology problems according to age

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

Sexually transmitted infections

Viral STIs including HIV, HSV, HPV, Molluscum contagiosum, Hep B etc. BacterialSTD's, Syphilis, gonorrhoea, chancroid, donovanosis, bacterial vaginosis, Chlamydia and mycoplasma infections: Lymphogranuloma venereum, urethritis, cervicitis, NGU ,Fungal: Candidiasis ,Protozoal: Trichomoniasis, Ectoparasitic: scabies, pediculosis infestations. ,Syndromic management of STDs, STDs in reproductive health and paediatrics.

Leprosy

Clinical features, Reactions, Treatment, Systemic involvement (ocular, bone, mucosa, testes, endocrine etc.), Pregnancy and leprosy, HIV infection and leprosy.

COURSE OUTCOMES:

- CO1 Describe pharmacokinetics and principles of topical and systemic therapy.
- CO2 Describe drug reaction, its diagnosis and management.
- CO3 Describe indications and methods for fluid and electrolyte replacement therapy including blood transfusion in dermatological conditions.
- Should be competent in the clinical approach to the patient of STDs and HIV/AIDS
- Should be able to interpret the histopathological diagnosis including laboratory aids related with venereology
- Able to perform dark ground illumination, gram stain, Bubo aspiration and tissue smear.
- Able to manage the patient according to syndromic approach for treatment of STDs
- CO8 The student should be able to diagnose and approach the case of leprosy.
- CO9 The student should be able to perform AFB smear.
- **CO10** The student should be able to manage cases of lepra reaction.
- CO11 The student should be able to identify, judge and decide when to refer the patients at appropriate level for surgery or rehabilitation.
- CO12 The student should be able to plan rehabilitation of patient suffering from chronic illness and disability and those with special needs like leprosy

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HOD DERMATOLOGY

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OUTCOME (PSO) MAPPING COURSE OUTCOME (PSO) AND PROGRAM SPECIFIC

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3	7	3	7	3	ε	3	٤	7	7	3	COt
3	3	3	3	I	3	ε	I	3	3	3	CO3
3	3	3	٤	I	3	ε	I	3	3	3	CO5
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COURSE-3(1243)DERMATOLOGY INCLUDING SKIN MANIFESTATIONS OF SYSTEMIC DISEASES AND THERAPEUTICS

COUSRE SPECIFIC OBJECTIVES

- 1. Critically evaluate, initiate investigation and clinically manage cases in dermatology associated with systemic conditions
- 2. Diagnose and manage skin conditions associated with nutritional and metabolic disorders
- 3. Student should have acquired practical and procedural skills related to the course
- 4. Student should learn the basic methodology of teaching and develop competence in teaching medical/paramedical students.
- 5. Should have acquired Problem Solving skills

COURSE CONTENTS

Skin Lesions in nutritional and metabolic disorders

Porphyrias, Xanthomas, Disorders of lipid metabolism and Storage,mucinosis,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, cardiovascular, pulmonary and endocrine disorders Skin changes in pregnancy, Cutaneous changes in haematological disease

Genodermatosis

Phacomatosis, Tuberous sclerosis, Incontinentia pigmenti, Ectodermal dysplasia, Xeroderma pigmentosum

Connective tissue disorder

Lupus erythematosus, Dermatomyositis, Scleroderma, MCTD (Mixed connective Tissue Disease), relapsing polychondritis, rheumatoid arthritis, rheumatic fever ,gout, Sjogren's syndrome, Raynaud's phenomenon, Multicentric reticulo histocytosis

Cutaneous Manifestations of Disease in Other Organ Systems

Sarcoidosis of the skin, Cutaneous Manifestations of Internal Malignancy, Acanthosis Nigricans, Papular Mucinosis, Neurocutaneous Disease, Tuberous Sclerosis Complex, Neurofibromatosis, Ataxia Telangiectasia, Behcet's Disease.

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COURSE OUTCOMES:

- CO1 Describe cutaneous manifestations of systemic disorders.
- CO3 Describe common dermatological malignancies in the country and their management including prevention
- CO4 Should be expert in evaluation of ECG, chest X-ray (CXR), biochemical, haematology and immunology reports related to dermatology.
- CO5 Should also have a broad idea how to approach an uncommon dermatological disease

COURSE OUTCOME (CO) / PROGRAM OUTCOME(PO) AND PROGRAM SPECIFIC OUTCOME (PSO) MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PSO	PSO	PSO	PSO	PSO
							1	2	3	4	5
CO1	3	2	2	3	3	2	3	2	2	3	3
CO2	3	3	3	3	3	2	3	3	3	3	3
CO3	3	2	3	3	3	2	3	2	3	3	3
CO4	3	2	2	1	3	2	1	2	2	1	1
CO5	3	2	2	3	2	2	3	2	2	3	3
AVERAGE	3	2.2	2.4	2.6	2.8	2	2.6	2.2	2.4	2.6	2.6

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COURSE 4 (1244)- RECENT ADVANCES IN DERMATOLOGY AND THERAPEUTICS

COURSE SPECIFIC OBJECTIVES

- 1. Student must know basic concepts of research methodology, plan a research project, consult library and online resources, has basic knowledge of statistics and can evaluate published studies.
- 2. Should be able to practice the specialty of dermatology ethically.
- 3. Recognize the health needs of patients and carry out professional obligations in keeping with principles of National Health Policy and professional ethics.
- 4. Able to ensure the implementation of National Health Programmes, particularly in sexually transmitted diseases (STD) and leprosy
- 5. Should update recent drugs used in the treatment of dermatology, venereology and leprosy
- 6. Should know about various dermatosurgery and aesthetic procedures

COURSE CONTENTS Topical Therapy

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

Topical Agents

Glucocorticoids, analgesics, anaesthetics, antiinflammatory, anti microbial, anti parasitic, antiperspirants, antipruritic, antiviral, astringents, bleaching agents, keratolytics and keratoplastic agents. Therapies:antiviral, topical antibiotics, topical antifungal agents, sun- screens, cytotoxic agents, cosmetics and skin care products, emollients and moisturizers.

Systemic Therapy

Systemic glucocorticoids, antihistamines, antibiotics, sulfones, aminoquinolones, cytotoxic and antimetabolic agents, oral retinoids, antihistamines, antiviral drugs, oral antifungal agents, immunosuppressive and immunomodulatory drugs, thalidomide.

Dermatological surgery

Phototherapy, photochemotherapy, electrocautery, electrolysis, cryotherapy, tattooing, intralesional injections, etc.

Aesthetic and Dermatosurgery: Introduction and approach

Skin resurfacing: chemical peels, Skin resurfacing: dermabrasion, Skin resurfacing: Laser, Skin punch grafting, Wound dressings, tumescent liposuction, Substances for soft tissue augmentation, Hair transplantation, Cryosurgery, Moh's micrographic surgery, nail surgery.

Sexually transmitted diseases

STDs and HIV ,Prevention, counselling and education of different STIs including HIV,National control programmes of STDs and HIV infection,Medicolegal, social aspects of STD's including psychological and behavioural abnormalities in STD patients

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Leprosy

Therapeutic aspects including newer drugs ,Immunotherapy ,Disabilities, deformities and rehabilitation, Prevention, education and counselling ,National leprosy control, elimination ,eradication programmes

COURSE OUTCOMES

CO1	Ability to plan and deliver comprehensive treatment for diseases using principles
	of rational drug therapy
CO2	Acquire knowledge of the basics of laser operation and precautions which need to
	be taken
CO3	Acquire knowledge about dermatosurgery procedures
CO4	Acquire knowledge about aesthetic procedures.
CO5	Acquire knowledge about recent topical and systemic therapies
CO6	Acquire knowledge about recent updates in NLEP AND NACP,CDC (HIV&STD)

COURSE OUTCOME (CO) / PROGRAM OUTCOME(PO) AND PROGRAM SPECIFIC OUTCOME (PSO) MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PSO	PSO	PSO	PSO	PSO
							1	2	3	4	5
CO1	3	2	2	3	3	2	3	2	2	3	3
CO2	3	3	3	3	3	2	3	3	3	3	3
CO3	3	2	3	3	3	2	3	2	3	3	3
CO4	3	2	2	1	3	2	1	2	2	1	1
CO5	3	2	2	3	2	2	3	2	2	3	3
CO6	3	3	3	3	2	2	1	2	3	3	3
AVERAGE	3	2.3	2.5	2.5	2.6	2	2.3	2.1	2.5	2.6	2.6

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