



**PRAVARA INSTITUTE OF MEDICAL SCIENCES
(DEEMED TO BE UNIVERSITY)**

**Loni, Tal. Rahata, Dist. Ahmednagar 413736
NAAC Re-accredited with 'A' Grade**

SYLLABUS

**Post Doctoral Fellowship Programme in Diabetes Management (Dept. of Medicine)
Dr. Balasaheb Vikhe Patil Rural Medical College
(Academic Council Meeting Dated 25th August, 2022)**

Title - Fellowship in Diabetes Management

1) Title of programme, programme objective, year and date of Implementation.

Fellowship in "Diabetes Management"

Objective-

- a. To train the postgraduate students in "Diabetes management"
- b. To upgrade the Department of Medicine by developing fellowship programmes.
- c. To highlight the prestige of PIMS through different fellowships.
- d. To initiate research work in Diabetes management.
- e. To avail the facility of such fellowship in rural area & giving the rural patient services as good as metro cities.
- f. To develop high standards in Diabetes management this will in turn attract postgraduate students from all over India & contribute towards the progress of PIMS.

Year & Date of Implementation —January and June of every year, can be finalized after discussion.

2) Eligibility of the programme

- M.D., D.N.B. & F.C.P.S. in Medicine recognized university in India and abroad.
- MBBS recognized university in India and abroad from abroad, provided that the candidate clears MCI examination & obtains MCI or state recognition.
- If there are less than 10 applications candidates may be selected on the basis of interview only.

If there are more than 10 applications a CET may be conducted. CET will include MCQS & justification essay.

3) Duration-

- One Calendar year with two semesters

Candidates will be expected to publish one research paper & attend one state/national/international conference & present paper or poster.

4) Curriculum Delivery/Transaction

Candidates will be posted with different departments ' e.g. Cardiology, General surgery, Ophthalmology .Over the year, candidates will have seminar, Case presentation, Journal club, and lecture in the afternoon session twice a week. Detailed programmed can be prepared for the year.

5) Programme out come

After completing the fellowship programme the candidates will be confident in providing advance Diabetic treatment and conservative management for Diabetic foot.

6) Examination & Evaluation Methods

Two examination will be conducted at the end of each semester.

First Examination at the end of first semester includes

- a) Basic physiologic principles and metabolism
- b) Definitions and diagnosis
- c) Monitoring glycemic control
- d) Pathogenesis of Type I DM and Type II DM
- e) Additional types of diabetes mellitus

Final Examination at the end of second semester will include

- f) Complication I) Microvascular II) Macrovascular.
- g) Islet-cell and pancreas transplant.
- h) Pregnancy and diabetes.
- i) Diabetes prevention.
- j) Hypoglycemia not related to diabetes treatment.
- k) Inpatient diabetes management.
- l) Newer technology in DM management.
- m) Rare disorders.

- Each Examination will consist of two theory paper 100 mark each duration 3 Hours.
- Papers will be evaluated by senior professor in Medicine Department.

- For practical- Oral- One long case (50 Marks) and two short cases (50 Marks). Table Theory viva (10 Marks) for Drugs, Emergency (20 Marks) X-ray, ECG, Instruments (20 Marks).
- 1 short thesis / project to be presented at the time of Clinical Evaluation (50Marks).
- Passing marks will be 50% for Theory and Practical.

7) Certification authority & design of certificate

- Certification authority will be Vice-chancellor, PIMS
- Certificate design will be according to PIMS design.

8) Place & venue of the academic work at the Programme- PIMS, DBVPRMC, Loni.

9) Department offering the programme-Department of Medicine.

10) In take per batch- maximum intake of four students per year.

11) Academic Calendar-Admissions in the month of January and July if seats are vacant every year. And Examinations will be conducted at the end of 12 months of fellowship programme.

12) Time Table-to be submitted later

13) Maintenance of attendance-Via Biometric Attendance

14) Arrangement & conduction of programme-

- Classroom session–In Seminar hall of Dept. of Medicine.
- Practical session- In all Medicine ward & Medicine OPD.

15) Liaison- HOD Medicine or Senior Professor

16) Evaluation-HOD & Senior Professor

17) Documentation-HOD & Senior professor

18) Appointment of Director/Co-ordinator, Resource Person, Teacher Assistance- Dean, DBVPRMC

19) Approximate Expenditure involved to run one batch per programme.

Administrative expenditure at 20,000 is expected for paper work, processing of applications Advertisement and conducting interviews.

More expenditure may be incurred to procure external examintors for practical examination

20) Fees proposed to be charged per course- 1 lakh/person/yr.

- 21) Remuneration for faculty 1000/- per lecture/PIMS-DU Faculty.**
- 22) Remuneration for Guest Faculty 2000/- per lecture/PIMS-DU Faculty.**
- 23) Financial and administrative expectation from PIMS (DU) / PMT to run the programmes:**

PIMS-DU / PMT will be expected to provide accommodation to the participants in postgraduate Hostel, Provide mess facilities & Library facility with books & journals on Diabetes management.
- 24) Infrastructure requirements-Classroom, OPD & ICU wards dedicated Diabetes management with good number of patient influx.**
- 25) Yearly A-A-A Audit-of the programme & financial audit process & format-according to the PIMS norms.**
- 26) Annual meta-evaluation and up gradation of the content & delivery of the programme-according to PIMS norms.**
- 27) Central documents- Student Section/ Personnel section DBVPRMC.**
- 28) Grievance redressal and appeals mechanism-According to PIMS Norms**
- 29) Any other aspect of the programme not covered above-**
 - Provision of leave
 - The candidates will be working at SR level and thus will receive salary for the same post from the institute.
- 30) Saving clause in case of difficulty- powers of the authorities of the university.**

According to PIMS norms.

The facility of the fellowship provision can highlighted on PIMS website with special Mention regarding the variety of procedures performed & number of cases performed per year. This will definitely attract candidates for this Fellowship.

SYLLABUS

1. History of diabetes mellitus
2. Intermediary metabolism and hormonal regulation
3. Morphology of pancreatic islets, insulin biosynthesis and secretion
4. Biology of insulin action
5. Definition, diagnostic criteria and classification
6. Impaired glucose tolerance and impaired fasting blood glucose
7. Diabetes mellitus in developed countries
8. Epidemiology of diabetes in India
9. Etiology of diabetes (overview)
10. Type 1 diabetes mellitus: pathogenesis and metabolic alteration
11. Pathogenesis of type 2 diabetes mellitus
12. Insulin resistance
13. Role of intrauterine and infantile malnutrition in the pathogenesis of diabetes.
14. Biochemical parameters and hormonal profile in diabetes
15. Genetics of diabetes (overview), immunogenetics of diabetes
16. Monogenic forms of diabetes and maturity onset diabetes in the young. (MODY)
17. Clinical features of type 1 diabetes mellitus
18. Clinical features of type 2 diabetes mellitus
19. Type 2 diabetes in the lean
20. Fibrocalculous pancreatic diabetes
21. Diabetes in the young: the Indian perspective
22. Secondary diabetes mellitus
23. Approach to management of diabetes mellitus
24. Patient education in diabetes care.
25. Nutrition management of diabetes mellitus (general)
26. Nutrition management in special situations in diabetes
27. Physical activity and yoga in diabetes mellitus
28. Oral anti-diabetic agents (an overview)
29. Oral hypoglycaemic agents: insulin secretagogues
30. Oral anti-hyperglycaemic agents - insulin sensitisers and others
31. Insulin therapy

32. Monitoring of glycaemic control
33. Monitoring beyond glucose control
34. Transplantations in the management of diabetes mellitus
35. Comorbid conditions: obesity and dysmetabolic syndrome
36. Hypertension in diabetes
37. Dyslipidemia in diabetes
38. Complications (overview)
39. Acute metabolic complications
40. Hypoglycemia
41. Acute infection
42. Chronic infections and diabetes mellitus
43. Macrovascular disorders in diabetes: determinants and risk factors
44. Pathogenesis of atherosclerosis in diabetes
45. Coronary artery disease in diabetes
46. Epidemiology of coronary artery disease in diabetes mellitus
47. Noncoronary cardiac complications in diabetes
48. Diabetes and cerebro-vascular disease
49. Peripheral arterial disease in diabetes
50. Diabetic foot syndrome
51. Pathogenesis of microvascular complications
52. Ocular complications of diabetes
53. Diabetic retinopathy
54. Diabetes and kidney
55. Neurological disorders in diabetes
56. Diabetes mellitus and gastrointestinal system
57. Skin disease in diabetes
58. Bone diseases in diabetes mellitus
59. Sexual dysfunction
60. Impact of glycemic control on complications
61. Pregnancy and diabetes
62. Prediction and prevention of type 1 diabetes
63. Prevention of type 2 diabetes (general)
64. Prevention of complications of diabetes
65. Planning an epidemiological study in diabetes mellitus

TEACHING & LEARNING ACTIVITIES

Journal review meetings	: Once a week
Seminars	: Twice a week
Difficult case discussions	: once a month
Community work	: 1 st Sunday of every month.

Free clinic at sugar Mills slum area once a month

Type 1 DM free clinic once a month at “Dr. B. V. P. RMC Loni PMT Hospital”.

Many more free camps are getting added for community work. This gives a huge scope to see Patients of different types with comorbidities & most importantly all DM patients got benefited in great numbers.

Clinical rounds	: Daily
Participation in Conferences	: At least 2 in a year
Paper presentation	: Candidate will have to write thesis on one given subject under an Independent Guide. Course director will help them in preparation.

- **Evaluation:-**

Term end examination will be arranged and conducted by Dept. of Medicine, Dr. Balasaheb Vikhe Patil Rural Medical College and declare the result.

Examination Scheme

Paper – I: Post Doctoral Fellowship in Diabetes Management – I

Paper – II: Recent advances in Post Doctoral Fellowship in Diabetes Management

Theory Examination:- (2 Paper of 100 marks each)

2 LAQ x 20 Marks= 40 Marks

6 SAQ x 10 Marks = 60 Marks

Practical Examination:-

One Long Case / Long experiments = 50 Marks

Two Short Cases (2 x 25) = 50 Marks

Viva Voce / Oral / OSPE / Spottes - 10 Marks	}	= 50 Marks
Drugs, Emergency - 20 Marks		
ECG, Instruments - 20 Marks		

One Short Project / One Short Thesis = 50 Marks

Minimum Passing:-

- i) Minimum 50% in Theory papers (Each paper minimum is 40%)
- ii) Minimum 50% in Practical /Clinical & Viva Voce
- iii) Overall 50% Theory & Practical/Clinical

Award of class:-

50% to 59.5% = IInd class

60 to 74.5% = Ist Class

Above 75% = Ist Class with Distinction

Attempts:-

- A student shall clear the Examination only within three attempts or within 4 years of admission.
- Result / Issue of Mark Sheet – Head of Institute & HOD will jointly issue the Mark Sheet.

Certification:-

- A) Title – Post Doctoral Fellowship in Diabetes Management.
- B) A fellowship is awarded upon successful completion of the prescribed study program, which will state that i) Candidate has completed the prescribed course of Post Doctoral Fellowship in Diabetes Management, ii) Candidate has completed prescribed clinical experience. iii) Candidate has passed the prescribed examination.
- C) Certificate will be issued with the signatures of concern Dean, Dr. Balasaheb Vikhe Patil Rural Medical College & Vice-Chancellor, Pravara Institute of Medical Sciences (Deemed to be University).
- D) Certificates to be prepared by concern College.

Recommended Books and Journals

Books:-

1. Joslin's Diabetes Mellitus
2. International Text Book of Diabetes :by Ralph A.Defronzo, EleFerrannini
3. Text Book of Diabetes : RSSDI
4. Textbook of Diabetes – by John C. Pickup & Williams
5. Nutritive Values of Indian foods by NIN, Hyderabad
6. Oxford Textbook of Medicine
7. Williams Textbook of Endocrinology
8. Diabetic Foot care by Edmonds, Foster & Sanders
9. Latest updates on Medscape and uptodate.com

Journals:

1. Diabetes care
2. Diabetologia
3. New England Journal of Medicine
4. British Medical Journal
5. International Journal for Diabetes in Developing Countries
6. Journal of Association of Physicians of India
7. The Lancet




Registrar
Pravara Institute of Medical Sciences
(Deemed to be University)
Loni-413736, Tal. Rahata, Dist. Ahmednagar
(M.S. India)