

DIPLOMA IN DIABETOLOGY (DIP-DIAB)

Diabetes is a major health problem around the world. It is common, costly but still manageable disease. It is one of the leading cause of death and co-morbidities in Pakistan which is a challenge for health care system. People with diabetes face various health issues including lower-limb amputation, blindness, cerebrovascular disease and renal failure.

The recent Diabetes Prevalence Survey of Pakistan has revealed 16.98 percent prevalence of diabetes which alerted the health authorities to seriously consider tackling this issue in time. There is already an existing national action plan for diabetes but still a lot need to be done. It is important to enhance the skills of our current health workforce in both primary and secondary care.

This Diploma is designed for doctors working in both primary and secondary care to learn the required skills so they can manage their patients in an efficient, cost-effective and patient centered approach. They will be encouraged to practice in both rural and urban areas to make the services accessible and approachable for the patients.

Aim of Diploma Course

To train physicians as part of capacity building for management of diabetes in both primary care and secondary care.

Objectives:

- To familiarize physicians with a generalized approach to diabetes and its management.
- To recognize and manage acute and chronic complications of diabetes.
- To develop greater understanding of the multidisciplinary approach to the care of people with Diabetes.
- To follow the national guidelines and referral policy.
- To enhance the understanding of needs of community and to contribute in preventive strategies

1. REGULATIONS:

- 1.1 Every candidate must be a medical graduate possessing the degree of MBBS or equivalent recognized by PMDC.
- 1.2 He / she must be registered with PMDC. In case of foreign candidates the doctor must be registered with the medical registration authority of that country and temporarily registered with PMDC. If the candidate has received training in Pakistan then he must be registered with PMDC.
- 1.3 He / she must have completed six months house job in medicine or allied and six months in surgery or allied discipline, or one year of rotational training in Medical and allied or surgical and allied specialties.
- 1.4 Applicants having experience in General Medicine and or Endocrine and diabetes will be given preference in admission.

- 1.5 Final Selection for diploma in Diabetes would be on the basis of aggregate merit in MBBS, passing an entry test and interview.
- 1.6 In case of candidates who have attained the necessary experience in Diabetes abroad, they must produce a certificate from the head of institution or the head of the department.
- 1.7 English shall be the medium of instruction and examination.

2. COURSE DURATION: (1 YEAR)

6 Months Diabetes & Endocrinology unit.

4 Months in primary care (to cover both health prevention and promotion)

2 Months to complete their mandatory research.

The students will have twice weekly session, to cover the theory part of the curriculum.

All candidates must submit their research dissertation or one paper published in a journal recognized by PMDC.

Module	Name of module	Credit Hours
1	Clinical Rotations	10
3	Theory	6

Total Credit Hours = 16

Assessment

The aim of assessment is to assess both the clinical competence and professionalism during the course. It includes both formative and summative assessments as detailed below. Attendance and participation in the face to face contact sessions and online discussions are also considered as part of the formative assessment. The training component of the course is not just for developing clinical competence but can also be used to complete the compulsory WPBA. The students will have examination at the end of each module and then final summative examination as well.

Assessment	Formative	Summative
Knowledge	MCQ's, EMQS, OSCE	MCQ's, EMQs, Short essays (case scenarios). OSCE
Skills	WPBA (DOPS, mini-CEX)	OSCE, PSA
Behavior	SJT, WPBA (E-portfolio, COT, CBD)	OSCE,

WPBA (Work place based assessments)

CBD	Minimum Three per module
Mini CEX	One per system
COT	Total 4
DOPS	Total 10
Audits	As agreed

The portfolio consists of

- 1) A Personal development plan
- 2) Self-reflection based on discussions with named supervisor
- 3) A log of cases seen in primary or secondary care
- 4) A log of face to face days and activities attended
- 5) Evidence of miniCex/DOPs and SEAs
- 6) Evidence and results of Assessments, both formative and summative
- 7) Evidence of self-directed learning
- 8) Evidence of personal reading from mentioned resources
- 9) Final assessment
- 10) Signing off from the diploma program
- 11) Invitation to use the portfolio for continued learning

Behaviours observed in a DOPS

1. Demonstrates understanding of indications, relevant anatomy, technique of procedure
2. Obtains informed consent
3. Demonstrates appropriate preparation pre-procedure
4. Appropriate analgesia or safe sedation
5. Technical ability
6. Aseptic technique (if appropriate)
7. Seeks help where appropriate
8. Post procedure management
9. Communication skills
10. Consideration of patient/professionalism
11. Overall ability to perform procedure

Skills Required

Clinical Examination Skills	Resources	Learning	Assessment
Abdominal including Rectal	KMU Clinical Skills lab / HMC / RHC	Video/FTF Learning by practice	DOPS / miniCEX
Respiratory	KMU Clinical Skills lab / HMC / RHC	FTF / Video Learning by practice	DOPS / miniCEX
Cardiology	KMU Clinical Skills lab / HMC / RHC	FTF / Video Learning by practice	DOPS / miniCEX
Diabetic foot and eye examination	KMU Clinical Skills lab / HMC / RHC	FTF / Video Learning by practice	DOPS / miniCEX

Procedural Skills	Resources	Learning	Assessment
<u>General</u> Blood sugar by glucometer Giving intravenous, intramuscular, subcutaneous or intradermal injections Inserting an IV cannula Measurement of height and weight / BMI	KMU Clinical Skills lab / HMC / RHC	Video/FTF Learning by practice	DOPS/COT
<u>Cardiovascular</u> Basic life support Performing and interpreting an electrocardiogram Use of Sphygmomanometer & Stethoscope	KMU Clinical Skills lab / HMC / RHC	FTF / Video Learning by practice	DOPS/COT
<u>Respiratory</u> Administering oxygen Use of a nebuliser & peak flow meter	KMU Clinical Skills lab / HMC / RHC	FTF / Video Learning by practice	DOPS/COT

<u>Eye</u> Visual acuity, colour tests and visual fields testing, Fundoscopy	KMU Clinical Skills lab / HMC / RHC	FTF / Video Learning by practice	DOPS
<u>Urinary</u> Passing a urinary catheter Performing and interpreting Urine dipstick	KMU Clinical Skills lab / HMC / RHC	FTF / Video Learning by practice	DOPS
<u>Surgical procedures</u> Incision and drainage of abscess Local anaesthesia Wound debridement and dressing for diabetic foot	KMU Clinical Skills lab / HMC / RHC	FTF / Video Learning by practice	DOPS

OUTLINES OF MODULA and SUMMATIVE EXAMINATION

MCQs, EMQs and short essays (Case scenarios)

- a. 50 MCQs and EMQs in each modular exam plus 5 short essay questions on case scenarios.
- b. In final Summative, the number of MCQs, EMQs and short cases may be increased as decided by the examiners.

OSCE

- a. 10 OSCE stations in each modular exam, this may include stations needed examination skills.
- b. In final summative examination, the number may get increased as decided by examiners.

The OSCE stations may include examination skills stations, interpretation of X-Rays, slides, Data interpretation, E.C.G, Fundal photographs, Case studies and special reports etc.

4. EXAMINATION FEE

- 4.1 A fee shall be charged for admission to the examination. The application form with admission fee should reach the controller of examination Khyber Medical University Peshawar not later than 30 days before commencement of the examination.
- 4.2 A late fee of Rs. 1,000/-shall be charged in addition to admission fee, for application submitted after the last date of submission of application forms, provided such application form and examination fee are received no later than fifteen days before the commencement of the examination. No application for examination will be accepted after that.

5. REQUIREMENTS TO SIT IN THE EXAMINATION:

- 5.1 MBBS or equivalent qualification recognized by PMDC.
- 5.2 12 months house job certificate as described in section 1.3.
- 5.3 Registration certificate from PMDC. In case of foreign candidates registration from the medical registration authority of the country and temporarily registration of PMDC.
- 5.4 Certificate of having successfully completed 2 years training for diploma in diabetes & endocrinology. The certificate must also reflect that the candidate has completed all the mandatory WPBA (work place based assessment).

SYLLABI AND COURSES OF READING

Module 1:

<i>Topics</i>	<i>Learning Resources</i>	<i>Assessment Methods</i>
Introduction to diabetes / History of Diabetes.	Presentations and online lectures/material on moodle Reading Guidelines	CBD, MCQs Case scenarios Online E-portfolio Reflective entries
Diagnosis and classification of Diabetes.	Presentations and online lectures/material on moodle Reading Guidelines	CBD MCQs Case scenarios Online E-portfolio Reflective entries
Public Health aspects of Diabetes.	Presentations and online lectures/material on moodle Reading Guidelines	CBD, MCQs Case scenarios Online E-portfolio Reflective entries

Normal physiology of insulin secretion and action	Presentations and online lectures/material on moodle Reading	CBD MCQs Case scenarios Online E-portfolio Reflective entries
Epidemiology and aetiology of type1 diabetes	Presentations and online lectures/material on moodle Reading	CBD, COT MCQs Case scenarios Online E-portfolio Reflective entries
Epidemiology and aetiology of type2 diabetes	Presentations and online lectures/material on moodle Reading	CBD, COT MCQs Case scenarios Online E-portfolio Reflective entries
Insulin resistance and Metabolic syndrome	Presentations and online lectures/material on moodle Reading	CBD, COT, Mini-CEX Quiz, MCQs Case scenarios Online E-portfolio Reflective entries
Other types of diabetes	Presentations and online lectures/material on moodle Reading	CBD, COT, Mini-CEX Quiz, MCQs Case scenarios Online E-portfolio Reflective entries
Global, National and regional strategies for control of Diabetes	Presentations and online lectures/material on moodle Reading	CBD, MCQs Case scenarios Online E-portfolio Reflective entries
Organization of diabetes care: Diabetes specialist nursing, diabetes education and general practice.	Presentations and online lectures/material on moodle Reading	CBD, Quiz, MCQs Case scenarios Online E-portfolio Reflective entries
Future directions in diabetes management and research	Presentations and online lectures/material on moodle Reading	CBD, Quiz, MCQs Case scenarios Online E-portfolio Reflective entries

Module 2:

Topics	Teaching Methods	Assessment Methods
Diabetes control and its measurement	Presentations and online lectures/material on moodle Reading Guidelines	CBD, COT, Mini-CEX, MCQs Case scenarios Online E-portfolio Reflective entries Peer discussion
Management of type1 diabetes	Presentations and online lectures/material on moodle Reading Guidelines	CBD, COT, Mini-CEX, MCQs Case scenarios Online E-portfolio Reflective entries CBD, miniCEX Peer discussion
Management of type2 diabetes	Presentations and online lectures/material on moodle Reading Guidelines	CBD, COT, Mini-CEX, MCQs Case scenarios Online E-portfolio Reflective entries Peer discussion
Diabetic ketoacidosis and hyperosmolar non-ketotic hyperglycemia	Presentations and online lectures/material on moodle Reading Guidelines	CBD, COT, Mini-CEX, MCQs Case scenarios Online E-portfolio Reflective entries Peer discussion
Hypoglycemia	Presentations and online lectures/material on moodle Reading	CBD, COT, Mini-CEX Quiz, MCQs Case scenarios Online E-portfolio Reflective entries Peer discussion
Hypertension in diabetes	Presentations and online lectures/material on moodle Reading Guidelines	CBD, COT, Mini-CEX Quiz, MCQs Case scenarios Online E-portfolio Reflective entries Peer discussion
Blood lipid abnormalities.	Presentations and online lectures/material on moodle Reading Guidelines	CBD, COT, Mini-CEX Quiz, MCQs Case scenarios Online E-portfolio Reflective entries Peer discussion
Pregnancy and diabetes	Presentations and online	CBD, COT, Mini-CEX

	lectures/material on moodle Reading Guidelines	Quiz, MCQs Case scenarios Online E-portfolio Reflective entries Peer discussion
Diabetes in childhood	Presentations and online lectures/material on moodle Reading Guidelines	CBD, COT, Mini-CEX Quiz, MCQs Case scenarios Online E-portfolio Reflective entries Peer discussion
Diabetes in old age	Presentations and online lectures/material on moodle Reading Guidelines	CBD, COT, Mini-CEX Quiz, MCQs Case scenarios Online E-portfolio Reflective entries Peer discussion
Diabetes and lifestyle	Presentations and online lectures/material on moodle Reading Guidelines	CBD, COT, Mini-CEX Quiz, MCQs Case scenarios Online E-portfolio Reflective entries Peer discussion

Module 3

Topics	Teaching Methods	Assessment methods
Complications.		
Diabetic eye disease.	Presentations and online lectures/material on moodle Reading Guidelines Bedside/OPD teaching	CBD, COT, Mini-CEX Quiz, MCQs Case scenarios Online E-portfolio Reflective entries CBD, miniCEX Peer discussion
Diabetic nephropathy	Presentations and online lectures/material on moodle Reading Guidelines Bedside / OPD teaching	CBD, COT, Mini-CEX Quiz, MCQs Case scenarios Online E-portfolio Reflective entries CBD, miniCEX Peer discussion
Diabetic neuropathy.	Presentations and online lectures/material on moodle Reading Guidelines	CBD, COT, Mini-CEX Quiz, MCQs Case scenarios Online E-portfolio Reflective entries Peer discussion
Macrovascular disease in diabetes	Bedside/OPD teaching Presentations and online lectures/material on moodle Reading Guidelines	CBD, COT, Mini-CEX Quiz, MCQs Case scenarios Online E-portfolio Reflective entries CBD, miniCEX Peer discussion
Foot problems in diabetes	OPD teaching Presentations and online lectures/material on moodle Reading Guidelines Diabetic foot examination video Podiatry clinic	CBD, COT, Mini-CEX Quiz, MCQs Case scenarios Online E-portfolio Reflective entries CBD, miniCEX Peer discussion
Sexual problems in diabetes	OPD teaching. Presentations and online lectures/material on	CBD, COT, Mini-CEX Quiz, MCQs Case scenarios

	moodle Reading Guidelines	Online E-portfolio Reflective entries Peer discussion
Gastrointestinal problems in diabetes	Bedside/OPD teaching. Presentations and online lectures/material on moodle Reading Guidelines	CBD, COT, Mini-CEX Quiz, MCQs Case scenarios Online E-portfolio Reflective entries Peer discussion
Skin and connective tissue disorders in diabetes	Bedside / OPDteaching. Presentations and online lectures/material on moodle Reading Guidelines	CBD, COT, Mini-CEX Quiz, MCQs Case scenarios Online E-portfolio Reflective entries Peer discussion
Psychological and psychiatric problems in diabetes	Bedside / OPD teaching. Presentations and online lectures/material on moodle Reading Guidelines	CBD, COT, Mini-CEX Quiz, MCQs Case scenarios Online E-portfolio Reflective entries Peer discussion
Some intercurrent problems in diabetes	Bedside / OPD teaching. Presentations and online lectures/material on moodle Reading Guidelines	CBD, COT, Mini-CEX Quiz, MCQs Case scenarios Online E-portfolio Reflective entries Peer discussion

BOOKS AND JOURNALS FOR READING

A. BOOKS:

1. Text Book of Diabetes. J.C.Pickup & G. Williams.
2. Insulin resistance A. Krentz.
3. A practical manual of Diabetic foot care. M.E.Edmunds, A.V.M.Fosters.
4. Diabetes and its Management. P.J.Watkins, S.A.Amiel,S.L.Howell & E.Turner.

B. JOURNALS:

1. Diabetic Medicine.
2. Diabetes care.
3. Diabetologia
4. Diabetes.
5. New England journal of medicine.
6. Journal college of Physicians and Surgeons of Pakistan.