

MD DERMATOLOGY

CURRICULUM STATUTES & REGULATIONS



NISHTAR MEDICAL UNIVERSITY, MULTAN



CERTIFICATE OF CURRICULUM APPROVALS

Name of Department: Dermatology

Name of Program Director: Dr Raheel Tahir

Name of Faculty: Dr Raheel Tahir

Name of Program: MD Dermatology

Date of Preparation: 25-06-2024

No	Statuary Body	Signing Authority	Signature
1	Departmental Board of Studies	Chairman	
2	Board of Faculty	Dean	
3	Curriculum committee	Chairman	
4	Board of advance studied	Chairman	
5	Academic Counsel	Chairman	
	Syndicate	Secretary	

CHECKLIST OF DOCUMENTS

NO	DETAIL	STATUS
1	Certificate Of Curriculum Approval	Yes
2	Nomenclature Of Program /Degree Title	Yes
3	Objectives Of Program	Yes
4	Specific learning outcomes	Yes
5	Duration Of Program	Yes
6	Admission Criteria	Yes
7	Examination Policy	Yes
8	Research Publications Policy	Yes
9	Thesis Evaluation Policy	Yes
10	Plagiarism Policy	Yes
11	Course Content	Yes
12	Recommended Books	Yes
13	Faculty Details	Yes

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Nomenclature of Proposed courses

The name of degree program will be

MD Dermatology

AIMS AND OBJECTIVES OF THE COURSE

AIM

The aim of five years MD program in Dermatology is to train residents to acquire the competency of a specialist in the field of Dermatology so that they can become good teachers, researchers and clinicians in their specialty after completion of their training.

GENERAL OBJECTIVES

MD Dermatology training should enable a student to:

Access and apply relevant knowledge to clinical practice:

- Apply scientific knowledge in practice
- Appropriate to patient need and context
- Critically evaluate new technology
- Safely and effectively perform appropriate clinical skills & procedures:
 - Consistently demonstrate sound clinical skills
 - Demonstrate procedural knowledge and technical skill at a level appropriate to the level of training
 - Demonstrate manual dexterity required to carry out procedures
 - Adapt their skills in the context of each patient and procedure
 - Maintain and acquire new skills
 - Approach and carry out procedures with due attention to safety of patient, self and others
 - Critically analyze their own clinical performance for continuous improvement
- Design and implement effective management plans:
 - Recognize the clinical features, accurately diagnose and manage Dermatological problems
 - Formulate a well-reasoned provisional diagnosis and management plan based on a thorough history and examination
 - Formulate a differential diagnosis based on investigative findings
 - Manage patients in ways that demonstrate sensitivity to their physical, social, cultural and psychological needs
 - Recognize disorders of the Dermatological system and differentiate those amenable to medical treatment

- Effectively recognize and manage complications
- Accurately identify the benefits, risks and mechanisms of action of current and evolving treatment modalities
- Indicate alternatives in the process of interpreting investigations and in decision-making
- Manage complexity and uncertainty
- Consider all issues relevant to the patient
- Identify risk
- Assess and implement a risk management plan
- Critically evaluate and integrate new technologies and techniques.
- Organize diagnostic testing, imaging and consultation as needed:
 - Select medically appropriate investigative tools and monitoring techniques in a cost-effective and useful manner
 - Appraise and interpret appropriate diagnostic imaging and investigations according to patients' needs
 - Critically evaluate the advantages and disadvantages of different investigative modalities
- Communicate effectively:
 - Communicate appropriate information to patients (and their family) about procedures, potentialities and risks associated with procedure in ways that encourage their participation in informed decision making
 - Communicate with the patient (and their family) the treatment options including benefits and risks of each

- Communicate with and co-ordinate health management teams to achieve an optimal management of the patient
 - Initiate the resolution of misunderstandings or disputes
 - Modify communication to accommodate cultural and linguistic sensitivities of the patient
- Recognize the value of knowledge and research and its application to clinical practice:
 - Assume responsibility for self-directed learning
 - Critically appraise new trends in Dermatology
 - Facilitate the learning of others
- Appreciate ethical issues associated with Dermatology:
 - Consistently apply ethical principles
 - Identify ethical expectations that impact on medico-legal issues
 - Recognize the current legal aspects of informed consent and confidentiality
 - Be accountable for the management of their patients.
- Professionalism by:
 - Employing a critically reflective approach to Dermatology
 - Adhering with current regulations concerning workplace harassment
 - Regularly carrying out self and peer reviewed audit
 - Acknowledging and have insight into their own limitations
 - Acknowledging and learning from mistakes
- Work in collaboration with members of an interdisciplinary team where appropriate:

- Collaborate with other professionals in the selection and use of various types of treatments assessing and weighing the indications and contraindications associated with each type
- Develop a care plan for a patient in collaboration with members of an interdisciplinary team
- Employ a consultative approach with colleagues and other professionals
- Recognize the need to refer patients to other professionals.
- Management and Leadership
 - Effective use of resources to balance patient care and system resources
 - Identify and differentiate between system resources and patient needs
 - Prioritize needs and demands dealing with limited system resources.
 - Manage and lead clinical teams
 - Recognize the importance of different types of expertise which contribute to the effective functioning of clinical team
 - Maintain clinically relevant and accurate contemporaneous records
- Health advocacy:
 - Promote health maintenance of patients
Advocate for appropriate health resource allocation

SPECIFIC LEARNING OUTCOMES

Residents completing MD Dermatology training will have formal instruction, clinical experience, so that at the end of this training a resident should be able to

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

Advanced training in Dermatology shall train the resident to;

- Identify the following anatomical structures and discuss their role in health:
 1. Epidermis
 2. Epidermal-dermal junction
 3. Dermal appendages
 4. Dermis
 5. Subcutis
- Describe the basic functions of the skin.
- Correctly define each of the following items:
 1. Macule, patch
 2. Papule
 3. Vesicle
 4. Bullae
 5. Plaque
 6. Nodule
 7. Tumor
 8. Scale
 9. Crust
 10. Erosion
 11. Fissure, sinus
 12. Ulcer
 13. Comedone
- Discuss the pathophysiology of acne including its natural history and differential diagnosis.

- Describe a treatment plan which includes the appropriate dermatologic consultation for each of the following:
 1. Comedonal acne
 2. Pustular acne
 3. Nodulocystic acne
 4. Acne rosacea
 5. Acne vulgaris

- Discuss the natural history, signs, symptoms and the differential diagnosis of seborrheic dermatitis in all age groups.
- Discuss the natural history, develop a differential diagnosis and propose a treatment plan for pruritus.
- Discuss the natural history, signs, symptoms, differential diagnosis and treatment for each of the following eczematous dermatoses:
 1. Contact dermatitis
 2. Atopic eczema
 3. Nummular eczema
 4. Dyshidrotic eczema
 5. Hand dermatitis
 6. Stasis dermatitis
 7. Generalized exfoliative dermatitis
- Discuss the natural history, differential diagnosis, signs, symptoms and treatment of the following reactive dermatoses:
 1. Urticaria
 2. Erythema multiforme
 3. Erythema nodosum
 4. Henoch-Schoenlein purpura
- Discuss the dermatological manifestations of the following collagen vascular diseases:
 1. Systemic lupus erythematosus
 2. Discoid lupus erythematosus
 3. Scleroderma, Dermatomyositis
 4. Raynaud's phenomenon, MCTD
- Discuss the chronic vesiculobullous disorders including:
 1. Pemphigus vulgaris
 2. Dermatitis herpetiformis
 3. Erythema multiforme

4. Epidermolysis bullosa
 5. Bullous pemphigoid
- Discuss the natural history, signs, symptoms, differential diagnosis and treatment for each of the following:
 1. Psoriasis
 2. Parapsoriasis
 3. Lichen planus
 4. Pityriasis rosea
 - Discuss the natural history, differential diagnosis, signs, symptoms and treatment for each of the following pyoderms:
 1. Impetigo contagiosum
 2. Ecthyma
 3. Pyogenic granuloma
 4. Pyoderma gangrenosum
 5. Erythrasma
 6. Folliculitis
 7. Furuncles and carbuncles
 8. Hidradenitis suppurativa
 9. Erysipelas and ecthyma
 10. Cellulitis
 - Discuss the natural history, signs, symptoms, differential diagnosis and treatment for each of the following fungal infections:
 1. Tinea capitis
 2. Tinea corporis
 3. Tinea pedis and manuum
 4. Onychomycosis
 5. Tinea cruris
 6. Tinea barbae
 7. Moniliasis/ candidiasis
 8. Tinea versicolor
 - Discuss the natural history, signs, symptoms, differential diagnosis and treatment for each of the following viral infections:
 1. Herpes simplex
 2. Herpes zoster
 3. Vaccinia
 4. Varicella
 5. Rubella
 6. Rubella
 7. Infectious mononucleosis

8. Scarlet fever
 9. Erythema infectiosum
 10. Roseola infantum
- Discuss the natural history, signs, symptoms, differential diagnosis and treatment of the following venereal diseases:
 1. Syphilis
 2. Gonorrhea
 3. Herpes genitalis
 4. Chancroid
 5. Lymphogranuloma venereum
 6. Granuloma inguinale
 - Discuss the natural history, signs, symptoms, differential diagnosis and treatment of each of the following parasitic diseases:
 1. Scabies
 2. Pediculosis
 3. Swimmer's itch
 4. Spider bites
 5. Mosquito bites
 6. Tick bites
 7. Wasp and bee stings
 - Discuss the natural history, signs, symptoms, differential diagnosis and treatment of each of the following nevoid anomalies:
 1. Junctional pigmented nevus
 2. Intradermal pigmented nevus
 3. Compound intradermal nevus
 4. Spindle and epithelioid nevus
 5. Blue nevus
 6. Mongolian spot
 7. Lentigo
 - Develop a differential diagnosis for a patient presenting with alopecia.
 - Discuss the natural history and etiology, as well as develop a management and prevention plan for the problem of ingrown nails.
 - Describe and discuss the following dermatologic problems of the newborn:
 1. Erythema toxicum neonatorum
 2. Seborrhea
 3. Scaling
 4. Strawberry angioma
 5. Milia
 6. Diaper dermatitis
 - Discuss the natural history, signs, symptoms differential diagnosis and management of warts and calluses.

- Discuss the natural history, signs, symptoms and management of the following nodules:
 1. Molluscum contagiosum
 2. Keloid
 3. Neurofibroma
 4. Lipoma
 5. Seborrheic keratosis
 6. Pilar cyst
 7. Epidermal inclusion cyst
 8. Dermoid cyst
- Discuss the natural history, signs, and symptoms of each of the following premalignant and malignant tumors:
 1. Actinic keratosis
 2. Cutaneous horns
 3. Basal cell carcinoma
 4. Squamous cell carcinoma
 5. Keratoacanthoma
 6. Bowen's disease
 7. Paget's disease
 8. Malignant melanoma
 9. Lentigo maligna melanoma
 10. Mycosis fungoides
 11. Leukemia cutis
 12. Lymphoma cutis

Clinical Skills:

- Carry out the laboratory investigations related to the diseases of skin, STD and Leprosy, such as-
- Scrapings of skin, nails and hair for fungus and ecto-parasites
- Various types of skin biopsies
- Slit skin smear examination
- Cytopathological examination
- Tzanck smear
- Skin smears
- Woods lamp examination
- Basic staining procedures e.g Zeihl Neelsen, Geimsa, Gram staining

- Describe the current treatment modalities for various diseases of skin, STDs and leprosy.
- Describe the preventive aspects, education, counseling services to the patient and National Control Programs for Leprosy, STDs and HIV infections.

Procedural Skills:

- Photochemotherapy and photo therapy
- Electro-cautery, cryotherapy, electrolysis, intra-lesional injections, etc.
- Cryosurgery
- Wound dressings
- Nail surgery
- Punch grafting
- Split skin grafting
- Dermabrasion and suction blister grafting
- Scar revision
- Chemical peeling
- Comedone/Milia extraction
- Excision of growth/papilloma/cysts etc
- Use of IPL/ hair removal laser
- Use of CO₂ laser
- Sclerotherapy for varicose and telangiectatic veins
- Nerve blocks

More Advanced Procedures:

- Fillers, PRP, Microneedling
- Substances for soft tissue augmentation
- Botox treatments, facial rejuvenation
- Skin resurfacing : chemical peels

Duration of course

The duration of MD Dermatology course shall be five (5) years with structured training in a recognized department under the guidance of an approved supervisor.

After admission in MD Dermatology program the resident will spend first 6 months in the Department of Dermatology as **Induction period** during which resident will get orientation about the chosen discipline and will also participate in the **mandatory workshops**. The research project will be designed and the **synopsis** be prepared during this period. The mandatory workshops would be:

1. Research methodology and biostatistics
2. Synopsis writing
3. Communication skills
4. Introduction to computer/internet technology and software programs

On completion of Induction period the resident will start formal training in Internal Medicine for 18 Months. During this period the resident must get the research synopsis approved by Ethical Review Committee. At the end of 2 year, the candidate shall take up Intermediate Examination.

During the end, 3rd, 4th & 5th years, of the program, there will be two components of the training

- 1) Clinical Training in Dermatology
- 2) Research and Thesis writing

The candidate will undergo clinical training to achieve the educational objectives of M.D. Dermatology program (knowledge & Skills) along with rotations in the

relevant fields. For the candidates in M.D. Dermatology, there shall be three rotational placements of total of 3 months duration, during 3rd year of the program as follows:

- Dermatopathology 1 Month
- Plastic Surgery 1 Month
- Laser and Leprosy 1 Month (15 days each)

The clinical training shall be competency based. There shall be generic and specialty competencies and shall be assessed by continuous Internal Assessment. The Research Component and thesis writing will be completed over the five years duration of the program.

Admission Criteria

Applications for admission to MD Training Programs of University will be invited through advertisement mentioning closing date of applications and date of Entry Examination. Entry examination will be taken by the university and passing through the entry test is essential for admission in MD dermatology program.

Eligibility: The applicant on the last date of submission of applications for admission must possess the:

- i) Basic Medical Qualification of MBBS or equivalent medical qualification recognized by Pakistan Medical & Dental Council.
- ii) Certificate of one year's House Job experience in institutions recognized by Pakistan Medical & Dental Council Is essential at the time of interview. The applicant is required to submit certificate from the concerned Medical Superintendent that the House Job shall be completed before the Interview.
- iii) Valid certificate of permanent or provisional registration with Pakistan Medical & Dental Council.

EXAMINATION POLICY

Course Structure	Components	Examination
At the end of 2 nd year of MD Dermatology Programme	• Basic Principles of Internal Medicine • Relevant Basic Sciences (Physiology, Pharmacology, Pathology)	<u>Intermediate Examination</u> at the end of 2nd Year of M.D. Dermatology program Written = 300 Marks Clinical, TOACS/OSCE & ORAL=200 Marks Total = 500 Marks
At the end of 5 th year of MD Dermatology Programme	<u>Clinical component</u> • Professional Education in Dermatology: Training in Dermatology with Compulsory/ Optional rotations <u>Research component</u> Research work / Thesis writing must be completed and thesis be submitted at least 6 months before the end of final year of the program.	<u>Final Examination</u> at the end of 5th year of MD Dermatology Program. Written = 200 Marks Clinical, TOACS/OSCE+Slides= 400 Marks CIS = 100 Marks Thesis Evaluation = 300 Marks Total = 1000 Marks Thesis evaluation at the end of 5th year of M.D. Dermatology Program.

Intermediate Examinations M.D. Dermatology Program

All candidates admitted in MD Dermatology course shall appear in Intermediate Examination at the end of 2nd calendar year.

Eligibility Criteria:

The candidates appearing in Intermediate Examination of the M.D. Dermatology program are required:

- a) To have submitted certificate of completion of mandatory workshops.
- b) To have submitted certificate / certificates of completion of first two years of training from the supervisor / supervisors of rotation.
- c) To have submitted CIS assessment proforma from his/her own supervisor on 03 monthly basis and also from his/her supervisors during rotation, achieving a cumulative score of **75%**.
- d) To have submitted certificate of approval of synopsis or undertaking / affidavit that if synopsis not approved with 30 days of submission of application for the Intermediate Examination, the candidate will not be allowed to take the examinations and shall be removed from the training programme.
- e) To have submitted evidence of payment of examination fee.

Intermediate Examination Schedule and Fee

- a) Intermediate Examination at completion of two years training, will be held twice a year.
- b) There will be a minimum period of 30 days between submission of application for the examination and the conduction of examination.
- c) Examination fee will be determined periodically by the University.

- d) The examination fee once deposited cannot be refunded/carried over to the next examination under any circumstances.
- e) The Controller of Examinations will issue Roll Number Slips on receipt of prescribed application form, documents satisfying eligibility criteria and evidence of payment of examination fee.

At the end of 2nd year M.D. Dermatology Program

Written Examination	=	300 Marks
Clinical, TOACS/OSCE & ORAL	=	200 Marks
Total	=	500 Marks

Written Paper	=	300 Marks
MCQs	=	100 (02 Marks each MCQ)
SEQs	=	10 Marks (10 Marks each SEQ)

Clinical, TOACS/OSCE & ORAL	=	Total Marks 200
a) 4 short Cases	=	100 marks
b) Long Case	=	50 marks
c) TOACS/OSCE & ORAL	=	50 marks

Written Paper

Principles Internal Medicine	=	70 MCQs	7 SEQs
Specialty	=	10 MCQs	1 SEQ

Basic Sciences

Physiology	=	8 MCQs	1 SEQ
Pharmacology	=	4 MCQs	-----
Pathology	=	8 MCQs	1 SEQ

Declaration of Results

The Candidate will have to score at least 55% marks in each written and clinical components and a cumulative score of 60% to be declared successful in the Intermediate Examination.

A maximum total of six consecutive attempts (availed or unavailed) will be allowed in the Intermediate Examination during which the candidate will be allowed to continue his training program. If the candidate fails to pass his Intermediate Examination within the above mentioned limit of four attempts, the candidate shall be removed from the training program, and the seat would fall vacant, stipend/ scholarship if any would be stopped.

Final Examination of M.D. Dermatology Program

All candidates admitted in MD Dermatology course shall appear in Final examination at the end of structured training program (end of 5th calendar year), and having passed the Intermediate examination.

Eligibility Criteria:

To appear in the Final Examination the candidate shall be required:

- i) To have submitted the result of passing Intermediate Examination.

- ii) To have submitted the certificate of completion of training, issued by the Supervisor will be mandatory.
- iii) To have achieved a cumulative score of 75% in Continuous Internal assessments of all training years.
- iv) To have got the thesis submitted and will then be eligible to appear in Final Examination.
- v) To have submitted no dues certificate from all relevant departments including library, hostel, cashier etc.
- vi) To have submitted evidence of submission of examination fee.

Final Examination Schedule and Fee

- a) Final examination will be held twice a year.
- b) The candidates shall have to satisfy eligibility criteria before permission is granted to take the examination.
- c) Examination fee will be determined and varied at periodic intervals by the University.
- d) The examination fee once deposited cannot be refunded / carried over to the next examination under any circumstances.
- e) The Controller of Examinations will issue an Admittance Card with a photograph of the candidate on receipt of prescribed application form, documents satisfying eligibility criteria and evidence of payment of

examination fee. This card will also show the Roll Number, date / time and venue of examination.

Components of Final Examination

Written Part of Final Examination	Total marks 200
Clinical And TOACS/OSCE	Total marks 400
Contribution of CIS to the Final Examination	Total marks 100
Thesis Evaluation	Total marks 300

Written Part of Final Examination

- a) There will be two written papers which will cover the whole syllabus of the specialty of training with total marks of 200.
 - Paper one =100 single best answer type Multiple Choice Questions (MCQs),each correct answer in the Multiple Choice Question paper will carry 01 mark.(Total 100 marks)
 - Paper two=10 Short Essay Questions (SEQs), each Short Essay Question will carry 10 marks. (Total 100 marks)
 - The Total Marks of the Written Examination will be 200
- b) The candidates securing atleast 55% marks in each paper and a cumulative score of 60 % will pass the written part of the final examination and will become eligible to appear in the clinical and oral examination.
- c) The written part result will be valid for three consecutive attempts for appearing in the Clinical and Oral Part of the Final Examination. After

that the candidate shall have to re-sit the written part of the Final Examination.

Clinical, TOACS/OSCE

- a) The Clinical exam will consist of
 - 04 short cases (Each short case will be of 07 minutes duration, 05 minutes will be for examining the patient and 05 minutes for discussion). Each short case will be observed by two examiners.
 - 01 long case, 30 minutes will be given for history taking and examination and 30 minutes will be given for discussion of case. Two examiners (one internal and one external) will observe the long case
- b) TOACS examination will consist of:
 - 10 TOACS stations
 - 05 stations of dermatopathology slides
 - 15 stations of clinical slides
- c) The Total Marks of Clinical and TOACS/OSCE will be 400 and to be divided as follows:
 - 4 Short Cases- 25 marks for each case (Total Marks = 100)
 - One Long Case Total Marks = 100
 - 10 TOACS/OSCE stations each having 10 marks (Total Marks = 100)
 - 05 stations of dermatopathology slides each carrying 05 marks (total marks=25)
 - 15 stations of clinical slides each having 05 marks (total 75 marks)
- d) A panel of two examiners will be appointed by the Vice Chancellor and of these one will be from university whilst the other will be the external examiner. Internal examiner will act as a coordinator. In case of difficulty in finding an internal examiner in a given subject, the Vice Chancellor would, in consultation with the concerned Deans, appoint any relevant person with appropriate qualification and experience, outside the University as an

examiner.

- e) The internal examiner will not examine the candidates for whom they have acted as Supervisor and will be substituted by other internal examiner

- f) The candidates scoring 60% marks in each component of the Clinical & TOACS examination.
- g) The candidates will have three attempts to pass the final examination with normal fee. A special administration fee in addition to normal fee or the amount determined by the University from time to time shall be charged for further attempts.

Declaration of Result

For the declaration of result

- I. The candidate must get his/her Thesis accepted.
- II. The candidate must have passed the final written examination, clinical examination and CIS.
- III. The MD degree shall be awarded after acceptance of thesis and success in the final examination.
- IV. On completion of stipulated training period, irrespective of the result (pass or fail) the training slot of the candidate shall be declared vacate

RESEARCH/ THESIS WRITING

Total of one year will be allocated for work on a research project with thesis writing. Project must be completed and thesis be submitted six months before the end of training. Research can be done as one block in 5th year of training or it can be stretched over five years of training in the form of regular periodic rotations during the course as long as total research time is equivalent to one calendar year.

Research Experience

The active research component program must ensure meaningful, supervised research experience with appropriate protected time for each resident while maintaining the essential clinical experience. Recent productivity by the program faculty and by the residents will be required, including publications in peer-reviewed journals. Residents must learn the design and interpretation of research studies, responsible use of informed consent, and research methodology and interpretation of data. The program must provide instruction in the critical assessment of new therapies and of the surgical literature. Residents should be advised and supervised by qualified staff members in the conduct of research.

Clinical Research

Each resident will participate in at least one clinical research study to become familiar with:

1. Research design
2. Research involving human subjects including informed consent and operations of the Institutional Review Board and ethics of human experimentation
3. Data collection and data analysis
4. Research ethics and honesty
5. Peer review process

This usually is done during the consultation and outpatient clinic rotations.

Case Studies or Literature Reviews

Each resident will write, and submit for publication in a peer-reviewed journal, a case study or literature review on a topic of his/her choice.

Laboratory Research

Bench Research

Participation in laboratory research is at the option of the resident and may be arranged through any faculty member of the Division. When appropriate,

the research may be done at other institutions.

Research involving animals

Each resident participating in research involving animals is required to:

1. Become familiar with the pertinent Rules and Regulations of the Nishtar Medical university, Multan i.e. those relating to "Health and Medical Surveillance Program for Laboratory Animal Care Personnel" and "Care and Use of Vertebrate Animals as Subjects in Research and Teaching"
2. Read the "Guide for the Care and Use of Laboratory Animals"
3. View the videotape of the symposium on Humane Animal Care

Thesis Evaluation Policy

Submission/ Evaluation of synopsis:

1. The candidates shall prepare their synopsis as per guidelines provided by the Advanced Studies & Research Board, available on university website.
2. The research topic in clinical subject should have 30% component related to basic sciences and 70% component related to applied clinical sciences. The research topic must consist of a reasonable sample size and sufficient numbers of variables to give training to the candidate to conduct research, to collect & analyze the data.
3. Synopsis of research project shall be submitted by the end of the 2nd year of MD program. The synopsis after review by an Institutional Review Committee shall be submitted to the University for consideration by the Advanced Studies & Research Board, through the Principal / Dean /Head of the institution.

Submission of Thesis:

1. Thesis shall be submitted by the candidate duly recommended by the Supervisor.
2. The minimum duration between approval of synopsis and submission of thesis shall be 06 months.
3. The research thesis must be compiled and bound in accordance with the Thesis Format Guidelines approved by the University and available on website.
4. The research thesis will be submitted along with the fee prescribed by the Universit

Thesis Examination:

- a) The candidate will submit his/her thesis at least 06 months prior to completion of training.
- b) The Thesis along with a certificate of approval from the supervisory will be submitted to the Registrar's office, who would record the date / time etc. and get received from the Controller of Examinations within 05 working days of receiving.
- c) The Controller of Examinations will submit a panel of eight examiners within 07 days for selection of four examiners by the Vice Chancellor. The Vice Chancellor shall return the final panel within 05 working days to the Controller of Examinations for processing and assessment. In case of any delay the Controller of Examinations would bring the case personally to the Vice Chancellor.
- d) The Supervisor shall not act as an examiner of the candidate and will not take part in evaluation of thesis.
- e) The Controller of Examinations will make sure that the Thesis is submitted to examiners in appropriate fashion and a reminder is sent after every ten days.
- f) The thesis will be evaluated by the examiners within a period of 06 weeks.
- g) In case the examiners fail to complete the task within 06 weeks with 02 fortnightly reminders by the Controller of Examinations, the Controller of Examinations will bring it to the notice of Vice Chancellor in person.

- h) In case of difficulty in find an internal examiner for thesis evaluation, the Vice Chancellor would, in consultation with the concerned Deans, appoint any relevant person as examiner in supersession of the relevant Clause of the University Regulations.
- i) There will be two internal and two external examiners. In case of difficulty in finding examiners, the Vice Chancellor would, in consultation with the concerned Deans, appoint minimum of three, one internal and two external examiners.
- j) The total marks of thesis evaluation will be 300 and 60% marks will be required to pass the evaluation.
- k) The thesis will be considered accepted, if the cumulative score of all the examiners is 60%.
- l) The clinical training will end at completion of stipulated training period but the candidate will become eligible to appear in the Final Examination at completion of clinical training and after acceptance of thesis. In case clinical training ends earlier, the slot will fall vacant after stipulated training period.

Award of MD Dermatology Degree

After successful completion of the structured courses of MD Dermatology and qualifying Intermediate & Final examinations (Written, Clinical, TOACS/OSCE & ORAL and Thesis) the degree with title MD Dermatology shall be awarded.

MD DERMATOLOGY EXAMINATIONS

Intermediate Examination

Total Marks: 500

All candidates admitted in MD Dermatology course shall appear in Intermediate examination at the end of 2nd calendar year.

There shall be one written paper of 300 marks, Clinical, TOACS/OSCE & ORAL of 200 marks.

Written Examination	=	300 Marks
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Clinical, TOACS/OSCE & ORAL	=	200 Marks
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Total	=	500 Marks
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Written Paper	=	300 Marks
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MCQs	=	100 (2 Marks each MCQ)
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SEQs	=	10 Marks (10 Marks each SEQ)
Clinical, TOACS/OSCE & ORAL	=	Total Marks 200
a) 4 short Cases	=	100 marks
b) Long Case	=	50 marks
c) Clinical, TOACS/OSCE & ORAL	=	50 marks

Written Paper

Principles of Internal Medicine	=	70 MCQs	7 SEQs
Specialty	=	10 MCQs	1 SEQ
Basic Sciences	=	20 MCQs	2 SEQs
Physiology	=	8 MCQs	1 SEQ
Pharmacology	=	4 MCQs	-----
Pathology	=	8 MCQs	1 SEQ

Final MD Dermatology Examination
Total Marks: 1000

Theory

200Marks

Paper I

100 MCQs

100 Marks

03 Hours

Paper II

10 SEQs

100 Marks

03 Hours

Only those candidates, who pass in theory papers, will be eligible to appear in the Clinical and TOACS/OSCE.

Clinical, TOACS/OSCE**400 Marks**

Four short cases	100 Marks
One long case:	100 Marks
10 TOACS/OSCE stations	100 Marks
05 dermatopathology slides	25 Marks
15 clinical slides	75 Marks

Continuous Internal Assessment**100 Marks****Thesis Examination****300 Marks**

All candidates admitted in MD courses shall appear in thesis examination at the end of 5th calendar year of the MD program. The examination shall include thesis evaluation with defense.

Candidates must obtain 60% marks in each part of clinical examination, continuous internal assessment and thesis examination individually. Candidate unable to obtain atleast 60% marks in each of these will be considered unsuccessful.

Anti-Plagiarism Policy



OFFICE OF THE REGISTRAR NISHTAR MEDICAL UNIVERSITY, MULTAN

email: registrar@nmu.edu.pk
No: 143 /NMU-Reg,

Dated: 16 - 02 - /2024

NOTIFICATION

IMPLEMENTATION OF HIGHER EDUCATION COMMISSION'S ANTI-PLAGIARISM POLICY (VERSION 2.0) AT NISHTAR MEDICAL UNIVERSITY

As per directions of Higher Education Commission Islamabad vide its Letter No. 15-54/Coord/ 2019/ HEC/(QAD)/646 dated August 12, 2023 it is being notified that Higher Education Commission's "ANTI- PLAGIARISM POLICY (VERSION 2.0)" is being implemented in Nishtar Medical University for evaluation of thesis and research work.

This is to align with Nishtar Medical University's commitment to maintaining academic integrity and upholding the highest standards in research and education. The HEC's Anti-Plagiarism Policy is designed to ensure the authenticity and originality of scholarly work, fostering a culture of academic honesty and ethical conduct.

All the faculty, students and researchers are expected to adhere to the guidelines outlined in the HEC's Anti-Plagiarism Policy (Version 2.0) during the preparation, submission and evaluation of theses and research projects. Any instances of plagiarism will be thoroughly investigated, and appropriate actions will be taken in accordance with this policy.

REGISTRAR

NISHTAR MEDICAL UNIVERSITY
MULTAN.

No. / 16 /NMU-REG Multan dated Multan the 2024

Copy forwarded for information and necessary action to:-

1. The Vice Chancellor, NMU, Multan.
2. All the Deans NMU Multan
3. The Controller of Examination NMU, Multan
4. The Director ORIC NMU, Multan
5. The Director QEC NMU, Multan
6. Master File.

REGISTRAR

NISHTAR MEDICAL UNIVERSITY
MULTAN

COURSE CONTENT

1. Physiology

Cellular organization, structure function correlations and physiological alterations in the integumentary system of body

- General characteristics and functions of epithelial tissue.
- Types of epithelium
- Classification of glands
- General characteristics of connective tissue
- Major cell types and fibers of connective tissues
- Major functions of each types of connective tissue
- Four major types of membranes
- Functions of the skin including protection, temperature regulation, excretion and secretion, sensitivity, sociosexual functions etc.
- Composition of the skin, blood supply, components
- General function of each layer of the skin
- Functions of accessory organ associated with the skin
- Factors that determine skin color
- Membrane biochemistry and signal transduction
- Gene expression and the synthesis of proteins
- Bioenergetics; fuel oxidation and the generation of ATP
- Carbohydrate metabolism
- Lipid metabolism
- Nitrogen metabolism
- Enzymes and biologic catalysis
- Tissue metabolism
- Biotechnology and concepts of molecular biology with special emphasis on use of recombinant DNA techniques in medicine and the molecular biology of cancer
- General principles of biochemical investigations
- Basic techniques in molecular biology
- Cloning and gene analysis
- Immunochemical techniques
- Protein chemistry and enzymology
- Cloning & PCR
- Protein chemistry and quantification
- Electrophoretic techniques
- Immunoblotting

- Raising and purifying antibodies
- ELISA

1. Pharmacology

- The evolution of medical drugs
- British pharmacopeia
- Pharmacokinetic processes
- Pharmacodynamic process
- Drug effect
- Beneficial responses
- Harmful responses
- Allergic responses
- Drug dependence, addiction, abuse and tolerance
- Drug interactions
- Drug prescription in dermatology
- Principles of toxicology
- Antibiotics, antifungals, antivirals, antiparasitics etc.
- Corticosteroids
- Histamine and antihistamine
- Classification of cytotoxic agents and immunosuppressants
- Dermatologically relevant cytotoxics and immunosuppressants
 - Azathioprine
 - Methotrexate
 - Cyclophosphamide
 - Cyclosporin
 - Tacrolimus etc.
- Analgesics, antipyretics and anti inflammatory agents
- Vitamins and skin disorders
- Principles of topical dermatological therapy
- Biological agents

2. Pathology

Pathological alterations at cellular and structural level in infection, inflammation, ischaemia, neoplasia and trauma affecting the skin and appendages

Cell Injury and adaptation

- Reversible and Irreversible Injury
- Fatty change, Pathologic calcification
- Necrosis and Gangrene
- Cellular adaptation
- Atrophy, Hypertrophy,
- Hyperplasia, Metaplasia, Aplasia

Inflammation

- Acute inflammation
- Cellular components and chemical mediators of acute inflammation
- Exudates and transudate
- Sequelae of acute inflammation
- Chronic inflammation
- Etiological factors and pathogenesis
- Distinction between acute and chronic (duration) inflammation
- Histologic hallmarks

- Types and causes of chronic inflammation, non-granulomatous & granulomatous,

Haemodynamic disorders

- Etiology, pathogenesis, classification and morphological and clinical manifestations of Edema, Haemorrhage, Thrombosis, Embolism, Infarction & Hyperaemia
- Shock; classification etiology, and pathogenesis, manifestations.
- Compensatory mechanisms involved in shock
- Pathogenesis and possible consequences of thrombosis
- Difference between arterial and venous emboli

Neoplasia

- Dysplasia and Neoplasia
- Benign and malignant neoplasms
- Etiological factors for neoplasia
- Different modes of metastasis
- Tumor staging system and tumor grade

Immunity and Hypersensitivity

- Immunity
- Immune response
- Diagnostic procedures in a clinical Immunology laboratory
- Protective immunity to microbial diseases
- Tumour immunology
- Immunological tolerance, autoimmunity and autoimmune diseases.
- Transplantation immunology
- Hypersensitivity
- Immunodeficiency disorders
- Immunoprophylaxis & Immunotherapy

Related Microbiology

- General aspects of microbiology and replication of bacteria, viruses and fungi
- Principles of laboratory diagnosis in microbiology (Bacteria, viruses, fungi and parasites)
- Sterilization and disinfection

Bacteriology:

- Normal flora of the skin and adjoining mucosae
- Pathogenesis of bacterial infections
- Classification of medically important bacteria
- Clinically relevant features of the following:
- Gram positive cocci especially streptococci and staphylococci
- Gram negative cocci especially Neisseriae gonorrhea
- Gram positive bacilli especially bacillus anthrax, clostridia, coryniform
- Gram negative bacilli especially pseudomonas and proteus
- Mycobacteria especially M.tuberculosis, M.leprae and atypical mycobacteria
- Actinomyces
- Spirochetes especially Treponema pallidum and Borrelia burgdorferi
- Chlamydiae especially Chlamydia trachomatis
- Rickettsiae

Virology

- Pathogenesis of viral infections
- Classification of medically important viruses
- Clinically relevant features of the following:
- Herpes viruses
- Pox viruses
- Papilloma viruses
- Parvovirus B 19

- Measles and rubella viruses
- HIV

Mycology:

- Basic mycology
- Classification of medically important fungi

Parasitology:

- General aspects of dermatologically relevant parasites, especially Leishmania, Sarcoptes scabiei, Pediculosis.
- Immunization
- Personnel protection from communicable diseases
- Use of investigation and procedures in laboratory
- Basics in allergy and immunology

Special Pathology

- Pathophysiology in different diseases of skin
- Common skin lesions, their causes and treatments.
- Terminology of pathological lesions in skin and subcutaneous tissue
- Cause, treatment and lesions associated with inflammatory conditions.
- Bacterial and viral infections including impetigo, furuncles, herpes simplex, herpes zoster and warts.
- Fungal skin infections; various forms of tinea
- Scabies and pediculosis.
- Skin neoplasms. Etiology, predisposing factors, metastasis and prognosis of common skin malignancies in Pakistan

MD Dermatology

Course Contents in Principles of Internal Medicine for Intermediate Examination

After spending first 6 months in Dermatology, the resident will start next 18 months Internal Medicine training. Resident should get exposure in the following organ and system competencies (listed below) while considering and practicing each system in terms of: -

- Medical ethics
- Professional values, student teachers relationship
- Orientation of in-patient, out-patients and Dermatological labs
- Approach to the patient
- History taking

- General physical examination
- Systemic examination
- Routine investigations
- Special investigations
- Diagnostic and therapeutic procedures

1. Cardiovascular Medicine

Common and / or important Cardiac Problems:

- Arrhythmias
- Ischaemic Heart Disease: acute coronary syndromes, stable angina, atherosclerosis
- Heart Failure
- Hypertension – including investigation and management of accelerated hypertension
- Valvular heart disease
- Endocarditis
- Aortic dissection
- Syncope
- Dyslipidaemia

Clinical Science:

- Physiological principles of cardiac cycle and cardiac conduction
- Pharmacology of major drug classes: beta blockers, alpha blockers, ACE inhibitors, Angiotensin receptor blockers (ARBs), anti-platelet agents, thrombolysis, inotropes, calcium channel antagonists, potassium channel activators, diuretics, anti-arrhythmics, anticoagulants, lipid modifying drugs, nitrates, centrally acting anti-hypertensives

2. Diabetes & Endocrine Medicine

Common and / or Important Diabetes Problems:

- Diabetic ketoacidosis
- Non-acidotic hyperosmolar coma / severe hyperglycaemia
- Hypoglycaemia
- Care of the acutely ill diabetic
- Peri-operative diabetes care

Common or Important Endocrine Problems:

- Hyper/Hypocalcaemia
- Adrenocortical insufficiency
- Hyper/Hyponatraemia
- Thyroid dysfunction
- Dyslipidaemia
- Endocrine emergencies: myxoedemic coma, thyrotoxic crisis, Addisonian crisis, hypopituitary coma, pheochromocytoma crisis

Clinical Science:

- Outline the function, receptors, action, secondary messengers and feedback of hormones
- Pharmacology of major drug classes: insulin, oral anti -diabetics, thyroxine, anti-thyroid drugs, corticosteroids, sex hormones, drugs affecting bone metabolism

3. Gastroenterology and Hepatology

Common or Important Problems:

- Peptic Ulceration and Gastritis
- Gastroenteritis
- GI malignancy (oesophagus, gastric, hepatic, pancreatic, colonic)
- Inflammatory bowel disease
- Iron Deficiency anaemia
- Acute GI bleeding

- Acute abdominal pathologies: pancreatitis, cholecystitis, appendicitis, leaking abdominal aortic aneurysm
- Functional disease: irritable bowel syndrome, non-ulcer dyspepsia
- Coeliac disease
- Alcoholic liver disease
- Alcohol withdrawal syndrome
- Acute liver dysfunction: jaundice, ascites, encephalopathy
- Liver cirrhosis
- Gastro-oesophageal reflux disease
- Nutrition: indications, contraindications and ethical dilemmas of nasogastric feeding and EG tubes, IV nutrition, re-feeding syndrome
- Gall stones
- Viral hepatitis
- Auto-immune liver disease
- Pancreatic cancer

Clinical Science:

- Laboratory markers of liver, pancreas and gut dysfunction
- Pharmacology of major drug classes: acid suppressants, anti-spasmodics, laxatives, anti-diarrhoea drugs, aminosalicylates, corticosteroids, immunosuppressants, infliximab, pancreatic enzyme supplements

4. Renal Medicine

Common and / or Important Problems:

- Acute renal failure
- Chronic renal failure
- Glomerulonephritis
- Nephrotic syndrome
- Urinary tract infections
- Urinary Calculus
- Renal replacement therapy
- Disturbances of potassium, acid/base, and fluid balance (and appropriate acute interventions)

Clinical Science:

- Measurement of renal function
- Metabolic perturbations of acute, chronic, and end-stage renal failure and associated treatments

5. Respiratory Medicine

Common and / or Important Respiratory Problems:

- COPD
- Asthma
- Pneumonia
- Pleural disease: Pneumothorax, pleural effusion, mesothelioma
- Lung Cancer
- Respiratory failure and methods of respiratory support
- Pulmonary embolism and DVT
- Tuberculosis
- Interstitial lung disease
- Bronchiectasis
- Respiratory failure and cor-pulmonale
- Pulmonary hypertension

Clinical Science:

- Principles of lung function measurement
- Pharmacology of major drug classes: bronchodilators, inhaled corticosteroids, leukotriene receptor antagonists, immunosuppressants

6. Allergy

Common or Important Allergy Problems

- Anaphylaxis
- Recognition of common allergies; introducing occupation associated allergies
- Food, drug, latex, insect venom allergies
- Urticaria and angioedema

Clinical Science

- Mechanisms of allergic sensitization: primary and secondary prophylaxis
- Natural history of allergic diseases
- Mechanisms of action of anti-allergic drugs and immunotherapy
- Principles and limitations of allergen avoidance

7. Haematology

Common and / or Important Problems:

- Bone marrow failure: causes and complications
- Bleeding disorders: DIC, haemophilia
- Thrombocytopaenia
- anticoagulation treatment: indications, monitoring, management of over-treatment
- Transfusion reactions

- Anaemia: iron deficient, megaloblastic, haemolysis, sickle cell,
- Thrombophilia: classification; indications and implications of screening
- Haemolytic disease
- Myelodysplastic syndromes
- Leukaemia
- Lymphoma
- Myeloma
- Myeloproliferative disease
- Inherited disorders of haemoglobin (sickle cell disease, thalassaemias)
- Amyloid

Clinical Science:

- Structure and function of blood, reticuloendothelial system, erythropoietic tissues

8. Immunology

Common or Important Problems:

- Anaphylaxis (see also 'Allergy')

Clinical Science:

- Innate and adaptive immune responses
- Principles of Hypersensitivity and transplantation

9. Infectious Diseases

Common and / or Important Problems:

- Fever of Unknown origin
- Complications of sepsis: shock, DIC, ARDS
- Common community acquired infection: LRTI, UTI, skin and soft tissue infections, viral exanthema, gastroenteritis
- CNS infection: meningitis, encephalitis, brain abscess
- HIV and AIDS including ethical considerations of testing
- Infections in immuno-compromised host
- Tuberculosis
- Anti-microbial drug monitoring
- Endocarditis
- Common genito-urinary conditions: non-gonococcal urethritis, gonorrhoea, syphilis

Clinical Science:

- Principles of vaccination

- Pharmacology of major drug classes: penicillins, cephalosporins, tetracyclines, aminoglycosides, macrolides, sulphonamides, quinolones, metronidazole, anti-tuberculous drugs, anti-fungals, anti-malarials, anti-helminthics, anti-virals

10. Medicine in the Elderly

Common or Important Problems:

- Deterioration in mobility
- Acute confusion
- Stroke and transient ischaemic attack
- Falls
- Age related pharmacology
- Hypothermia
- Continence problems
- Dementia
- Movement disorders including Parkinson's disease
- Depression in the elderly
- Osteoporosis
- Malnutrition
- Osteoarthritis

Clinical Science:

- Effects of ageing on the major organ systems
- Normal laboratory values in older people

11. Musculoskeletal System

Common or Important Problems:

- Septic arthritis
- Rheumatoid arthritis
- Osteoarthritis
- Seronegative arthritides
- Crystal arthropathy
- Osteoporosis – risk factors, and primary and secondary prevention of complications of osteoporosis
- Polymyalgia and temporal arteritis
- Acute connective tissue disease: systemic lupus erythematosus, scleroderma, poly- and dermatomyositis, Sjogren's syndrome, vasculitides

Clinical Science:

- Pharmacology of major drug classes: NSAIDs, corticosteroids, immunosuppressants, colchicines, allopurinol, bisphosphonates

12. Neurology

Common or Important Problems:

- Acute new headache
- Stroke and transient ischaemic attack
- Subarachnoid haemorrhage
- Coma
- Central Nervous System infection: encephalitis, meningitis, brain abscess
- Raised intra-cranial pressure
- Sudden loss of consciousness including seizure disorders (see also above syncope etc)
- Acute paralysis: Guillain-Barré, myasthenia gravis, spinal cord lesion
- Multiple sclerosis
- Motor neuron disease

Clinical Science:

- Pathophysiology of pain, speech and language
- Pharmacology of major drug classes: anxiolytics, hypnotics inc. benzodiazepines, antiepileptics, anti-Parkinson's drugs (anti-muscarinics, dopaminergics)

13. Psychiatry

Common and /or Important Problems:

- Suicide and parasuicide
- Acute psychosis
- Substance dependence
- Depression

Clinical Science:

- Principles of substance addiction, and tolerance
- Pharmacology of major drug classes: anti-psychotics, lithium, tricyclic antidepressants, mono-amine oxidase inhibitors, SSRIs, venlafaxine, donepezil, drugs used in treatment of addiction (bupropion, disulpharam, acamprosate, methadone)

14. Cancer and Palliative Care

Common or Important Oncology Problems:

- Hypercalcaemia

- SVC obstruction
- Spinal cord compression
- Neutropenic sepsis
- Common cancers (presentation, diagnosis, staging, treatment principles): lung, bowel, breast, prostate, stomach, oesophagus, bladder)

Common or Important Palliative Care Problems:

- Pain: appropriate use, analgesic ladder, side effects, role of radiotherapy
- Constipation
- Breathlessness
- Nausea and vomiting
- Anxiety and depressed mood

Clinical Science:

- Principles of oncogenesis and metastatic spread
- Apoptosis
- Principles of staging
- Principles of screening
- Pharmacology of major drug classes in palliative care: anti-emetics, opioids, NSAIDS, agents for neuropathic pain, bisphosphonates, laxatives, anxiolytics

15. Clinical Genetics

Common and / or Important problems:

- Down's syndrome
- Turner's syndrome
- Huntington's disease
- Haemochromatosis
- Marfan's syndrome
- Klinefelter's syndrome
- Familial cancer syndromes
- Familial cardiovascular disorders

Clinical Science:

- Structure and function of human cells, chromosomes, DNA, RNA and cellular proteins
- Principles of inheritance: Mendelian, sex-linked, mitochondrial
- Principles of pharmacogenetics
- Principles of mutation, polymorphism, trinucleotide repeat disorders

- Principles of genetic testing including metabolite assays, clinical examination and analysis of nucleic acid (e.g. PCR)

16. Clinical Pharmacology

Common and / or Important problems:

- Corticosteroid treatment: short and long-term complications, bone protection, safe withdrawal of corticosteroids, patient counselling regarding avoid adrenal crises
- Specific treatment of poisoning with:
 - Aspirin,
 - Paracetamol
 - Tricyclic anti-depressants
 - Beta-blockers
 - Carbon monoxide
 - Opiates
 - Digoxin
 - Benzodiazepines

Clinical Science:

- Drug actions at receptor and intracellular level
- Principles of absorption, distribution, metabolism and excretion of drugs
- Effects of genetics on drug metabolism
- Pharmacological principles of drug interaction
- Outline the effects on drug metabolism of: pregnancy, age, renal and liver impairment

Investigative Competencies

Outline the Indications for, and Interpret the Following Investigations:

- Basic blood biochemistry: urea and electrolytes, liver function tests, bone biochemistry, glucose, magnesium
- Cardiac biomarkers and cardiac-specific troponin
- Creatine kinase
- Thyroid function tests
- Inflammatory markers: CRP / ESR
- Arterial Blood Gas analysis
- Cortisol and short Synacthen test
- HbA1C

- Lipid profile
- Amylase
- Full blood count
- Coagulation studies
- Haemolysis studies
- D dimer
- Blood film report
- Blood / Sputum / urine culture
- Fluid analysis: pleural, cerebro-spinal fluid, ascitic
- Urinalysis and urine microscopy
- Auto-antibodies
- Chest radiograph
- Abdominal radiograph
- Joint radiographs (knee, hip, hands, shoulder, elbow, dorsal spine, ankle)

More Advanced Competencies;

- Viral hepatitis serology
- Stool testing
- HIV testing
- Ultrasound
- Detailed imaging: Barium studies, CT, CT angiography, high resolution CT, MRI

Procedural Competencies

- The trainee is expected to be competent in performing the following procedures by the end of core training. The trainee must be able to outline the indications for these interventions. For invasive procedures, the trainee must recognize the indications for the procedure, the importance of valid consent, aseptic technique, safe use of local anaesthetics and minimization of patient discomfort.
- Venepuncture
- Cannula insertion, including large bore
- Arterial blood gas sampling
- Lumbar Puncture
- Central venous cannulation

- Initial airway protection: chin lift, nasal airway, laryngeal mask
- Basic and, subsequently, advanced cardiorespiratory resuscitation
- Various types of skin biopsies

Rotation:

. For the candidates in M.D. Dermatology, there shall be three rotational placements of total of 3 months duration, during 3rd year of the program as follows:

- Dermatopathology 1 Month
- Plastic Surgery 1 Month
- Laser and Leprosy 1 Month (15 days each)

RECOMMENDED BOOKS

FOR IMM EXAM

1. Davidson's Principles and Practice of Medicine
2. Kumar and Clark's Clinical Medicine
3. CURRENT Medical Diagnosis and Treatment CMDT
4. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2)

FOR DERMATOLOGY FINAL EXAM

1. Rook's Textbook of Dermatology
2. Fitzpatrick's Dermatology
3. Bologna, Dermatology
4. Andrews' Diseases of the Skin
5. Dermatology Secrets Plus by Fitzpatrick
6. Fitzpatrick's Color Atlas and Synopsis of Clinical Dermatology
7. ANDREWS' DISEASES OF THE SKIN CLINICAL ATLAS
8. Clinical Dermatology (Lange Medical Books)
9. McKee's Pathology of the Skin
10. Journals(JAAD, Archives, JPAD, Dermatology Clinics)

Faculty Details
Department of Dermatology

Dr Raheel Tahir
HOD/Associate Professor

Dr Kalsoom Jawaid
Assistant Professor

Dr Aliya Akhtar
Assistant Professor