

**OMAN MEDICAL SPECIALTY BOARD  
RESIDENCY TRAINING PROGRAM  
FOR DERMATOLOGY**



**BOOKLET FOR INFORMATION  
&  
MANUAL TRAINING PROGRAM**

**FIRST EDITION  
2007**

**OMAN MEDICAL SPECIALTY BOARD**  
**DERMATOLOGY RESIDENCY TRAINING PROGRAM**

**DERMATOLOGY SCIENTIFIC COMMITTEE**

**CHAIRMAN**

Dr. D.D. Banodkar

**PROGRAM DIRECTOR**

Dr. Abla Al-Ismaily

**ASST. PROGRAM DIRECTOR**

Dr. Ahmed Al-Waily

Dr. Fatma Al-Balushi

**MEMBERS**

Dr. Mohammed Mustafa

Dr. Ilham Mustafa

Dr. Abdullah Al-Taai

Dr. Hani Jamil Arafa

Dr. Magida M. Nasib Al-Raisi

**2007**

## TABLE OF CONTENTS:

TITLE	PAGE #
1. Introduction	4
2. Objective	5
3. Admission Requirements	6
4. Training Requirements	6
5. Structure of Training Program	6-9
6. Responsibilities	10
7. Contents of Training:	11-12
a. Academic and Clinical Activities	
b. Procedure & Skills in Dermatology	
c. Logbook	
d. Research Activity	
8. Additional Requirements	12
9. Vacation, Holidays, and On-call	13
10. Evaluation	13-14
11. Promotion	14
12. Outline Examination	14-16
13. Certification	16
14. Training Manual for Dermatology	17-33

# **DERMATOLOGY TRAINING PROGRAM**

## **1. INTRODUCTION**

Dermatology is that branch of medicine concerned with the study and clinical management of the skin, its appendages and mucous membranes, both in health and disease.

The four year residency training in dermatology involves the development of a thorough knowledge of the skin, its appendages and mucous membranes both in health and disease, and the acquisition of clinical and technical skills and attitudes consistent with the capability for Independent consultant practice.

On completion of the educational program, the graduate physician should be competent to function as a Specialist in Dermatology.

## **2. MISSION STATEMENT**

- To produce a competent knowledgeable dermatologist capable of functioning independently after successfully completing an approved educational programme and an evaluation, including an examination process designed to assess the knowledge, experience and skills requisite to the provision of high quality patient care in dermatology.
- To provide an educating environment that will promote high quality education in both knowledge and practical skills and as well, as achieve a trend towards medical research.

## **3. VISION**

- Provision of state of art professional training in the field of Dermatology and sexually transmitted disease in order to produce a skilled competent knowledge specialist to perform duties safety and effectively with essential responsibilities and attitudes.

#### 4. **GENERAL OBJECTIVES**

- 4.1 Specialist in dermatology should have a high degree of competence in diagnosing and treating diseases of skin and genito urinary medicine and its allied branches.
- 4.2 Should gain enough clinical and technical experience to practice as a safe and a competent dermatologist.
- 4.3 Should be well versed with basic dermatological surgical techniques and current modalities of therapy.
- 4.4 Should be able to recognize dermatological emergencies and manage them effectively.
- 4.5 Possess good skills in various diagnostic and therapeutic procedures in dermatology.
- 4.6 Keep orderly accurate and informative medical records.
- 4.7 Should possess skill to select relevant investigations logically and interpret effectively.

#### **Specific Objectives**

1. To train and graduate competent, knowledgeable dermatologists capable of functioning independently.
2. The graduate must be a well trained dermatologist who can deal with the common and as well as rare skin disease and allied branches of this specialty.
3. Provide an educational environment that will promote the standards of health care in Oman.

## **5. SPECIALITY ADMISSION REQUIREMENTS**

- 5.1 Applicants for the OMSB in Dermatology must have the following: General OMSB requirements:
- 5.2 He/she must be of a holder of Bachelors Degree in Medicine & Surgery or equivalent from a University recognized by the OMSB.
- 5.3 He/she must have completed a year of internship.
- 5.4 He/she must be of good conduct & medically fit for the Speciality.
- 5.5 He/she must provide three letters of Recommendation from three consultants with whom he/she has worked confirming his/her ability & capability of training.
- 5.6 He/she must submit a letter of approval from his/her sponsor confirming permission to join the OMSB Specialty Training Program on full time basis for the entire period of training.
- 5.7 He/she must pass the interview.
- 5.8 The scientific Committees may add other conditions, oral or written exams, or tests for admission as approved by OMSB.
- 5.9 The trainee must fulfill the additional conditions & pass the oral and Written examinations set by the program.
- 5.10 The trainees are selected as per the OMSB rules & regulations.
- 5.11 The trainees should register with OMSB and abide by all its By-laws.

## **6. TRAINING REQUIREMENTS**

- 6.1 Training is a full time commitment. Residents shall be enrolled in full time, continues training fort he whole period of the program.
- 6.2 Training is to be conducted in institutions accredited for training by the Oman Specialty Certificate of Dermatology.
- 6.3 The training will be comprehensive in the specialties of Dermatology.
- 6.4 Trainees shall be actively involved in patient care with gradual progression of responsibility.
- 6.5 Trainees will gain experience in diagnostic, invasive and non-invasive, monitoring procedures.
- 6.6 Trainees shall abide by the raining regulations and obligations as set by the Oman Medical Specialty Board Certificate of Dermatology.

## 7. STRUCTURE OF TRAINING PROGRAM

### 7.1 Duration of Program

7.1.1 The residency-training programme is a four year structured course affiliated to the Oman Medical Specialty Board in Dermatology. It is inclusive of one year of rotations in related branches of internal medicines, plastic surgery, general surgery and other related allied branches, like Microbiology & Pathology, Infectious medicine, rheumatology, psychiatry, paediatric medicine etc.

7.1.2 The other three years includes extensive training in clinical knowledge in general dermatology as well as subspecialties like dermatosurgery & laser, photobiology, allergies, mycology, venereology, leprosy which is spent in general hospital with indoor patients facilities.

**The four year residency training is divided into two parts:  
Part I and Part II**

### **PART I**

Part I consist of first two years which includes a year of rotation in allied subjects like General Medicine, Plastic Surgery, Pediatrics & Psychiatry. It also includes understanding of basic knowledge in Dermatology, Pathology, and Mycology. Immunopathology & Microbiology.

### **Junior Residency Training – (26 Blocks – 2 years)** **Each Block is 28 days**

The Candidate must complete the Junior Residency training period of 26 Blocks, as detailed below.

### **First year (R1) = 13 Blocks**

- A. Rotation in General Dermatology in Basic Science - 4 Blocks.
- B. Rotation in General Medicine General & Plastic Surgery & allied subject for – 8 Blocks.

### **Second year (R2) = 13 Blocks**

- A. Continuation of rotation in General Medicine General & Plastic Surgery & allied subject for - 5 Blocks.
- B. Rotation in General Dermatology – 8 Blocks

## **PART II = 26 Blocks (2 years)**

Includes 2 years of extensive clinical knowledge of Dermatology, Venereology, Leprology and Andrology and the various subspecialties in dermatology.

## **Third & Fourth year (R3 & R4)**

### **Residency program for: Advanced Dermatology**

- a. Same as the above from e to j.
- b. Training how to manage the venereal disease patients, history taking clinical examination and laboratory diagnosis.
- c. Attend the various subspecialty clinics on dermatosurgery and lasers, allergy, phototherapy, genodermatosis etc.
- d. Presenting of difficult cases and involved in discussion.
- e. Under the instruction of senior technician learn the immunopathological procedures.
  - Procedures of frozen sectioning
  - Staining procedure of immunofluorescence
  - To learn the operation, maintenance and photographing of the fluorescent microscope.
- f. Ultraviolet phototherapy training.
- g. Research project: to study an interesting topic in the specialty.
- h. Encourage to do some of skin surgery.
- i. Assist for administration and teaching work.

## **8. RESPONSIBILITIES**

1. The trainees shall abide by the policies and procedures of the department and hospital.
2. The trainees shall maintain patient confidentiality and ethics of the profession.
3. Trainees shall maintain a professional relationship with their patients, the patient's relatives, colleagues and hospital staff.
4. Trainees shall attend and participate under supervision, in the active management of all patients in the various intensive care units, in order to gain more experience in this field.

## 9. CONTENTS OF TRAINING

### 9.1 Academic and Clinical Activities

- a. Trainees are expected to attend didactic lectures provided by the program and participate actively in departmental presentations, symposia, conferences, workshops, training courses, etc.
- b. Trainees are expected to attend regularly and punctuality, to their duties and any other assigned clinical rotation.

### 9.2 Procedure and Skills in Dermatology

- a. Dermatology Minor procedures: Minimum of fifty (50) procedures in the following: Biopsies, Electro-cauterization, Cryosurgery, Laser, Skin grafting, Wood's Lamp, minor surgical procedures is mandatory prior to appearing in the final examination.
- b. Dermatology Special Procedures: Minimum of fifty (50) PUVA, Patch test special procedures are to be completed prior to appearing of exams.
- c. Laser therapy & Chemical Peeling Minimum of twenty five (25) procedures are mandatory prior to appearing in the final exams.

### 9.3 Logbook:

- a. The objective of this book is to help the student to learn and to provide record of experiences gained during the posting in various disciplines. Each student is expected to participate in all the activities of the department, as a satisfactory period of clinical training is necessary before sitting for the final examination. Students who do not submit a satisfactory log book may be deferred from sitting the final examination till they have a further period of clinical exposure. Students are advised to take their log books whenever they participate in clinical practice and to make sure to get the signatures of their teachers/tutors immediately. **THE STUDENTS ARE REMINDED THAT ANY FALSE ENTRIES WOULD BAR THEM FROM THE EXAMINATION**

#### Contents of the Log book include:

1. Clerking of Case histories for Males, Females & Pediatrics.

2. Courses, Conferences, and Workshops required During Residency Program: The trainee must attend the following courses during their residency period: Dermatopathology, Dermatosurgery, Lasers, Evidence based dermatology, Therapeutics, and revision course conducted during the 4<sup>th</sup> year of the program.
3. Case presentations: A minimum of (50) presentation is mandatory prior to examination.
4. Journal Club presentation: A minimum of 20 presentations is mandatory prior to examination.
5. Histopathology: (50) Slide discussions is mandatory prior to examination.
6. Dermatology Minor procedures: Minimum of fifty (50) procedures: Biopsies, Electro-cauterization, Cryosurgery, Laser, Skin grafting, Wood's Lamp, minor surgical procedures is mandatory prior to appearing in the final examination.
7. Dermatology Special Procedures: Minimum of fifty (50) PUVA, Patch test special procedures are to be completed prior to appearing of exams.
8. Laser therapy & Chemical Peeling Minimum of twenty five (25) procedures are mandatory prior to appearing in the final exams.
9. Report on Residents in Specialty Training.
10. First, Second, Third, and Fourth year In-Training Evaluation report.
11. Final In-training evaluation report.

#### **9.4 Research Activity:**

##### **Outline Research Requirement**

- a. All trainees must conduct a research/thesis project in the field of Dermatology submitted prior to the final examination.
- b. At least one presentation (verbal or poster) in a national or international Conference during their training period.
- c. The trainee must be able to appraise critically published papers as well as designing and interpreting clinical trials.

**10. ADDITIONAL REQUIREMENTS:**

- 8.1 Training programs are expected to include more than one center to cover the specialty area.
- 8.2 Training may be undertaken at one or more of the recognized training programs available in the Sultanate of Oman.
- 8.3 Trainees are expected to become certified in basic and advanced Cardio-pulmonary Resuscitation (CPR)

**11. VACATION, HOLIDAYS, AND ON-CALL:**

- 11.1 Trainee shall be entitled to an annual leave of 30 days in addition to a maximum of 10 days in lieu of Eid holidays, official holidays and emergency leave if required to work during these holidays and leaves.
- 11.2 Training period shall be extended for an equivalent period to compensate for sick leave, maternity leave and exceptional "emergency" leaves before the trainee is awarded a certificate of completion of training.
- 11.3 Annual which is not utilized in due time within the year shall not be transferred to the following year.
- 11.4 Trainee can be granted a leave for scientific purposes (attending scientific conferences and seminars, specialty examination etc.) not exceeding 7 days a year provided that he/she presents the proof of attendance of such activities and after the approval of the Program Director.

**12. EVALUATION**

**a. End of Rotation Evaluation**

An in training evaluation report based on the goals and objectives of the program must be completed at the end of each rotation. This must be done at the end of each rotation or at a minimum frequency of every six months for each resident. These evaluations should have input from all supervising teaching staff. The evaluation must be reviewed with the residents soon after the rotation is completed and sent to the Chairman, OMSB - Dermatology.

The Trainee must complete at least 3/4 of the training period rotations for it to be considered valid.

### **b. In –training Examinations**

The program Director should prepare a report every six months and at the end of the academic year using the specific evaluation form showing the progress of the trainee. This represents a summary of the trainee's performance of the two durations and has to sign it. The evaluation is then submitted to the Scientific Committee for approval and the final report is submitted to the OMSB and the Resident's Sponsor.

### **c. Annual Overall Evaluation**

The Scientific Committees shall conduct annual examination for the evaluation of trainees. The results of these examinations shall be part of the evaluation process for the annual promotion purposes.

## **13. PROMOTION**

A trainee's promotion from one level to the next (e.g. from a first year to second year of residency) is based on the average of the periodical assessment reports. (Three of four at least) which represents 50%. However, a trainee must have a general average of no less than 60% and the average of the two parts of the assessment is no less than 60% of each part separately.

## **14. EXAMINATION OUTLINE**

### **First Part:**

1. Done 2 years after beginning of training.
2. An application of entering the exam should be signed by Chairman of training committee.
3. Contents:
  - a. Microbiology and parasitology
  - b. Physiology
  - c. Pathology & Histology
  - d. Immunology
4. Pharmacology
5. Internal Medicine, Surgery, Pediatrics & Psychiatry.
6. Genetics
  - a. Embryology
  - b. Surface Anatomy
  - c. Principle In photophysics

The examination will be written of MCQ type with 4 hours allowance (consist of 200 questions).

The candidate consider Pass if he achieved a minimum standard of 60%.

**Second Part:**

1. Done at the end of Training Time at accreditation center.
2. Passed first part.
3. Satisfactory of all his reports.
4. Apply an examination application form.

The examinations will include written, clinical and oral examination:

- A. Written examination (50% of total):  
First paper: MCQ, 2 hours (25%), consist of 120 questions.
- B. Second paper: MCQ, 2 hours (25%), consist of 120 questions.

The candidate should score a minimum standard of each paper 50%

5. Clinical and oral examinations (50% of total)  
Clinical cases and dermatopathology slides (25%) Oral 25%  
Minimum standard of each is 50%.

The candidate considered passed if he achieved 70% of total.

Examination Committee - Responsible to put all rules regulation and arrangement of examination sub committee.

**Written and oral examination:**

Each resident should be given an oral and a written examination formulated by the program committee at least once a year and results of these must be recorded on the In training evaluation report.

**15. EXIT QUALIFICATIONS**

1. Successful completion of the specialty training program for the period approved and passing end of the year examination as well as part one Examination.
2. Completion of training certificate from the OMSB.
3. The exam will be held once every year.

4. The examination may consist of written, oral parts, OSCE and short clinical cases.
5. The resident who does not pass the exam may repeat the examination within six months after the approval of the scientific committee.
6. The trainee may take the exam for a maximum of three times. In case the trainee does not succeed the third time, he/she may be granted a fourth attempt by the Board of Trustees in exceptional cases.
7. The passing score is 70%. However, if the percentage of the candidates passing the examination is less than 70%, the passing score can be lowered by one mark at a time aiming at achieving 70% passing rate or score of 65% or whichever comes first. Under No circumstances, the score can be reduced below 65%. Negative marking is not allowed.

**16. CERTIFICATE OF COMPLETION:**

Trainees passing the final specialty examination will be awarded by the Oman Medical Specialty Board.

# OMAN MEDICAL SPECIALTY BOARD



المجلس العماني للاختصاصات الطبية

## DERMATOLOGY TRAINING MANUAL

# DERMATOLOGY TRAINING MANUAL

## **SPECIFIC OBJECTIVES FOR EACH ROTATION:**

Specialist in dermatology should have a high degree of competence in diagnosing and treating diseases of skin and genito urinary medicine and its various sub specialties.

- **General Dermatology**

There must be comprehensive exposure to all primary diseases of skin, hair, nails and visible mucosa, cutaneous manifestations of systemic disease, collagen vascular disease and skin problems related to allergy and immunology.

- **Clinical Services for Dermatology**

The clinical services making up the program must provide full training in the diagnosis and management of dermatological conditions as detailed below.

- **In-patient and consultation**

The dermatology service must have appropriate facilities to teach residents the skills needed to manage patients with skin disease who require admission to hospital. Whether these patients are admitted directly to dermatology, or to another service, the resident must become proficient in the investigation and treatment of these patients under the guidance of qualified dermatologist who are members of the organized teaching staff.

The program must be associated with an active consultation service to internal medicine and its subspecialties, family medicine, peditrics other medical and surgical services and the emergency department. It is important that teaching sites approved for training have a sufficient number of admissions to ensure this consultative service, residents must take an active part in this service.

Each trainee is assigned certain inpatients where it is his/her responsibility for the day-day care of these patients. A senior supervisor will conduct daily rounds and at least weekly grand round.

- **Outpatient Clinic**

Under direct supervision, the trainee runs outpatient clinics as well as conducts the common procedures carried out in the clinic. There must be organized out patient department or ambulatory care facility providing an adequate number of adult and pediatric dermatological out patient.

In-patient and out-patient teaching should be integrated as much as possible, in order to provide continuity of observation of patients both in and out of hospital. Organized clinics or other facilities must be available with adequate number of patient's opportunities for construction in the broad range of dermatology that can be managed on an ambulatory basis. In addition to general clinics, special clinics under the supervision of experienced teachers will provide additional learning opportunities for residents. It is essential that clinics provide a teaching milieu and that schedules of residents be so arranged as to ensure their attendance.

- **Ward referrals**

The trainee must have a regular commitment to seeing in-patient referrals and should be familiar with the skin problems of patients in the intensive care units. Initially such referrals are carried out with a senior with increasing responsibility for independent consultations.

- **On-call**

All trainees must have Dermatology on-call commitment during the training. The first two years are hospital based and the second two years are non-hospital (from home). The on-call should cover the care of dermatology in-patients, admissions of new patients, referrals from other departments (adult and pediatric wards, intensive care units, and the Accident and Emergency). The on-call trainee will always be supported by a second and a third on call senior colleague.

- **Allergy**

- a. Basics science in allergy.
- b. Should be able to conduct patch test and pinprick test and should be able to interpret reading and advice accordingly.

- **Photobiology**

- a. Should know the basic of applied physics.
- b. Should be able to conduct Minimal Erythema Dose (MED) and Minimal Photoxic Dose (MPD) test.

- c. Should be able to operate PUVA machines independently and hand and foot machines.

- **Pediatric Dermatology**

There must be an adequate number of patients training in the dermatologic manifestations of acute-contagious illnesses, and other skin diseases in children.

- **Dermatopathology**

The program must include all aspects of dermatopathology, including microscopic diagnostic of skin disorders by means of light and fluorescent microscopy, electron microscopy, and immunohistochemistry, laboratory facilities must be adequate and organized for teaching under the direction of a dermatopathologist or a physician with a special interest in dermatopathology.

- **STD & Leprosy**

Should be aware of diagnosing, investigating and treating all common sexually transmitted disease. Should be well versed in conducting all laboratory procedures of common STD's. Should be exposed to different types of Leprosy cases and should be able to investigate and manage their cases.

- **Dermatosurgery and Laser**

- a. Should be well versed in conducting dermatosurgical procedure like various types of skin biopsies, electrocauterization and fulguration, radiosurgery ablations, cryotherapies, subcision of scars, tattooing skin grafting etc.
- b. Should assist in partial thickness skin grafting, suction blister, grafting, micro punch vitiligo surgery etc.
- c. Should know the basics of lasers and its application in various conditions.
- d. Should assist in laser surgery.
- e. Facilities and supervision must be available for such diagnostic procedures as patch testing, photo testing Wood's light examination, and microscopic examination for fungi and scabies and of hair mounts.

- **Genodermatosis**

Should be exposed to all common genodermatosis in Oman and should be able to diagnose investigate and counsel such patients.

- **Infectious disease**

There must be adequate exposure to patients with infectious disease, including HIV and sexually transmitted.

- **Dermatologic Therapy**

There must be arrangements for special instruction and supervised experience in use of both topical and systemic pharmacologic agents and in the role of phototherapy and photochemotherapy, cryotherapy and radiosurgery etc.

- **Skin Malignancies**

The program must include the diagnostic and therapeutic aspects of malignant skin disease, preferably in an interdisciplinary setting providing ample opportunities for consultation with plastic surgeons, pathologists, and medical and radiation oncologist.

## **EXTERNAL ELECTIVES ABROAD**

The trainee is highly encouraged to spend two to three months in India or Egypt to get exposure to the uncommon skin diseases. Such two countries have wide variety of dermatological cases and will give the resident an ample experience in tropical dermatology.

## **NUMBER OF PROCEDURES / SURGERIES RECOMMENDED**

1. Clerking of case histories -100 cases: (40 male cases, 30 feale Cases, 30 paediatric cases).
2. Seminars & Scientific activities (50)
3. Case presentation (50)
4. Journal club presentations (50)
5. Histopathology (50)
6. Minor surgical procedures biopsies (50)
7. Minor surgical procedures electro cauterization (50)
8. Minor surgical procedures cryosurgery (50)
9. Minor procedures epilations (20)
10. Minor procedures skin grafting (10)
11. Minor procedures wook's lamp (50)
12. Special procedures fungal scraping (50)
13. Special procedures puva (50)
14. Special procedures patch test (50)
15. Laser therapy procedures (25 cases)
16. Chemical peeling procedures (25 cases)

## **DIDACTIC LECTURE SERIES FOR ALL RESIDENTS**

These topics are distributed to R1, R2, R3 & R4 residents which are presented to the whole department on every Sunday from 1.30 to 2.30 pm throughout the year.

1. Epidermal cell kinetics
2. Immunogenetics
3. Percutaneous absorption
4. Antifungal agents
5. Histamines & anti-histamines
6. Stains and immuno histochemistry in Dermatopathology
7. Disorder of nails
8. Pregnancy dermatosis
9. Leg ulcers
10. Drug reactions
11. Irritant & contact dermatitis
12. Laser in dermatology
13. Pemphigus variants
  - a. Androgen biology as basis for diagnosis and treatment of androgenic disorders in women and men.
14. Vasculitis
15. Lymphoma of skin
16. Photodermatosis
17. Epidermal Tumours
18. Kaposi Sarcoma
19. Genodermatosis
20. Urticarias
21. Skin signs of internal disease
22. Chemical Peeling
23. Topical & systemic steroids in Dermatology
24. Inflammation
25. Familial Multiple Tumor Syndrome
26. Ectodermal Dysplasia
27. Skin & Systemic Disease
28. Diseases of veins & arteries leg ulcers
29. Bacterial & viral Infection
30. Eczema & Allergic Dermatitis
31. HIV & STD
32. Leprosy
33. Acne, Seborrhoeic Dermatitis & Vitiligo
34. Fungal & Scabies
35. Cutaneous disorder of newborn
36. Dermatitis due to physical factors
37. Abnormalities of dermal connective tissue
38. Drug reactions
39. Congenital blistering disorders
40. Parasitic infection & infestation
41. Purpura

42. Anatomy of subcutaneous fat & panniculitis disease
43. Anatomy , Physiology & function of sweat glands
44. Nail disorders
45. Biology of hair follicle & alopecia disorders
46. Thinning of ozone layer
47. Adverse effects from systemic drugs
48. Development and structure of skin
49. skin disorders caused by disturbances of lipid metabolic

### **SUGGESTED DIDACTIC LECTURES**

- A. Syllabus of approximately 80 lectures maybe presented during the course of each 48 months cycle. Both R1,R2 and R3,R4 residents are expected to attend these lectures.

### **CONTENTS OF THE PROGRAM AND DETAILED SYLLABUS OF THE TRAINING PROGRAM**

#### **THE BASIC SCIENCES IN DERMATOLOGY WILL COVER:**

1. Histology, Embryology, Physiology, Biochemistry of the skin, Anatomy and Physiology of male and female genitalia.
2. Microbiology to cover, bacteriology, virology, mycology, entomology and parasitology of the skin.
3. Basic immunology and allergy
4. Pharmacology and cosmetology
5. Basic genetics
6. Photophysics and basic principles of therapy with physical agents including x-ray therapy and short wave diatherapy.
7. Medical photography.

#### **BASIC SCIENCES:**

##### **A. Anatomy and physiology**

1. Embriology: Structure and function of the developing skin.
2. Epidermis, kinetics, differentiation, physical properties, epidermal keratins, proteins of keratohyaline, cell membrane structure and keratinocyte cultures.
3. Melanogenesis

4. Control of epidermal growth and metabolism - carbohydrate metabolism, protein metabolism, and epidermal lipids. DNA damage and repair.
5. The dermis - Connective tissue and ground substance, elastic and collagen, dermoepidermal interactions.
6. Skin vasculature and circulations.
7. Skin appendages: hairs, sebaceous glands, sweat glands.
8. Nails
9. Cutaneous innervations and physiology of skin sensation.
10. Mast cells and its mediators.
11. Immunologic role of the skin.
12. Nutritional and metabolic skin disorders.
13. Dermatoepidermal junction.
14. Response of the skin to visible lights and ultraviolet.
15. Neuropeptides and the skin.
16. Percutaneous absorption.

**B. Microbiology, Parasitology and Entemology**

The aim of this course is to familiarize the student with the microbiology of the human skin in health and disease, its role in defense against infection and the types of microbial diseases of the skin, their diagnosis, management and prevention. The course will also contain aspects of sexually transmitted disease, their presentation, microbiology, management, epidemiology and prevention. Characteristics of the microbial agents, their mode of transmission, virulence factors and pathogenesis will be covered. The course will consist of formal lectures, seminars and practical sessions in Microbiology.

The proposed topics to be covered are:

1. Bacterial Cytology and Physiology
2. Properties of Bacteria as revealed by Laboratory methods
3. Bacteria of Medical Importance
4. Antibacterial Chemotherapy
5. Microbial diseases of the skin
6. The Nature of Viruses & Viral skin diseases

7. Sexually Transmitted Diseases (STD)
  8. Parasitology & Entomology related to the skin
  9. Mycology
- A)** Fundamentals of Mycology and Classification of Fungi, Molds & Yeasts
- B)** General Microscopic and cultural techniques used in medical mycology.
1. Safety
  2. The collection and processing of Specimens
  3. Direct microscopic examination
  4. Cultural Procedures
  5. Physiologic Nutritional tests
  6. Serology of Fungal Diseases
  7. Animal Inoculations
- C)** The opportunistic Fungi
- D)** Aspergillosis
- E)** Superficial Mycoses
1. Pityriasis Versicolor
  2. Tinea Nigra
  3. Piedra
- F)** Dermatophytes
1. General characteristics
  2. Source and Type of infection
  3. Ascigerous States of Dermatophytes
  4. Laboratory Procedures
  5. Mycology
- G)** Chromomycosis
- H)** Maduromycosis
- I)** Sporotrichosis
- J)** Yeast Identification
1. Collection - Transport-Storage of Specimens
  2. Direct Examination
  3. Culture and Isolation
  4. Serological procedures
- K)** The systemic Mycoses and the Dimorphic Fungi

L) The actinomycetes of Medical Importance

M) Fungal Susceptibility testing

1. Antifungal Agents
2. Bioassay and Susceptibility testing

N) Sterilization and Disinfection

**C. Basic Immunology:**

1. Introduction to immunology
2. Immunogenicity, antigen specificity and hormonal immunity
3. Cell mediated immunity
4. The role of phagocytic cells - neutrophils and macrophage line
5. Complement system abnormalities and immunodeficiencies
6. Human histocompatibility HLA system
7. Mediators of inflammation
8. Immune reactions
9. Laboratory evaluation of immune function

**D. Pharmacology and Cosmetology:**

Pharmacology of skin  
Treatment of skin diseases

**A) General principles of topical dermatologic therapy and their various modalities:**

1. Vehicles for solution, lotions, ointments and creams
2. Cleansing agents
3. Emulsifying agents
4. Antiseptics
5. Antipruritic
6. Antiseborrhoeic
7. Preservatives
8. Keratolytics
9. Keratoplastic drugs
10. Antibacterial agents
11. Antifungal agents
12. Antiviral agents
13. Antiparasitic agents
14. Photosensitizers and agents for pigmentation
15. Photoprotection

16. Depigmentating agents
17. Antiperspirants
18. Anaesthetics (Local)

**B) General Pharmacology and pharmacokinetic Drugs for systemic and / or topical use and their mode of action:**

1. Steroids
2. Antibacterial agents
3. Antiviral agents
4. Antifungal agents
5. Antihistamines, drugs used in hyposensitization & allergic emergencies
6. Analgesic and NSAID
7. Antiparasitic
8. Immunosuppressive and cytotoxic drugs
9. Immunomodulators
10. Vitamins
11. The retinoids
12. Psoralens
13. Tranquillizers
14. Hypnotics
15. Anticonvulsants
16. Toxicology and antidotes
17. Fluids and electrolytes

**C) Cosmeticology:**

1. Astringents and skin tonics
2. Protective creams and hand cleansers
3. Bath preparations
4. Antiperspirants and deodorants
5. Depilatories
6. Shaving preparations
7. Insect repellants
8. Skin lighteners
9. Shampoos
10. Hair tonics and conditioners
11. Hair colorants
12. Hair strengthening preparations

**E. Basic Genetics:**

1. Normal Cell division
2. The human chromosomes
3. The transfer of genetic information
4. Modes of inheritance
  - a) Autosomal
  - b) Sex linked

- c) Variations in expression of genes
- d) Multifactorial inheritance
- 5. Chromosomal abnormalities
- 6. Autosomal aberrations
- 7. The sex chromosomes and sex abnormalities
- 8. The sex chromatin
- 9. Blood groups
- 10. Dermatoglyphics
- 11. Immunogenetics
  - a) Histocompatibility genes
  - b) HLA and diseases
  - c) Genetics of immune deficiency diseases
  - d) Autoimmune diseases
- 12. Genetic Counseling

**F. Medical Photography:**

**Introduction**

- 1) Terminology and technical abbreviations
- 2) Digital & 35 mm camera functions (types, lenses, filters)
- 3) Flash lighting (types, shutters)
- 4) Handling cameras (tripods)
- 5) Colour & B&W photography (contrast, tones)
- 6) 35mm films (types)

**Computer generated slides**

- 1) Expressing information with slides
- 2) Design and layout (different dimensions)
- 3) Exploring colours (backgrounds and foreground)
- 4) Using tables, graphs, diagrams
- 5) Slide presentation software

**BASIC PRINCIPLES OF DERMATOLOGIC SURGERY**

**A. Surgical Anatomy of the Skin**

**B. Basic Surgical Principles:**

- Surgical preparation
- Anaesthesia
- Patient evaluation for dermatologic surgery
- Preoperative psychological evaluation
- Emergencies in skin surgery
- Suture Materials
- Wound Healing and wound dressing.

**C. Standard Dermatologic Surgical Procedures:**

- Skin biopsy
- Excision
- Scissor Surgery
- Sutures and Suturing Techniques
- Electrosurgery
- Cryo Surgery

**D. Dermatologic Laser Surgery:**

- Lasers in Dermatology
- CO2 Laser
- Argon Laser
- Dye Laser
- Pulse dye laser
- Excimer Laser etc.

**E. Advanced Dermatologic Surgical Procedures:**

- Random pattern flaps
- Skin Grafts
- Tissue Expansion

**F. Regional Dermatologic Surgery:**

- The Ear
- The Hand
- The Nose
- The lips and oral cavity
- The Eyelids
- The Nails
- The Male and Female genitalia

**G. Cosmetic and Reconstructive Dermatologic Surgery:**

- Dermabrasion
- Scalp Reduction
- Hair Transplantation
- Liposuction surgery
- Scar Revision
- Sclerotherapy
- Face-lift surgery: principles and variations
- Blepharoplasty and brow lifting

**H. Control of Surgical Infection.**

**I. Techniques of Cardiopulmonary Resuscitation.**

**J. Cancer of Skin and the Surgical Oncology.**

**K. Chemosurgery & Immunotherapy:**

- Microcontrolled surgery for skin cancer.
- Fluorouracil
- Topical use of Nitrogen mustard
- Regional Therapy for cancers of the limbs
- Chemical Peeling and Chemoabrasion
- Immunotherapy of cutaneous Tumours

**L. Surgical Treatment of Skin Diseases:**

- Scarring alopecia
- Furuncles and Carbuncles
- The aging face
- Epidermal tumours
- Premalignant lesions
- Dermal and subcutaneous tumours
- Acne
- Hypertrophic scars and Keloids
- Cutaneous burn Injury
- Hyperhidrosis
- Hidradenitis suppurativa
- Tattoos
- Leg ulcers
- Malignant melanoma
- Basal Cell Carcinoma
- Squamous Cell Carcinoma
- Corns, Skin tags and callosities
- Warts

**GENERAL MEDICINE:**

A) Emergency Medicine: including Cardiopulmonary Resuscitation.

B) Subspecialties:

1. Endocrinology & Diabetes
2. Rheumatology and Collagen Vascular disorders
3. Haematology & Oncology
4. Gastrointestinal Disorders and Liver Diseases
5. Infectious Diseases

**PEDIATRICS:**

1. Care of Neonates
2. Normal development

3. Juvenile Diabetes Mellitus
4. Rheumatic Fever
5. Nephrology
6. Mongolism and other important chromosomal disorders
7. Selected genetic disorders
8. Haemophylas and related diseases

### **PSYCHIATRY:**

Lectures/Seminars covering the following subjects to be given in the first 3 months (Twice/week):

1. General Aetiology
2. Symptomatology (4 lectures)
3. Anxiety disorders
4. Dissociation disorders
5. Obsessional disorders
6. Affective disorders
7. Schizophrenia
8. Psychosomatic relationship
9. Childhood disorders
10. Psychosexual disorders
11. Pharmacotherapy
12. Psychotherapy

### **TEXT BOOKS:**

#### **LIST OF BOOKS & JOURNALS RECOMMENDED**

##### **A. TEXT BOOKS:**

###### **(a) Dermatology:**

- Text Book of Dermatology by Rook et al
- Dermatology in General Medicine by Fitzpatrick et al
- Dermatopathology by Lever & Lever
- Pinkus Dermatopathology by Mehregan et al
- Histological Diagnosis of Inflammatory skin disease by A.B Ackeman.
- Dermatopathology by Philip Machie.
- Notes on Medical Bacteriology J Douglas Sleight & Morag C.Timbury
- Clinical Medicine Kumar P.J. & Clark M.L
- Notes on Medical Virology Tombury M.C
- Basic of Dermatologic Surgery Stegman S.J Tromovitch T.A. & Glogan R.G.

- (b) **Venereology:**
  - Sexually Transmitted Diseases by King, Holmes et al
- (c) **Leprosy:**
  - Leprosy by Dharmendra Volume I & II
  - Handbook of Leprosy by Jopling WH et al
- (d) **Andrology:**
  - Andrology by John P. Pryor et al
  - Male Infertility by A. Melar MD.

**B. PERIODICALS:**

- American Academy of Dermatology.
- International Journal of Dermatology.
- British Journal of Dermatology.
- Pan Arab Journal of Dermatology.
- British Journal of Genito Urinary Medicine.
- International Journal of Leprosy.

**THE PARTICIPATING TRAINING CENTERS**

Al Nahdha Hospital is the main training center. Allied training branches are Bausher polyclinic, Sultan Qaboos University Hospital, Royal Hospital, Khoula Hospital.

**THE MEMBERS OF TEACHING FACULTY**

The following are the teaching faculty and members of Scientific Committee of OMSB in dermatology.

Dr. D.D. Banodkar	Chairman
Dr. Abla Al Ismaily	Program Director
Dr. Ilham Mustafa	Assistant Program Director
Dr. Fatma Al Balushi	Assistant Program Director
Dr. Ahmed Al Waily	Assistant Program Director
Dr. Mohd. Redha Mustafa	Member
Dr. Abdullah Al Taie	Member
Dr. Hani Gamil Arafa	Member
Dr. Majida Al Raisi	Member