



MGM SCHOOL OF BIOMEDICAL SCIENCES, NAVI MUMBAI
(A constituent unit of MGM INSTITUTE OF HEALTH SCIENCES)

(Deemed to be University u/s 3 of UGC Act 1956)

Grade “A++” Accredited by NAAC

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Curriculum for

Ph.D. Medical Dialysis Technology

Academic Year 2025 - 26

Syllabus of Ph.D entrance Medical Dialysis Technology

- 1. Intermittent and Continuous Extracorporeal Therapies:** Introduction to Extracorporeal Therapies, Physiology of Renal Function, Intermittent Hemodialysis (IHD), Continuous Renal Replacement Therapies (CRRT), Comparison of IHD and CRRT, Other Extracorporeal Therapies, Dialysis Prescription and Management, Monitoring and Troubleshooting, Patient Care in Dialysis, Emerging Trends and Technologies
- 2. Hemodialysis:** Introduction to Hemodialysis, Principles of Hemodialysis, Hemodialysis Equipment and Setup, Hemodialysis Procedure, Hemodialysis Complications, Patient Care in Hemodialysis, Dialysis Prescription and Management, Dialysis-Related Drugs and Nutritional Support, Dialysis and Patient Education, Ethical and Legal Aspects of Hemodialysis, Emerging Trends in Hemodialysis, Assessments and Practical Skills
- 3. Peritoneal Dialysis:** Introduction to Peritoneal Dialysis, Components of Peritoneal Dialysis, Types of Peritoneal Dialysis, Management and Monitoring in Peritoneal Dialysis, Patient Education and Lifestyle Considerations, Special Considerations in Peritoneal Dialysis.
- 4. Medication for dialysis patients:** Emergency medications used in dialysis patients, Common medications used in dialysis patients, Mechanism of action, Bioavailability of drugs
- 5. Equipments used in Dialysis:** Materials used in dialysis membranes, Hemodialysis machine, Water treatment system, Maintenance
- 6. Psychological aspects of dialysis treatment:** Improving patient adherence to dialysis schedules, Dialysis and its impact on daily living, social life, and mental health; Dialysis and Quality of Life

References:

1. Lameire N. Handbook of Dialysis JT Daugirdas, PG Blake, TS Ing (Editors).
2. Nissensen. Handbook of Dialysis, Allen R. Nissenson, Richard N. Fine, Rajnish Mehrotra, Joshua Zaritsky
3. Henrich's Principles and Practice of Dialysis, 5th South Asian ed, Edgar V. Lerma, Matthew R. Weir

Director