

**GOVERNMENT OF KARNATAKA**  
**PARA MEDICAL BOARD**

**INFRASTRUCTURES REQUIRED FOR DIPLOMA IN MEDICAL**  
**LABORATORY TECHNOLOGY**

**a. Building :**

Accommodation	<p>Built up area 2800 Sq. Ft. for college comprising of Lecture Hall, Office Room, Library, Practical Hall, Staff Room, Store Room, Preparation /demonstration room, Toilets with power and water supply.</p> <p><b>Laboratory:</b> Each laboratory 10' x 15' one for each subject, i.e., One laboratory for Anatomy and Physiology, one for Pathology and Microbiology and one for Biochemistry.</p> <p><b>Lecture Hall:</b> 15' x 30' -- Three nos.</p> <p><b>Library:</b> 15' x 40' -- One Hall with proper furniture for 30 students.</p> <p><b>Play ground:</b> Preferable</p> <p><b>Separate Common Room with toilet :</b> one for Boys and one for Ladies/girls.</p> <p><b>Hostel:</b> Separate for boys and girls, but not mandatory.</p> <p><b>Transportation:</b> If the distance is more 3 kms. between the college and hospital, vehicle has to be provided for commutation.</p>
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## b. Teachers & other staff

Principal	<p>Professor from among any Department of Medical faculty having MBBS, PG qualification and with minimum 5 years of teaching experience after M.D./Diploma (Clinical Pathology).</p> <p>Principal of the concerned Medical College, wherever the course is attached to medical college In subjects like Biochemistry / Microbiology candidate with PhD can be considered for Principal Post when the candidate with Medical Postgraduate qualification is not available.</p>
Anatomy:	<p>Professor /Asst. Prof --- One</p> <p>Full time / Part time lecturer/ tutor --- One</p> <p>(MBBS / MSc. Human Anatomy)</p>
Physiology	<p>Professor /Asst. Prof --- One</p> <p>Full time / Part time lecturer/ tutor --- One</p> <p>(MBBS / MSc. Human (Medical) Physiology)</p>
Biochemistry	<p>Professor /Asst. Prof --- One</p> <p>Full time / Part time lecturer/ tutor --- One</p> <p>(MBBS / MSc. (Medical Biochemistry))</p>
Pathology	<p>Professor /Asst. Prof --- One</p> <p>Full time / Part time lecturer/ tutor --- One</p> <p>(MBBS / MD or DCP)</p>
Microbiology	<p>Professor /Asst. Prof --- One</p> <p>Full time / Part time lecturer/ tutor --- One</p> <p>(MBBS / MSc. Medical Microbiology)</p>
Technicians	<p>Senior Technician --- 3 10 years experience in a recognized Institution with 200 bed strength or BSc. (MLT).</p> <p>Junior Technician --- 3</p> <p>DMLT/CMLT &amp; above</p> <p>Attenders:One attender in each department</p>

### c. Equipments

Refrigerator	-- 04
Centrifuge	-- 03
Microscope	-- 20
Hand lens	-- 02
microtome working	-- 01
Histokinetic working	-- 01
Spirit lamps	-- 20
Sahli's Hemoglobinometer	-- 20
Hot air oven working	-- 02
Stabilizers	-- 04
Analytical balance	-- 01
Chemical balance	-- 01
Certified weight box	-- 01
pH meter	-- 01
Hot plates	-- 02
Dessicator	-- 01
Incubator (2' x 3')	-- 02
Timers	-- 03
Thermostatic water bath	-- 02
Improved Tripleruled neubauer counting chamber	-- 20
Safety spectacles	-- 02
Charts and Models	
Chemicals and Stains as per standard procedure book on lab. Medicine.	
Tripod stand and burner	
Autoclave	-- 01
VDRL Shaker	-- 01
VDRL Slide	-- 05
Loviband comparaters	-- 01
Bacterial loop	-- 10
Thermometer upto 200 <sup>0</sup> C	-- 02
Candle Filter	-- 01

*Anatomy*: parts of the human body and individual organs.

Charts: Models showing regions / parts of human body.

2 sets of Histological slides and which are mentioned in the syllabus.

1. Skeleton -- 01
2. Sets of individual bones -- 02

*Physiology:* Blood group antigens: anti-A, anti-B, anti-D

lancets	---	02 boxes
Westergrens tubes	---	10
Wintrobe's tubes	---	10
Capillary tubes (Heparinised & Plain)	---	05 boxes each
Petridishes (diff. sizes)	---	100
Pauster pipettes	---	100
Adjustible micro pipettes	---	02
Funnels - different sizes	---	10
Beakers - different sizes	---	10
Measuring jars - different sizes	---	10
Conical flasks	---	15
Round bottom flask	---	15
Watch glass	---	100
Volumetric flask	---	10
Test Tube holder	---	40
Centrifuge Tubes	---	100
Folin Wu Tubes	---	20
Test tube racks	---	40
Serological Pipettes	---	40
Glass rods (Diff. sizes)	---	20
Rubber gloves	---	01 box
Surgical gloves	---	02 boxes
Rubber teets (diff. sizes)	---	20 Nos.
Dropper bottles	---	40

#### **d. Recommended Text Books & References**

##### **i) Anatomy:**

1. Singh ( Inderbir)  
Text book of Histology  
J.P. Brothers, New Delhi
2. Difore Atlas of normal Histology  
Ed. 6 Lea & Febiger - 1989
3. Anatomy & Physiology for Nurses

##### **Reference Books:**

1. Human Anatomy -- Chaurasia Vol. I, II & III
2. Human Anatomy -- A.K. Dutta Vol. I, II & III
3. Cunningham's Manual of Practical Anatomy -- Vol. I, II & III

## **ii) Physiology:**

1. Fundamentals of Physiology - A text book for Nursing students by R.L. Bijalani -- Jay Pee Brothers Publications
2. Human Physiology and Biochemistry by Prof. A.J.Jain, Arya Publications

## **iii) Biochemistry:**

### Text Books:

1. Text book of Biochemistry for Dental Students– Pattabhiraman
2. Text book of Biochemistry for Dental Students, Harbans Lal
3. Text book of Chemistry prescribed for II P.U.C. (students may need the basic knowledge of chemistry)

### Practical Books:

1. Practical manual of Biochemistry – Rajagopal
2. Practical manual of Biochemistry – Shivananda Nayak
3. Practical manual of Biochemistry - Pattabhiraman

## **iv) Pathology:**

Books for faculty: One copy each

1. Medical laboratory Science - Theory and Practicals by J. OCHEI, A. KOLHATKAR Tata McGraw Hill Publishing Company Ltd.
2. Practical Haematology - SIR JOHN V. DACE, S.M. LEWIS, ELBS
3. Clinical Diagnosis Management by laboratory methods. Latest (19th) Edition. (Toff Sanford D Anderson) John Bernard Henry, W.B. Saunder Company, Prism Book Pvt. Ltd.
4. Theory and Practice of Histological Technique by John D Bancraft, Alan Stevens, Churchill livingstone Publishers.

For students (multiple copies) (10, 20, 30):

5. Hand book of Medical laboratory technology, 2nd edition by Robert H Carman, Christian Medical Association of India (publishers)
6. Ramnik sood, Text book of laboratory medicine.
7. Text book of laboratory medicine by V.H. Talib

**v) Microbiology:**

1. Bacteriology by Ananthanarayanan
2. Bacteriology by Rajesh Bhatia
3. Parasitology by Chatterjee
4. Parasitology by Jayaram and Panicker
5. Hand book of laboratory technology by Scott
6. Hand book of laboratory technology, C.M.C. Vellore - 2 copies.

## **DIPLOMA IN MEDICAL IMAGING TECHNOLOGY**

### **a. Building**

- A. This course must be run only in the Department of Radiology attached to a Medical College / in the Dept. of Radiology attached to a Medical College or In a X-ray / Dept. of Radiology attached to a major hospital or Nursing Home which has a minimum of 150 beds.
- B. Such of these departments must be well equipped with all the equipments, instruments and accessories pertaining to X-ray, ultra-sound, imaging equipments, viz., C.T., M.R.I., and Colour Doppler equipments etc. connected with Medical Radiography.
- C. A Library containing adequate number of text books and reference books of latest edition pertaining to the concerned subjects.
- D. Building plan for Department of Radio-diagnosis (Radiology) as enclosed which is approved by BARC / AERB

#### ***Building Plan (diagram enclosed):***

- i. Solution Storage (used fixer)
- ii. Used X-ray films storing room
- iii. Mobile / Portable X-ray Unit of 60 mA room
- iv. Technicians and Duty room
- v. DARK room of 'U' shape as per BARC specification.
- vi. Radiographers room and unexposed film storage room.
- vii. 500 mA with IITV (a) Wall thickness More than 20 cms.
- viii. Dress changing room with attached bathroom and toilets.
- ix. Students class room with attached bathroom and toilets

- x. X-ray Museum with human skeleton and other teaching aids as specified in the lab equipments including X-ray tubes (different types of old defunct retrieved from old X-ray unit Rotating / Stationary).
- xi. Staff room.
- xii. Ultrasound room with bathroom, toilets and Air condition.

Though we have enclosed typical BARC approved building pattern for teaching hospitals, this can be remodeled for the Taluk level for 100-bedded hospitals as and when required (Plan enclosed).

### **b. Teaching personnel**

1. Principal – teacher / Chief Radiologist with MD in Radio – Diagnosis or Radiologist with DMRD or senior most full time faculty with MD / MS can be considered.
2. One qualified Physicist / Quality Controlling officer / Radiation Safety Officer with a qualification of MSc. In Radiation Physics approved by BARC or BSc. With Diploma in Radiation Physics (DRP) approved by BARC
3. Two X-Ray Technicians with more than 5 years experience in Govt. or Private Hospital.

All the medical subjects can be taught by the faculty members of attached Medical College or Teaching Hospitals on part time basis.



### **c. Diagnostic X-ray Equipments: (Minimum for 20 students)**

- i. 500 mA / 300 mA X-Ray unit with 2 tubes with IITV preferably.
- ii. 100 mA X-Ray unit for routine conventional work.
- iii. 60 mA Mobile Unit/ Portable Unit.
- iv. Dental X-ray Unit (optional)
- v. Necessary X-ray accessories of at least 5 sets for 20 students each: Cassettes with high speed intensifying screen / hangers / lead aprons / grids / cones / lead blockers / mobile lead protective barriers for each X-ray unit, film badge services for radiation protection to the regular radiation workers.
- vi. X-ray viewing lobbies 2 in one / in one in class rooms
- vii. All those equipments must be equipped with minimum of 3mm. Thickness lead aprons of 6 nos. (as approved by BARC)

### **d. Books**

- i. PUC II year Physics, Chemistry & Biology books for S.S.L.C passed candidates
- ii. For diagnostic purpose for D.M.X.T :
  - a. Diagnostic Radiography for technicians by Dr. Satish Bhargav 6 Sets
  - b. Diagnostic Radiography for technicians by Dr. Ram Mohan each
  - c. Diagnostic Radiography by Dr. Kakarla Subba Rao – Vol. I & II
  - d. Any Journal available for P.M.B.
  - e. Radiographic Techniques and positioning – by Clark Vol. I & Vol. II
  - f. Physics of Radiology –text book by Christeinson
  - g. Imaging modality of C.T. and M.R.I. for technicians (Handbook)

## **Checklist for Inspectors of D.M.I.T**

(as per the revised recommendations done by expert Committee of Radiologists)

1. Infrastructure: Building as per proforma enclosed
2. Faculty technical as well as teaching.
3. Hospital (Pvt. or Govt.) / Diagnostic Centre attached
  - a. Clinical workload - details of workdone per day, in General, whole body Radiography including special radiological investigations.
  - b. Diagnostic X- ray equipments and other related accessories
  - c. Teaching of gadgets or materials
  - d. Radiation safety aspects / safety devices and safety measures adapted (as per B.A.R.C. / A.E.R.B. guidelines)
4. Radiological Records - Radiograms showing daily work done statistics including routine X-rays and special investigation of all patients.
5. Attendance Registers - Faculty & Teaching staff.
6. Other newer imaging modalities if available / other special X-ray units / Portable X- ray service / Mammography / Dental X-ray unit / O.P.G. etc.

## **DIPLOMA IN HEALTH INSPECTOR**

### **a. Field Training**

The college / Institution should have attachment of two PHC / PHUs for field training apart a vehicle for transport of students.

### **b. Teaching Staff**

1. One qualified M.B.B.S. with Post Graduate qualification in Community Medicine or Diploma in Public Health, having more than five years of teaching experience.
2. An Assistant with M.B.B.S. qualification and with practical knowledge in field experience for minimum of five years / P.G. in Community Medicine / Diploma in Public Health with minimum of 3 years of practical experience.
3. Two qualified Health Inspectors with Health Inspector's course / Rtd. Senior Health Inspectors on ad-hoc basis.

### **c. Equipments:**

1. Weighing Machine, Height Measuring Stand, Refrigerator, Microscopes, T.V. & V.C.R.

#### ***Museum***

Spotters of :

- Entomology slides
- Nutrition
- Immunising Agents
- Family planning
- Meterological Instruments
- Protective devices
- Insecticides
- Disinfectants

Charts, Models, Diagrams, Chloratex apparatus and Horrocks Kit.

**d. Books:**

1. Books on Community Medicine & Statistics
2. Text Book of Community Health Inspectors H.I.T. (JP Publishers, Delhi)
3. Text Book of Community Health for Nurses – Nursing Course  
(Pee Pee Pub., Delhi)
4. Lab Manual for technical courses-Paras Publications
5. Text book of Sociology
6. Text book of behavioural Science

# **DIPLOMA IN MEDICAL RECORDS TECHNOLOGY**

## **a. Building**

This course must be run in a Medical College recognized by the Medical Council of India or in a major Hospital attached to the Medical College which has more than 300 beds.

A computerized medical records Department must be available.

There will be a compulsory study Tour to visit 3 or more well established Medical Record Department in Teaching or major Hospitals.

A Library containing adequate number of text books and reference books of latest edition pertaining to the concerned subjects taught during the course must be available.

## **b. Teachers**

1. A qualified Person with post Graduate qualification or a Degree in Medical Record Science OR the course can run under the supervision of the Principal of Medical College or Superintendent of the hospital.
2. Two Qualified medical record technicians.
3. For other subjects, teaching personnel can be drawn from Medical or other colleges on part time basis.

## **c. Equipments**

1. Computers - 10 Nos.
2. Moving Racks
3. ICD Books

## **d. Recommended Books**

1. Medical Record Management - By EDNA HUFFMAN  
*Book for Reference:*
  - a. Medical Record Organization and Management by Dr. G.D.MOGLI
  - b. Hand book of Medical Record Technology - By Ms. ALEY JACOB  
(Christian Medical Association of India Publications, Delhi)
2. Anatomy and Physiology - by EVELYN PEARS 16th Edition
3. Elements in Bio-statistics - by Dr. SUNDER RAO
4. Hospital Administration - by Dr. FRANCIS .C.M (JayPee Publications)

## **DIPLOMA IN DIALYSIS TECHNOLOGY**

### **a. Building:**

1. A lecture hall sufficient to accommodate the sanctioned no. of students with following Audio-visual equipment:
  - a) O.H.P.
  - b) Slide Projector
  - c) Computer with LCD projector
2. An attached laboratory unit with facilities of basic investigations as mentioned in each requirement criteria.
3. A well-equipped library with recommended reference books for basic science and also nephrology and dialysis.
4. A dialysis unit consisting of a hall to accommodate the 5 HD machines and the following:

a) Complete water treatment system comprising of Pre-filter, Carbon filter, Softener, R.O. unit and storage tank	1 full system to run 5 HD machines
b) Stabilized power supply supported by generator in case of power failure	3 KVA machine
c) Split A/C with false roof (optional)	3 tons
d) Individual servo controlled stabilizer (3 KVA each)	5 nos.
e) Complete electrical wiring from main supply to machine and generator to machine (Emergency)	as required
f) Complete external plumbing work, from water source to R.O. unit from R.O. unit to the machines	2 booster pumps.

### **b. Teaching staff:**

1. One qualified Nephrologist with a P.G. degree / Diploma in Nephrology with three years experience in a recognized Institution.
2. One medical duty doctor for Shift work with basic M.B.B.S. degree with training in Dialysis care.
3. Senior Dialysis technicians preferably with 3 years experience in dialysis.
4. Qualified Instructors for other allied subjects on full time or part time basis.

**c. Equipment:**

ITEM	NO.	USAGE
a) H.D. Machines	4	for regular patients
b) H.D. Machines	1	for Isolation patients
c) CRRT Machine	1	for ICU dialysis

SL. NO.	EQUIPMENTS	QTY.
<b><u>HAEMODIALYSIS UNIT</u></b>		
1.	Cardiac Monitor	2
3.	Defibrillator	1
4.	Humidifier	7
5.	Glucometer	2
6.	Weighing Machine	1
<b><u>LABORATORY</u></b>		
<b>A.</b>	<b>PATHOLOGY:</b>	
1.	Monocular Microscope	01
2.	Binocular Microscope with Transformer	02
3.	Analytical Balance	01
4.	Heating Coil Pioneer	01
5.	Tally Counter	01
<b>B.</b>	<b>MICROBIOLOGY</b>	
1.	BOD Incubator	01
2.	ELISA Reader & Washer	01
3.	Bunsen Burner	01
<b>C.</b>	<b>BIO CHEMISTRY</b>	
1.	Flame Photometer	01
2.	FPM Compressor 126	01
3.	Water Still Equitron	01
4.	Semi Auto Chemistry Analyzer	01
5.	Semi Automatic Analyser	01

## **d. RECOMMENDED TEXT BOOKS & REFERENCES**

### **A. ANATOMY:**

1. Singh ( Inderbir)  
Text book of Histology  
J.P. Brothers, New Delhi
2. Difore Atlas of normal Histology  
Ed. 6 Lea & Febiger - 1989
3. Anatomy & Physiology for nurses

#### Reference Books:

- |   |    |                             |
|---|----|-----------------------------|
| 1. Human Anatomy                            | -- | Chaurasia Vol. I, II & III  |
| 2. Human Anatomy                            | -- | A.K. Dutta Vol. I, II & III |
| 3. Cunningham's Manual of Practical Anatomy | -- | Vol. I, II & III            |

### **B. PHYSIOLOGY:**

#### **Books:**

1. Anatomy and Physiology for Nurses by Evelyn Pearle -- 16th Edition  
Jay Pee brothers Publications -- Rs. 90/-
2. Anatomy and Physiology for Nurses by Gupta & Gupta  
AITBs Publications -- Rs. 110/-
3. Basic Anatomy & Physiology by N. Murgesh 5th Edition--  
Satya Publishers Rs. -- 70
4. Anatomy and Physiology illustrated by S.S. Nadakarni

#### **Reference Books:**

1. Fundamentals of Physiology - A text book for Nursing students by R.L.  
Bijalani -- Jay Pee Brothers Publications
2. Human Physiology and Biochemistry by Prof. A.J.Jain, Arya Publications Rs.  
390/-

### **B. MICROBIOLOGY:**

1. Text Book of Microbiology by Anantha Narayan
2. Text Book of Microbiology by Rajesh Bhatia



#### **D. BIOCHEMISTRY :**

##### Text Books:

4. Text book of Biochemistry for Dental Students– Pattabhiraman
5. Text book of Biochemistry for Dental Students, Harbans Lal
6. Text book of Chemistry prescribed for II P.U.C. (students may need the basic knowledge of chemistry)

##### Practical Books:

4. Practical manual of Biochemistry – Rajagopal
5. Practical manual of Biochemistry – Shivananda Nayak
6. Practical manual of Biochemistry - Pattabhiraman

#### **E. DIALYSIS:**

<b>Sl. No</b>	<b>Name</b>	<b>Author</b>	<b>Publisher</b>
1	Dialysis Therapy (New Ed.) (1 copy)	Nissenson Fine	Jay Pee Brothers Medical Publishers (P) Ltd.
2	Review of Haemodialysis for Nurse and Dialysis Personnel (1 copy)	C.F. Gutch	-
3	Principle and Practices of Haemodialysis (1 copy)	William C.M. Meulean	-
4	Principles of Dialysis (1 copy)	Trunne Dipittiod	-
5	Haemodialysis Nursing (1 copy)	Juane Dippittiod	-
6	Hand book of Dialysis (2 copies)	Daugirdas	-

# **DIPLOMA IN OPERATION THEATRE &** **ANESTHESIA TECHNOLOGY**

## **a. Building**

### 1. Hospital

- No. of surgical and allied specialties beds
- Patient preparation room with toilet and bath room facilities – 3 beds
- Scrub room
- Operation theatres – 2 air conditioned and well equipped with anesthetic and surgical instruments and equipments.
- Postoperative recovery room – 3 beds with availability of oxygen, nitrous oxide and suction.
- Central sterilization room
- Wash room for instruments.
- Manifold room.
- Separate rest rooms for doctors and paramedical staff.

### 2. Class rooms

- To accommodate comfortably 20 students.
- Blackboard, tables and chairs.
- Overhead projector, slide projector.

### 3. Library facilities

- To accommodate comfortably 20 students.
- Good lighting and ventilation.
- Books in each subject of anatomy, physiology, biochemistry, microbiology, surgery, medicine, OT technology – pending publication of standard textbooks of OT technology, students shall use textbooks on the subjects prescribed for diploma in nursing.

### 4. Hostel facilities (optional)

Separate hostel facilities for men and women; comprising of rooms with adequate light and ventilation.

### 5. Playground and games

Playground for playing outdoor games and provision for indoor games to be provided.

### 6. Transport (optional)

Vehicle for transporting students from college/ hostel to clinical work place to be provided.

## **b. Teaching staff**

	Post	No. of posts	Qualification
1.	Professor	1	MS in General Surgery (permanent) with teaching experience
2.	Asst. Professor	1	MD in anesthesia (permanent) with teaching experience
3.	Lecturers	4	MBBS (part time) for teaching anatomy, physiology, biochemistry, microbiology

## **c. Equipments**

Equipments for 20 candidates

- OT tables – hydraulic/ electronic with lithotomy, kidney bridge facilities – 2
- Ceiling mounted OT lights – 2
- Suction apparatus – 3
- Autoclaves – 1
- Sterilization bin – 2
- Cautery machine – 2
- Fumigation equipment for OT – 1
- Boyles anesthetic machine – 2
- OT instruments for all specialties – 2 sets each
- Pulse oximeter – 2
- ECG monitors – 2
- Defibrillators – 1
- Ambu bags – 2
- Ventilator – 1
- Central oxygen, nitrous oxide from manifold room
- C- arm with image intensifier and necessary protective equipment.

## **d. Recommended Text Books & References**

### **A. ANATOMY**

1. Singh ( Inderbir)  
Text book of Histology  
J.P. Brothers, New Delhi
2. Difore Atlas of normal Histology  
Ed. 6 Lea & Febiger - 1989
3. Anatomy & Physiology for nurses

### **Reference Books:**

- |   |    |                             |
|---|----|-----------------------------|
| 1. Human Anatomy                            | -- | Chaurasia Vol. I, II & III  |
| 2. Human Anatomy                            | -- | A.K. Dutta Vol. I, II & III |
| 3. Cunningham's Manual of Practical Anatomy | -- | Vol. I, II & III            |

## **B. PHYSIOLOGY**

5. Anatomy and Physiology for Nurses by Evelyn Pearce -- 16th Edition  
Jay Pee brothers Publications
6. Anatomy and Physiology for Nurses by Gupta & Gupta  
AITBs Publications
7. Basic Anatomy & Physiology by N. Murgesh 5th Edition--  
Satya Publishers
8. Anatomy and Physiology illustrated by S.S. Nadakarni

### **Reference Books:**

3. Fundamentals of Physiology - A text book for Nursing students by R.L. Bijalani -- Jay Pee Brothers Publications
4. Human Physiology and Biochemistry by Prof. A.J.Jain, Arya Publications

## **C. BIOCHEMISTRY**

### Text Books:

7. Text book of Biochemistry for Dental Students– Pattabhiraman
8. Text book of Biochemistry for Dental Students, Harbans Lal
9. Text book of Chemistry prescribed for II P.U.C. (students may need the basic knowledge of chemistry)

### Practical Books:

7. Practical manual of Biochemistry – Rajagopal
8. Practical manual of Biochemistry – Shivananda Nayak
9. Practical manual of Biochemistry - Pattabhiraman

## **D. MICROBIOLOGY**

1. Text Book of Microbiology by Anantha Narayan - 2 copies
2. Text Book of Microbiology by Rajesh Bhatia - 2 copies
3. Simplified Microbiology - The Trained Nurses Association of India  
(Latest edition)

## **E. OPERATION THEATRE**

### Reference Books:

1. Berry, Edna carnelia and Mary Louise Kohn - *Introduction to Operating Room technique, 4th edition*, Blukiston Publication, Mac Hills Kogakurha Ltd., London, 1972.
2. Brigden, Raymond J. *Operating Theatre techniques, 5th edition* - Churchill Living stone, Edinburg, Londom, Melbourne & Newyork, 1998.
3. Dixon, Elleen - *Theatre Technique, 5th edition*, N.R. brothers, Medical division, Sanyostagurj, Indore, India
4. Ananthanarayan R. C.K. Jayaram Paniker - *Text Book of Microbiology 4th edition*, Orient Longman Ltd., 1990
5. *Nurses role in O.T. and the Central Sterilisation* - KAS DP publishers
6. Latest edition of Bailey and Love's short practice of Surgery.

# DIPLOMA IN OPHTHALMOLOGY TECHNOLOGY

## **a. Building**

1. A Library
2. Class Rooms
3. Examination Hall
4. An Office
5. Staff Room with bathroom.
6. Students Rooms (Male & Female) with bathrooms.
7. Accommodation facility for male & female students.
8. Stores for Linen / Drugs etc.,

## **b. Teachers and other staff**

- |   |    |
|---|----|
| 1. Qualified Ophthalmologists<br>With DOMS / MS | 03 |
| 2. Senior Para Medical Ophthalmic<br>Assistants | 02 |
| 3. Staff Nurses                                 | 04 |
| 4. Attenders                                    | 10 |
| 5. Receptionist-cum-registration                | 02 |
| 6. Lab. Technicians                             | 02 |
| 7. Drivers                                      | 02 |
| 8. Office Staff                                 |    |

## **c. Equipments:**

Snellen's Charts	Refraction units
Torches	Direct Ophthalmoscopes
Indirect Ophthalmoscope	Slit Lamp
Keratometer	O.T. Lights
Sterilization Unit / Autoclaves	O.T. Tables / Trolleys
Boyles apparatus	Dressing Bins
Tonometer schiots	A Scan Biometry
Operating microscopes	Autorefractometer
Furniture for Out-patient room, offices, class rooms, Library, Wards etc.	

**d. Books:**

- i. Parson's Diseases of Eye by Mayo and worth
- ii. Ophthalmic Assistant Refraction by Duke Elder Ahmed or Khurana (Diseases of eyes)

Reference:

- i. Clinical Ophthalmology by Kanski
- ii. DBCS Manuals by Govt. of India.

# **DIPLOMA IN DENTAL MECHANICS**

## **a. Building**

Dental Mechanic is a trained person, who makes or repairs dental appliances and dentures including inlay, crown and bridge work. He shall restrict his activities to purely mechanical lab work at the instance of the registered dental surgeon. He shall not do any chair side work.

- The course must be run in DCI recognised dental college.
- The college must have a well equipped dental lab with all instruments and materials and good inflow of patients for training.
- Facilities for practical demonstration in Physics, Biology must be available.
- A suitable library for reference of students must be present.
- A well equipped lab with all the necessary facilities is mandatory. Lab should be equipped for both prosthetic and orthodontic work.
- Library facilities: A suitable library for the reference of students must be available.

## **b. Teaching staff**

- A qualified full time Professor must head the Department of Prosthodontics.
- One full time Assistant Professor to teach Dental Mechanic students must be present.
- Two qualified Dental Mechanics with 3 years experience must be present.

## **c. Equipments**

1. Mean value articulators
2. Semi-adjustable articulators
3. Dental flasks with clamps
4. Acrylisers
5. Vacuum - mixer
6. Vibrator
7. Cast -drying oven
8. Center grinder / palatal trimmer
9. Lab handpiece with micro motor
10. Hanging motors
11. High speed lathe
12. Casting machine with crucible
13. Casting furnace
14. Casting rings



15. Sandblaster
16. Model trimmer
17. Electrolytic polishing unit
18. Micromotors
19. Agar conditioner and duplicating flasks
20. Surveyors
21. Ceramic firing unit
22. Pindex die pin attaching unit
23. Die cutting unit
24. Denture finishing kit
25. Metal finishing kit
26. Ceramic restoration finishing kit

#### d. Books

Sl. No.	Textbook Title	Author	Publication	Edition
1	Manual of Training Dental Technicians		HerMajesty's Stationery Office	
2	Laboratory Procedures for Inlays, Crowns and Bridges	Derek Stananought	Blackwell Scientific Publications Ltd.	
3	An Atlas of Removable Partial Denture design	Russel. Stratton / Frank J. Wiebelt	Quintessence	
4	Science and Technic of Cast Restoration	George M. Hollenback		
5	Guide to Occusal Waxing	Shillingburg / Wilsom/Morrison	Quintessence	2nd
6	Dental Mechanics For students	John Osborne		4th
7	Dental Implants Fundamental And Advanced laboratory Technology (color atlas)	Robert Wikelman Kenneth Orth	Wolfe	
8	Quintessence of Dental Technology		Quintessence	

9	Dental Laboratory Technology	Nicholas Martinelli	Mosby	3rd
10	Practical Exercise in Dental Mechanics	F.G. Shaw D.C. Scott		3rd
11	Introduction to metal ceramic Technology	W. Patrick Naylor	Quintessence	
12	Precision Fixed Prosthodontics Clinical and Laboratory Aspects	M. Martignoni / A. Schonenberger	Quintessence	
13	Dental Laboratory procedures in Complete Dentures Vol-1 Removable Partial Dentures Vol-2 Fixed Partial Dentures Vol-3	Rhoads. Rudd. Morrow.	Mosby	2nd
14	A Text Book of Dental Anatomy	Wheeler's	Saunders	8th
15	Color Atlas of Ceramo-Metal Technology - Vol. 1 and Vol. 2	Masahiro Kuwata		
16	Essentials of Dental Ceramics - An Artestic Approach	Gerard J Chiche Alain Pinault	Year Book Medical Publishers, Inc.	
17	The Science and Art of Dental Ceramics, Vol-1	John. W. Mclean	Quintessence	
18	Creative Ceramic Color - A Practical System	Ernest. A. Hegenbarth	Quintessence	
19	The Design And Construction of Removable Orthodontic Appliances	C. Philip Adams	John Wright and Sons Ltd.	
20	A Manual of Practical Orthodontics	W.J. Tulley A.C. Campbell	John Wright and Sons Ltd.	3rd

# **DIPLOMA IN DENTAL HYGIENE**

## **a. Building**

The Institution which do not have sufficient infrastructure to conduct BDS course is not permitted to start Dental Hygienist course. Dental College should be recognized by Dental Council of India.

## **b. Teaching staff**

1. A qualified Principal / Head of the Institution as per DCI
2. There should be a fully qualified Professor of Periodontics to head the department.
3. One full time additional Asst. Prof. with PG qualification in Periodontics exclusively meant for teaching Dental Hygienist Training Programme as per DCI norms.
4. Two full time lecturers with BDS degree and three years of teaching experience.
5. Two qualified Dental Hygienists with three years of experience
6. All other Medical & Dental subjects can be taught by the Faculty Members of the attached Medical / Dental Colleges and Teaching hospitals on part time basis.

## **c. Laboratory Equipment**

A Laboratory / Dental Clinic / Dental Workshop well equipped with Dental Equipments, instruments and Materials used during the course of the study with adequate Patient inflow for training.

## **d. Books**

1. Comprehensive review of Dental Hygiene - II Edition by Barby
2. Clinical Periodontology for Dental Hygienist - Carranza. Jr.
3. Fundamentals of Periodontal Instruments - III Edition by Jill
4. Review of Dental Hygiene by Nelson
5. Periodontics for Dental Hygiene - II Edition by Allen
6. Dimensions of Dental Hygiene - III Edition by Pauline & Hpeeel
7. Clinical Practice for Dental Hygiene - VII Edition by Willkins
8. Periodontology for Denal Hygienist - by Perry
9. Oral Hygiene - IV Edition by Bunting
10. Dental Hygienist - Guide to Nutritional Care by Judy & Ratliss.
11. Infection Control & Management of Hazardious material for Dental Team by Miller.
12. Comprehensive Dental Hygiene Care - IV Edition by Irene R. Woodall.