

# Curriculum



## **DIPLOMA IN ENDOCRINOLOGY AND METABOLISM (DEM)**

**Bangabandhu Sheikh Mujib Medical University  
Shahbagh, Dhaka.**



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1. Name of the Course : **Diploma in Endocrinology & Metabolism (DEM)**
2. Duration of Course : 2 (two) years
3. Date of Commencement : July of each year
4. Aims and Objectives : To produce Endocrinologists competent enough to serve the community

### **5. Eligibility for admission:**

- a. MBBS or its equivalent degree recognized by BMDC.
- b. Minimum 2 (two) years after passing MBBS or its equivalent degree recognized by BMDC.

### **6. Course contents:**

#### **Paper-1 (Basics):**

Group-A: **Physiology and Biochemistry**

Group-B: **Pharmacology, Pathology and Immunology**

#### **Paper-2 (Diabetes Mellitus):**

Group-A: **Diabetes Mellitus (Basic part)**

Group-B: **Diabetes Mellitus (Clinical Management)**

**Paper-3 (Endocrinology and Metabolism):**Group-A:**Basic Endocrinology and Metabolism**Group-B:**Clinical Endocrinology and Metabolism****7. Training Rotation:**

- Discipline of Diabetes and Endocrinology - one year
- Discipline of Internal Medicine - six months
- Allied Discipline for Endocrinology- six months (Nephrology, Neurology, Nuclear Medicine)

**8. Summative Examination:**

- 8.1. Summative or exit examination will be held once at the end of the course and then every January & July, the date determined by the University.
- 8.2. Three papers on written examination
- 8.3. Written questions: In each paper, there will be 4 (four) questions divided in two groups (Gr-A and Gr-B, each group having two questions). In each group one Long Essay type and one SAQ type five in each

8.4. Clinical-practical:

Clinical: There will be one long case and minimum three short cases. In long case 30 minutes will be for history taking and examination and 15 minutes for crossing by two Examiners. Fifteen minutes will be allocated for short cases. Two examiners will assess the candidate in long case and opposite two examiners will assess the short cases.

Practical: 10 OSPE stations

- 8.5. Oral: There will be two boards- in each board, there will be two examiners. Fifteen minutes for each board equally divided into two examiners. There will be 4 (four) examiners who are at least at the level of Assoc. Professor or above. 50% of the examiners will be external.
- 8.6. To pass, the candidate has to secure at least 60% marks in each of the components of- 1) Written (three papers combined) 2) Clinical-practical and 3) Oral examination individually.

**Examinations format:**

<b>Components of examination</b>	<b>Paper</b>	<b>Marks allocated</b>	<b>Time</b>	<b>Pass mark</b>
a. Written	Paper-I	100	3 hour	
	Paper-II	100	3 hour	
	Paper-III	100	3 hour	
<b>Total</b>		<b>300</b>		<b>180</b>
b. Clinical & Practical	Clinical OSCE	100 100		120
c. Oral		100		60
<b>Total</b>		<b>600</b>		<b>360</b>

**9. Formative assessment:**

There will be formative assessment at the end of each six months of training by the supervisor/department or by the institute. Three satisfactory certificates along with others will be pre-requisite for appearing in the final exit examination. The last six months will end with summative examination.

**10. Core Clinical Syllabus:****10.1. Physiology and Biochemistry:****Paper-I****Group-A**

- (i) Physiology of different endocrine glands
- (ii) Biochemistry-general and applied
- (iii) Metabolism
  - a. Carbohydrate
  - b. Protein
  - c. Fat
  - d. Mineral and vitamins
- (iv) Hemodynamics and cardiovascular physiology
- (v) Neurophysiology
- (vi) Renal physiology
- (vii) Water and electrolyte imbalance
- (viii) Gastrointestinal physiology



**10.2. Pharmacology, Pathology and Immunology:****Paper-I****Group-B****a. Pharmacology**

- (i) Pharmacokinetics
- (ii) Drug interaction
- (iii) Insulin
- (iv) Oral hypoglycemic agents
- (v) Drugs interfering glucose metabolism
- (vi) Hormones and their clinopharmacological use

**b. Pathology and Immunology**

- (i) General Pathology
- (ii) Pancreas
- (iii) Other endocrine glands
- (iv) Genetics

**10.3. Diabetes Mellitus (Paper-II)****Group-A**

- a. Epidemiology
- b. Aetiology of diabetes

- c. Insulin: Biosynthesis, mode of action  
Insulin antagonists and resistance
- d. Diagnosis of diabetes
- e. Insulin therapy
- f. Oral hypoglycemic agents
- g. Control of diabetes

**Group-B**

- a. Ketoacidosis and coma
- b. Hypoglycemia
- c. Diabetes and pregnancy
- d. Surgery and diabetes
- e. Complications of diabetes
- f. Neuropathy, Nephropathy, Eye, Vascular disease
- g. Home monitoring of diabetes
- i. Education and diabetes
- j. Rehabilitation-Medical and Vocational
- k. New aspects in management of diabetes mellitus

## **10.4 Endocrinology and Metabolism (Paper-III)**

### **Group-A. Basic Endocrinology & Metabolism**

- a. Biosynthesis, secretion, action  
& metabolism of hormones
- b. Prostaglandins and cyclic nucleotides
- c. Neuroendocrinology

### **Group-B. Clinical Endocrinology & Metabolic diseases**

- a. Hypothalamus and its disorders
- b. Endocrine glands and their disorders:
  - Pituitary
  - Thyroid
  - Parathyroid
  - Pancreas
  - Adrenal cortex
  - Adrenal Medulla
  - G.I. Tract
  - Sex glands (Gonads)
- c. Inherited metabolic disorders.
- d. Cytogenetic problems related to  
Endocrinology and metabolism

**11. Procedural skill**

Comprehensive idea over thyroid FNAC, dynamic tests of endocrine disorders (dexamethasone suppression test, synacthen test, water deprivation test etc.)

**12. Writing case note/ operational note**

Each student will have to write at least 10 case-note (History, Examination, Treatment, Investigation and follow-up)

**16. Eligibility for appearing in the final examination:**

- Two-year in-course training
- 3 (three) satisfactory 6-monthly report of formative assessment
- 75% or more attendance in lecture, demonstrations & other academic activities
- Satisfactory completion of log-book and 10 case notes



**Diploma trainee's Block progress report**

Name of the trainee : Session :

Name of the course : Reg. No:

Name of the institute :

Period of block :

<b>Performance</b>	<b>Poor</b>	<b>Satisfactory</b>	<b>Good</b>	<b>Excellent</b>
Written*				
Clinical- Practical*				
Oral*				
Attendance*				
Attitude				

\* Poor: <50%, Satisfactory: ≥50-60%, Good: >60-75%, Excellent : >75%

**Note:** "Poor" grade in more than two performance during a particular block means deficient training and also cause disqualification for appearing in the final examination unless training in particular block is complete.

Signature: .....  
Head of the Department  
(Seal)