

**OMAN MEDICAL SPECIALTY BOARD**



**المجلس العماني للاختصاصات الطبية**

**DERMATOLOGY  
RESIDENCY PROGRAM  
CURRICULUM  
(2007)**

# DERMATOLOGY SPECIALTY

## OMSB Residency Program Curriculum

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## 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 safely and effectively with essential responsibilities and attitudes.

### **3. GENERAL OBJECTIVES**

- 3.1 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.
- 3.2 Should gain enough clinical and technical experience to practice as a safe and a competent dermatologist.
- 3.3 Should be well versed with basic dermatological surgical techniques and current modalities of therapy.
- 3.4 Should be able to recognize dermatological emergencies and manage them effectively.
- 3.5 Possess good skills in various diagnostic and therapeutic procedures in dermatology.
- 3.6 Keep orderly accurate and informative medical records.
- 3.7 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.

## 4. SPECIALITY ADMISSION REQUIREMENTS

- 4.1 Applicants for the OMSB in Dermatology must have the following:  
General OMSB requirements:
  - 4.1.1 He/she must be of a holder of Bachelors Degree in Medicine & Surgery or equivalent from a University recognized by the OMSB.
  - 4.1.2 He/she must have completed a year of internship.
  - 4.1.3 He/she must be of good conduct & medically fit for the Specialty.
  - 4.1.4 He/she must provide three letters of recommendation from three consultants with whom he/she has worked confirming his/her ability & capability of training.
  - 4.1.5 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.
  - 4.1.6 He/she must pass the interview.
  - 4.1.7 The scientific Committees may add other conditions, oral or written exams, or tests for admission as approved by OMSB.
  - 4.1.8 The trainee must fulfill the additional conditions & pass the oral and written examinations set by the program.
  - 4.1.9 The trainees are selected as per the OMSB rules & regulations.
  - 4.1.10 The trainees should register with OMSB and abide by all its bye-laws.

## 5.0 STRUCTURE OF TRAINING PROGRAM

### 5.1 Duration of Program

5.1.1 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.

5.1.2 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.

- **Part II**

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

**GENERAL OUTLINE OF ROTATIONS – OF 52 BLOCKS 4 YEARS (EACH BLOCK = 4 WEEKS = 28 DAYS)**

- A. DERMATOLOGY** - a. Basic  
b. General Dermatology  
c. Sub Specialty

	<b>39 Blocks</b>
<b>B. External rotation in allied branches</b>	<b><u>13 Blocks</u></b>
<b>Total</b>	<b>52 Blocks</b>

**A. Dermatology Sub divisions:**

- a. Basic dermatology – 4 blocks.
- b. General Dermatology – 13 blocks.(ward duties 4 blocks, dermatological procedures 4 blocks and general dermatology 5 blocks)
- c. **Rotation in Sub Specialties:**  
**\*Rotation in subspecialties is only for 1-2 times a week and rest of the days the residents are in General Dermatology.**
  1. Laser & Dermatology Surgery – 3 blocks.
  2. Allergy – 2 blocks.
  3. Phototherapy & Psoriasis – 2 blocks.
  4. Leprosy & Sexually transmitted disease - 2 blocks.
  5. Infertility – 2 blocks.
  6. Genodermatosis – 2 blocks.
  7. Pediatric dermatology – 2 blocks
  8. Histopathology – 2 blocks
  9. SQU – 1 blocks.
  10. Leave – 4 blocks

**B. External Rotation in allied branches (\* Rotation in medicine surgery, pediatrics and allied branches 13 Blocks)**

**Sub-Division**

General Medicine – 1 Block

Rheumatology -1 Block

Endocrinology-1 Block

Infectious Disease -1 Block

Psychiatry-1 Block

Oncology- 1 Block

**Pediatrics- 1 Block**

**Surgery**

General Surgery- 1 Block

Plastic surgery –2 Block

**Pathology:**

Microbiology – 1 Block

Histopathology -2 Block

## **Year wise rotation:**

### **Part I**

#### **First year (R1)**

- 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)**

- A. Continuation of rotation in General Medicine General & Plastic Surgery & allied subject for - 5 Blocks.
- B. Rotation in General Dermatology - 7 Blocks.

Basic science includes training in following faculties:

- Dermatology
- Venereology
- Leprosy
- Andrology
- Histopathology
- Immunopathology
- Mycology & Microbiology
- Dermato surgery

The Part I includes training in the following:

- a. Study of histology and pathology of the skin.
- b. New case study: observe the characteristics of skin lesions, history taking dermatological examination, skin biopsy and special methods of dermatological treatment.
- c. Training of in patient management to learn how to complete history, treatment orders, routine and special examinations.
- d. Laboratory training: under instruction of senior technician, learn how to process the skin biopsy specimen and the procedures of routine and

- special staining, perform 10 cases for pathological processing and staining and learn how to operate and maintain the microscope.
- e. Strengthen the ability of handling follow up patients.
  - f. Assist chief resident in skin surgery.
  - g. To learn how to manage consultation patients with chief resident of attending physician.
  - h. Under instruction of chief resident or attending physician, learn the pathological diagnosis of skin biopsy.
  - i. Attend dermatological clinico pathological seminars.
  - j. Journal reading and reporting training.

## **Part II**

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

#### Residency program for:

- Advanced dermatology
  - Thesis research project
- 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.

## ➤ **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, peadiatrics 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**

- c. Should know the basic of applied physics.
- d. Should be able to conduct Minimal Erythema Dose (MED) and Minimal Photoxic Dose (MPD) test.
- e. 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 immuno-histochemistry, 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, micropunch 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.

## **TEACHING METHODS**

1. Lectures
2. Seminars
3. Demonstration and tutorial
4. Study of colour transparencies
  - a. Clinical
  - b. Microbiological
  - c. Histopathology
5. Journal review – mainly
  - a. Pan Arab J Derm
  - b. The Gulf Journal of Dermatology & Venereology
  - c. Amer. Acad. Dermatology
  - d. Brit.J Dermatology
  - e. Int.J.Dermatology
  - f. Arch. Of Dermatoloty
  - g. Medical & Surgical Dermatology
  - h. Am.J.Dermatology
  - i. International J.Dermatology
  - j. Arch of Venereology
6. Conferences

## **TEACHING RESOURCES**

1. Library
2. Seminar Rooms
3. Medical Photography
4. In Patient
5. Out Patient
6. Laboratories and facilities for bedside diagnostic aids
7. Mycology
8. Bacteriology
9. Dark field
10. Cultures
11. Pathology
12. Fluorescent microscopy
13. Woods light
14. Phototesting
15. Patch testing
16. Intradermal testing
17. Cytology
18. E.M
19. Medical Photography

## **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
14. Androgen biology as basis for diagnosis and treatment of androgenic disorders in women and men.
15. Vasculitis
16. Lymphoma of skin
17. Photodermatosis
18. Epidermal Tumours
19. Kaposi Sarcoma
20. Genodermatosis
21. Urticarias
22. Skin signs of internal disease
23. Chemical Peeling
24. Topical & systemic steroids in Dermatology
25. Inflammation
26. Familial Multiple Tumor Syndrome
27. Ectodermal Dysplasia
28. Skin & Systemic Disease
29. Diseases of veins & arteries leg ulcers
30. Bacterial & viral Infection
31. Eczema & Allergic Dermatitis
32. HIV & STD
33. Leprosy
34. Acne, Seborrhoeic Dermatitis & Vitiligo
35. Fungal & Scabies
36. Cutaneous disorder of newborn

37. Dermatitis due to physical factors
38. Abnormalities of dermal connective tissue
39. Drug reactions
40. Congenital blistering disorders
41. Parasitic infection & infestation
42. Purpura
43. Anatomy of subcutaneous fat & panniculitis disease
44. Anatomy , Physiology & function of sweat glands
45. Nail disorders
46. Biology of hair follicle & alopecia disorders
47. Thinning of ozone layer
48. Adverse effects from systemic drugs
49. Development and structure of skin
50. skin disorders caused by disturbances of lipid metabolic

➤ **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. Embryology: 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.

## **A. Microbiology, Parasitology and Entomology**

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

## **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)

**G. 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
- Exciter 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
- Benign pigmented lesions
- 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. Haemophylia 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

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

1. Clerking of case histories -100 cases: ( 40 male cases, 30 female 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)

### ➤ **LOGBOOK**

All residents are to maintain regular log book which contains the records of the various procedures conducted by them and the various seminars and journal clubs attended. It will also have their evaluation forms attached which will be supervised and signed time by time by the immediate supervisors.

## **6. COURSES, CONFERENCES, WORKSHOPS REQUIRED DURING RESIDENCY PROGRAM**

The trainee must attend the following courses during their residency period:

1. Dermatopathology.
2. Dermatosurgery and Lasers.
3. Evidence based dermatology.
4. Therapeutics.
5. Two months external clinical attachment.
6. Revision course conducted during the 4<sup>th</sup> year of the program.

## **7. 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.

## **8. OUTLINE RESEARCH REQUIREMENT**

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

## **9. 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.

## 10. 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

## 11. 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. Content:
  - a. Microbiology and parasitology
  - b. Physiology
  - c. Pathology & Histology
  - d. Immunology
  - e. Pharmacology
  - f. Internal Medicine, Surgery, Pediatrics & Psychiatry
  - g. Genetics
  - h. Embryology
  - i. Surface Anatomy
  - j. 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):
  1. First paper: MCQ, 2 hours (25%), consist of 120 questions.
  2. Second paper: MCQ, 2 hours (25%), consist of 120 questions.

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

- B. 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.

## **12. APPRAISALS / ASSESMENT EVALUATION AND PROMOTION**

Progress through the training program will be monitored by monthly assessment which includes:

1. Supervisor assessment report.
2. Completion of the logbook tasks for the year.
3. Written and clinical examination at the end of every year.

### **In-training appraisals reports:**

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.

### **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.

### **13. 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 which ever comes first. Under No circumstances, the score can be reduced below 65%. Negative marking is not allowed.

## **14. 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 Sleigh & 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) Leprology:**

- 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.

## **15. SPECIFIC STANDARDS OF ACCREDITATION FOR OMSB RESIDENCY PROGRAMS IN DERMATOLOGY**

### **INTRODUCTION:**

Department wishing to have an accredited program in dermatology should have the following standards.

The purpose of this document is to provide directors and surveyors with an interpretation of the general standards of accreditation as they relate to the accreditation of programs in dermatology.

### **STANDARD 1: GOALS AND OBJECTIVES**

There must be a clearly worded statement outlining the goals of the residency program and the educational objectives of the residents.

The general goals and objectives for dermatology are outlined in the curriculum - booklet. Based upon these general objectives each program is expected to develop rotation specific objectives suitable for that particular program.

### **STANDARD 2: ADMINISTRATIVE STRUCTURE**

There must be an appropriate administrative structure for each residency program.

1. Dermatology and Venerology clinics or center should be attached to general hospital with the following:
  - Internal Medicine Department
  - General Surgery Department
  - Psychiatry Department
  - Well Developed laboratories: Mycology, Microbiology, Immunology, Pathology and cytology.
  - Library electronic library
  - Medical records and statistics
  - Research program
2. At least two scientific session/week which include:
  - Journal club
  - Lectures
  - Clinical presentations

3. Staff:

- The teaching staff should be fellowship of a Board or equivalent with at least five years experience in both clinical and academic field.
- Well trained nurses.

4. Dermatology outpatient clinic.

- No. of examination room
- No. of waiting room
- Method of medical record
- No. of patient attendance
- No. of Doctors
- No. of Nurses

**STANDARD 3: STRUCTURE AND ORGANIZATION OF THE RESIDENCY PROGRAM**

There must be an organized program of rotations and other educational experiences, designed to provide each resident with the opportunity to fulfill the educational requirements and achieve competence in the specialty or subspecialty.

The program must be organized to provide increasing individual professional responsibility, under appropriate supervision, according to the resident's level of training, ability, and experience for the diagnosis and management of patients with dermatologic disease and in all aspects of the contemporary practice of dermatology. In addition, the resident must gain experience in performing appropriate surgical and other procedures required for the optimum care of patients.

**STANDARD 4: RESOURCES**

There must be sufficient resources including teaching faculty, the number and variety of patients, physical and technical resources, as well as the supporting facilities and services necessary to provide the opportunity for all residents in the program to achieve the educational objectives and receive full training as defined by the specialty training requirements in dermatology.

Experiences must include learning environments that facilitate the acquisition of knowledge, skill, and attitudes relating to aspects of age, gender, culture, and ethnicity appropriate to dermatology.

1. Teaching Faculty

There must be a sufficient number of qualified teaching staff to supervise residents and provide teaching in the basic and clinical sciences related to dermatologic disease.

2. Number and Variety of Patients

The number and variety of patients in each of the following categories must be satisfactory to meet the educational requirements of the residents.

a. General Dermatology

There must be comprehensive exposure to all primary disease of skin, hair, nails and visible mucosa cutaneous manifestations of systemic disease collagen vascular disease and skin problems related to allergy and immunology. The running OPD should consist of 75 to 100 patients per day.

b. Paediatric Dermatology

There must be an adequate number of patients to provide training in the dermatologic manifestations of acute contagious illnesses, and other skin disease in children. The minimum OPD should consist of 25 patients per day.

3. Clinical Services for Dermatology

The clinical services making up the program must provide full training in the diagnosis and management of dermatological conditions in each of the areas listed below. There should be at least a minimum of 5 outpatient clinics run on daily basis

a. In patient

The dermatology services must be appropriate facilities to teach residents the skills needed to manage patients with skin diseases who require admission to hospital. The resident must become proficient in the investigation and treatment of these patients under the guidance of qualified dermatologists 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, pediatrics', other medical and surgical services and the emergency department. It is important that teaching sites approved for training have a minimal of 12 beds for dermatology admissions to ensure this consultative service, residents must take an active part in this service.

b. Outpatients

There must be an organized out patient department care facility providing an adequate number of adult and pediatric dermatological out patients.

In patient and out patient teaching should be integrated a 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 numbers of patients to provide opportunities for instruction 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 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.

4. Supporting Services – Clinical, Diagnostic, Technical

The following facilities and services must be available, either within the program or by arrangement with other programs or institutions, and closely coordinated with the over all program.

- a. Active teaching services in internal medicine and allied branches like rheumatology, infectious disease, endocrine, oncology etc. and surgery. Liaison arrangements within the faculty should ensure that clinical training during the basic clinical year and the year of internal medicine or peadiatrics, in fulfillment of the specialty training requirements, meets the needs of residents in dermatology.
- b. An allergy and immunology service with adequate liaison to ensure exposure of residents in dermatology to the teaching staff in immunology.

- c. An active service in medical microbiology, with expertise available in mycology, parasitology, bacteriology and virology.
- e. A plastic surgery service as per the curriculum.
- d. An audiovisual and a photography service available to enhance and facilitate learning, and the development and maintenance of appropriate teaching files.
- f. Intensive care units and emergency departments that provide experience with the dermatologic complications of severely ill and injured patients.
- g. Adequate clinical and laboratory facilities for the performance of dermatological surgical and diagnostic procedures.
- h. Access to library facilities and other learning resources including access to electronic media.

### **STANDARD 5: EVALUATION OF RESIDENT PERFORMANCE**

There must be mechanisms in place to ensure the systemic collection and interpretation of evaluation data on each resident enrolled in the program.

#### 1. In Training Evaluation Reports

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. 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 Program Director.

#### 2. Written and Oral Examinations

Each resident should be given an oral and a written examination at least once a year and results of these must be recorder on the In-Training Evaluation Report.

## **OMSB RESIDENT EVALUATION FORMS**

- ❖ RESIDENTS MONTHLY EVALUATION**
- ❖ ROTATION EVALUATION**
- ❖ RATING**
- ❖ CONSULTANT / STAFF EVALUATION**

**RESIDENT MONTHLY EVALUATION FORM**

Name:..... OMSB #:..... Program: .....

Resident Level: R I  R II  R III  R IV  R V  R VI

Date of Rotation: From:		To:.....Resident level:.....					
No	Criteria	Unsatisfactory 1	Borderline 2	Satisfactory 3	Above Average 4	Outstanding 5	N/A
<b>I. Patient Care</b>							
1-	History and physical examination.						
2-	Interpretation and differential diagnosis.						
3-	Decision making and management plan.						
4-	Organization of work and time management.						
5-	Maintains patient confidentiality						
6-	Verbal and written communication.						
7-	Provides comprehensive care.						
8-	Ability to manage emergency conditions.						
9-	Consultation skills.						
<b>II. Medical Knowledge &amp; Attitudes</b>							
10-	Punctuality.						
11-	Basic and clinical knowledge.						
12-	Works effectively in a team environment						
13-	Technical skills and procedures.						
14-	Reports facts accurately, including own Errors						
15-	Attitude to patient and staff.						
16-	Ability to supervise.						
17-	Recognizes own limitations						
18-	Maintains code of ethics & honesty.						
<b>III. Scholarly Contributions</b>							
19-	Attends and contributes to rounds, seminars and other learning events						
20-	Accepts and acts on constructive feedback						
21-	Teaching skills (Peers)						
22-	Ability for self directed learning						
<b>Overall Assessment</b>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>General Comments (including strengths, weakness and needs for special attention)</b>							

Date of Rotation: From ..... To .....

**Name and Signature of Supervising**

**Consultant**.....Date.....

**Name of Resident:**.....**Signature:**

.....**Date:**.....

**Official Use:-**

$$\frac{\text{Total Score}}{\text{No of items evaluated}} \times 20 = \dots\dots\dots \%$$

### CONSULTANT/ STAFF EVALUATION

Name of Consultant / Staff: .....

Program: ..... Resident Level: .....

Rotation: ..... Hospital: .....

Date of Rotation: From:..... To: .....

1. How many weeks did you work with this consultant / staff?  
Up to 2  3 or 4  5 or 6  7 or 8  8+
2. The frequency of your contacts with the teaching consultant / staff was: (per week)  
1 or less  2  3  4  5 or more

Consultant	Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5	N/A
1. Made rounds regularly.						
2. Provided quality teaching.						
3. Was well organized.						
4. Stimulated enthusiasm for knowledge.						
5. Demonstrated breadth of knowledge.						
6. Established good rapport with resident.						
7. Provided direction and feed back.						
8. Was approachable for help and feedback.						
9. Encouraged resident to take appropriate responsibility.						
10. Promoted a comprehensive approach to patient care.						
11. Provided a good role model as a physician.						
12. Was available with enough time for resident support and supervision						
13. Allowed resident protected teaching time.						
14. Provided opportunity for performing procedure and techniques.						

An Average Score: < 30% Unsatisfactory, 30-60% Satisfactory, 60-80% V. Good, > 80% Excellent

Name of resident (optional) ..... Date: .....

Office Use:-

$$\frac{\text{Total Score}}{\text{Number of evaluation items}} \times 20 = \dots\dots\dots \%$$

### ROTATION EVALUATION FORM

Name (Optional) : .....OMSB # : .....

Program : ..... Hospital: ..... Rotation:.....

Date of Rotation: From:..... To: ..... Resident Level:.....

Rotation:	Unsatisfactory 1	Deficient 2	Good 3	V. Good 4	Outstanding 5	N / A
1. The number of in-patients cases seen was appropriate.						
2. Inpatients cases demonstrated a broad range of clinical problems.						
3. The number of out-patients cases seen was appropriate.						
4. Outpatient cases demonstrated a broad range of clinical problems.						
5. The opportunity to see acute emergency cases.						
6. The opportunity to see consultations.						
7. Ward rounds.						
8. Clinical Meetings / Lectures.						
9. Journal Club						
10. Audit ( e.g. Morbidity / Mortality )						
11. Clear learning objectives.						
12. The number of procedures adequate.						
13. Demonstration & Supervision of techniques.						
14. Level of responsibility in patient care.						
15. Patient management.						
16. Quality / quantity of teaching on rotation.						
17. My total workload was appropriate for the time available.						
18. Adequate feedback from consultant / staff on performance.						
19. Support and supervision was available and adequate.						
20. Opportunity to do research.						
<b>21. Overall quality of rotation</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Signature of Resident: ..... Date: .....

Official Use:-

Total Score

\_\_\_\_\_ X 20 = ..... %

No. of items evaluated

## RATING

### UNSATISFACTORY ROTATION EVALUATION FORM

### OUTSTANDING

Out patients	Do not see new patients. No time for/interest in discussion with consultant. Large number of patients. Poor organization.	←→	See new and old patients. Time for discussion with consultant. Reasonable time with patients. Well organized.
Acute Emergency	Advice/help not easy to obtain. Consultant difficult to find/contact. Also not keen to come and assist.	←→	Advice/help readily available. Consultant always happy to be phoned/consulted/give assistance.
Ward rounds	Rarely consultant led. Rapid decisions, little discussion. Junior views not listened to.	←→	Usually consultant led. In depth presentation/discussion of patients. Adequate time
Clinical meetings / lectures	Poor consultant support. Badly attended. Rigid non innovative programme. Not multi-disciplinary. Held outside normal working hours. Little input from consultants.	←→	Consultant led. Well attended by all grades. Varied programme. Often multi-disciplinary. Regularly held in normal seasonal time. Juniors encouraged present/take part.
Journal club	Juniors expected to do all reviewing. Poor consultant attendance. Didactic discussion?	←→	Equal consultant/junior participation. Articles précised and discussed.
Audit	Morbidity/mortality only. No in-depth review of clinical practice/problems. Does not lead to change clinical practice. Retrospective data. Juniors expected to collect all data. Non constructive or threatening atmosphere.	←→	Proper audit cycle utilized. Lead to change in clinical practice. Prospective data collection. Juniors assisted with data collection. Friendly, non confrontational atmosphere.
Demonstration of techniques	Works on own. Poor senior support. Not shown/taught new or more advanced techniques.	←→	Taken through procedures. Graduated discussion about patients with consultants.
Patient management	No guidelines. No trust Consultant questions all decisions. Consultant does not back trainee.	←→	Consultant readily offers help/advice. Trainee given guidelines. Trusted to use own initiative/judgment. Consultant back trainee.
Adequate feedback from Consultants	Poor or absent appraisal. No specific protected time for discussion of performance. Consultant not frank about performance. Mainly critical, rarely praises.	←→	Regular appraisals in protected time. Consultant opens about strengths, weaknesses and areas for improvement.
Research Opportunity	No fixed time allowed. Any identified time often not taken due to other pressures.. Clinical work precludes time for research	←→	Fixed session/protected time allocated. Arrangements made to free trainee of some clinical work to allow research activity.