MSc in AI & Analytics for Infection Prevention & Control

Program Snapshot

Program Title	MSc in AI & Analytics for Infection Prevention & Control
Stacked Awards	PG Certificate 12 Cr → PG Diploma 24 Cr total → MSc 30 Cr total
Delivery	100% online — asynchronous-first with structured synchronous academic engagement and documented RSI
Duration	PG Certificate: 8 months | PG Diploma: 12 months total | Master's: 24 months total
Orientation	Academic and Professional
Distinctive Value	A contemporary program combining IPC, AI, analytics, digital surveillance, and outbreak-scenario simulation

What is this master's?

This is a modern, future-facing master's degree that connects infection prevention and control with AI, analytics, digital surveillance, and data-informed decision support. It is designed to prepare professionals who can interpret safety indicators, develop digital monitoring systems, build dashboards and early-warning tools, and use AI-enabled approaches responsibly within healthcare settings.

Why is this program modern and distinctive?

The program stands out because it reflects the shift from conventional IPC practice toward intelligent, data-driven, and digitally enabled prevention models. It combines infection prevention, patient safety, analytics, governance, simulation, and AI deployment logic in one integrated pathway, making it highly relevant to contemporary healthcare transformation.

Market relevance and career value

Healthcare organizations increasingly need professionals who can lead IPC not only through policy and compliance, but also through analytics, digital surveillance, risk dashboards, outbreak simulation, and governed AI deployment. This program is therefore aligned with current and emerging workforce needs in hospitals, quality units, public health systems, healthcare analytics teams, and digital transformation initiatives.

Stacked awards and credit structure

The program follows a flexible stacked-award structure: Postgraduate Certificate (12 Cr), Postgraduate Diploma (24 Cr total), and Master of Science (30 Cr total). This gives learners a staged pathway with recognized milestone awards and supports progressive academic and professional advancement.

Learning model and educational experience

The program is delivered through a flexible online model that combines asynchronous learning with structured synchronous academic engagement. Students benefit from guided self-paced study, regular faculty interaction, applied case activities, and documented feedback through the LMS.

Simulation and advanced technologies

The educational experience is strengthened through remote simulation, outbreak-scenario exercises, structured oral defenses, dashboard-based problem solving, and virtual learning environments. Where appropriate, advanced simulation approaches and technology-enhanced learning tools are used to support practical readiness and modern decision-making capability.

Program orientation

This program may be presented with both academic and professional orientation, serving learners who wish to advance toward research, leadership, policy, quality improvement, or applied implementation roles in modern IPC environments.

What graduates gain

- Advanced competence in IPC indicators, patient safety metrics, and digital quality monitoring.
- Ability to design dashboards, alerts, and data-informed decision tools for infection prevention settings.
- Practical understanding of AI and analytics deployment, including calibration, fairness, drift monitoring, and governed implementation.
- Capacity to contribute to safer digital transformation, continuous improvement, and organizational risk management.
- Preparation for leadership, specialist, or innovation-oriented roles in IPC, analytics, quality, and healthcare systems improvement.

Who can apply?

The program is primarily intended for applicants with academic or professional backgrounds in infection prevention and control, public health, epidemiology, patient safety, healthcare quality, nursing, medicine, medical laboratory fields, health informatics, or other relevant health and analytics-related disciplines. Applicants from interdisciplinary or related backgrounds may also be considered following academic review.