B.9) Digital Health (DH)
[Koita Centre for Digital Health (KCDH)]

Koita Centre for Digital Health (KCDH) at IIT Bombay is the first of its kind in India, focused on driving academic programs, research, and industry collaborations in Digital Health.

Keeping in mind the interdisciplinary nature of the domain, the PhD program encourages the association of two research supervisors, preferably from two different academic entities (viz. departments or centres within IIT Bombay), to supervise the research of each Ph. D. candidate enrolled in KCDH. Also, collaborations with clinicians are encouraged for each research project.

ELIGIBILITY FOR ADMISSION

First Class or 60% marks (55% marks for SC/ST), as specified in the General Eligibility Criterion, in the qualifying degree namely

A. M..E./M.Tech/MS degrees in Engineering/ Technology

B. MS (Master of Surgery) / MD / MVSc / MDS / MPTh/MPharm/M.O.Th

C. MBBS, BDS, BPharm, BVSc, BPTh, BOTh (degree programme to be of 4 years or more) with 60 percent aggregate AND qualifying All India level post graduate entrance examination for corresponding disciplines such as AIIMS/ NEET-PG/MCI/JIPMER/ PGI Chandigarh/AFMCPune/ for MBBS/BDS or GPAT (for Pharmacy graduates) or a valid CSIR/UGC/DBT/ICMR JRF not linked to ICMR project (for FA any fellowship that will provide scholarship for 5 years.

D, M.Sc./ M.S./ Integrated BS-MS in Physical sciences (Physics, Chemistry or equivalent disciplines), M.A./M.Sc./Integrated BS-MS in Mathematical sciences (Mathematics, Statistics, Biostatistics, Applied Statistics, Applied/Computational Mathematics or equivalent disciplines). M.Sc./ M.S. / Integrated BS-MS in Life sciences (specifically Biochemistry, Biophysics, Biotechnology, Physiology, Molecular Biology or equivalent disciplines)

E. B.E./B. Tech **(Bachelor's** degree in Engineering /Technology)/ 4 year BS (Mathematics, Applied/Computational Mathematics, Economics, Statistics or equivalent disciplines), with eligibility subject to specified admission procedure, would be considered. A valid GATE score and other IITB norms as per IITB PhD brochure will be required.

The candidates with qualifying degrees as mentioned in **'C,** D & **E'** must fulfill one of the following:

(i) A valid GATE score

(ii) a valid CSIR/UGC/DBT/ICMR JRF not linked to ICMR project (for FA any fellowship that will provide scholarship for 5 years

(iii) Experience as specified earlier in A.5 and A.6 for CT,EX IS,PS,SF,SW category

Note: Criteria for awarding Teaching Assistantship and other application categories are as per the guidelines mentioned in section A.6 of this Brochure.

RESEARCH AREAS

1. Healthcare Applications
□ EHR, EMR and clinical applications
□ Medical imaging
□ Medical devices software
□ Payers and life sciences application

2. Healthcare Data Management
□ Data interoperability and standards
□ Data Privacy and Security
□ Healthcare data warehousing & management
□ Federated data management

3. Healthcare Analytics and AI/ML.
□ Healthcare AI/ML
□ Medical image analytics
□ Clinical decision support
□ Preventive & prescriptive analytics

4. Consumer Health & Tele-medicine
□ Consumer health devices
□ Mobile Health applications
□ Tele-medicine applications
□ Remote patient monitoring

5. Computational Biology and Bioinformatics
□ Proteomics
□ Genomics
□ Pathway analysis
□ Disease diagnosis

6. Population Health & Public Health Policy
□ Disease surveillance & analytics
□ Population health analytics
□ Epidemiology & disease management
□ Public health policy

7. Large Language Models in Healthcare
□ Diagnosis assistance and improved patient care
□ Advancing medical research and knowledge
□ AI enabled crisis management
□ Data driven policy changes