I.3.3.B *Detour* Curriculum Framework
For Post-B.Sc. M.Sc. in
Intelligent Health Systems
(With Personalized First-Year Track A and Track B)

1. Program Title

M.Sc. in Intelligent Health Systems

With provision for extension to:

M.Sc. Honors in Intelligent Health Systems

2. Nature of the Program

The Post-B.Sc. M.Sc. in Intelligent Health Systems is designed for learners who have completed a suitable B.Sc. or equivalent undergraduate degree and seek entry into the advanced Intelligent Health Systems pathway of JSS JSS GIFT.

The Program recognizes that Post-B.Sc. learners may enter from two different academic backgrounds:

1. **Track A: Biology / Life Sciences / Health-Science Background Learners**
   These learners may have strong exposure to biology, life sciences, biotechnology, microbiology, biochemistry, physiology, nursing-related sciences, public health or allied health areas, but may not have adequate mathematics, programming or computer science foundations.

2. **Track B: Computer Science / Mathematics / Statistics / Data / Physical Sciences Background Learners**

   These learners may have strong exposure to mathematics, computing, statistics, programming, data analytics, electronics or physical sciences, but may not have adequate biology, health systems, clinical data or healthcare workflow foundations.

   Therefore, the first year of the Program shall be personalized separately for Track A and Track B.

   The academic goal is not to keep the tracks permanently separate. The goal is to elevate both groups into a common advanced Intelligent Health Systems capability level.

   After completing the first-year foundation-elevation architecture and the summer merger-readiness block, both Track A and Track B learners shall merge with the

advanced stage corresponding to Integrated M.Sc. Intelligent Health Systems Semester IX and Semester X.

3. Program Philosophy

The Program is designed to produce intelligent health systems professionals who can think with science, reason with health data, understand healthcare systems, build intelligent health solutions, validate AI models, respect patient safety, and contribute to hospitals, public health systems, medical AI companies, digital health platforms, med-tech companies, genomics companies, life-science AI companies and global health-tech ecosystems.

The Post-B.Sc. pathway shall preserve the same final graduate identity as the Integrated M.Sc. in Intelligent Health Systems.

The graduate should be able to:

- Think with science
- Reason with health data
- Understand human health systems
- Build with technology
- Validate with evidence
- Deploy with responsibility
- Act with patient safety
- Lead in global health technology

4. Track Entry Logic

Track A: Biology / Life Sciences Entry Track

This track is meant for learners from backgrounds such as:

- B.Sc. Biology
- B.Sc. Biotechnology
- B.Sc. Microbiology
- B.Sc. Biochemistry
- B.Sc. Genetics
- B.Sc. Zoology
- B.Sc. Botany
- B.Sc. Life Sciences
- B.Sc. Nursing-related science backgrounds, where applicable
- B.Sc. Allied Health Sciences, where applicable
- B.Sc. Public Health / Nutrition / Biomedical-related areas, where applicable

These learners require strengthening in:

- Mathematics for AI
- Probability and biostatistics
- Programming
- Data structures
- Databases
- Data handling
- AI and machine learning
- Health data modelling
- Digital health systems

Track B: CS / Mathematics / Statistics / Data / Physical Sciences Entry Track

This track is meant for learners from backgrounds such as:

- B.Sc. Computer Science
- B.Sc. Information Technology
- B.Sc. Data Science
- B.Sc. Mathematics
- B.Sc. Statistics
- B.Sc. Physics
- B.Sc. Electronics
- B.Sc. Computer Applications or equivalent science-oriented computing pathway
- Other quantitatively strong undergraduate disciplines

These learners require strengthening in:

- Human biology
- Medical terminology
- Disease systems
- Healthcare workflows
- Hospital information systems
- Clinical data
- Public health
- Biomedical data
- Healthcare ethics
- Clinical validation and patient safety

5. Program Duration and Credit Structure

Normal Duration

The normal duration shall be:

Two academic years

comprising:

Semester I to Semester IV

In addition, a summer term shall be used for merger-readiness and compulsory add-on major track strengthening.

Proposed Award Requirement

For award of:

M.Sc. in Intelligent Health Systems

the learner shall complete:

76 Qualifying Credits + 24 Compulsory Add-on Major Track Credits

Therefore, the total credit requirement shall be:

100 Credits

6. Credit Distribution

Stage	Qualifying Credits	Compulsory Add-on Major Track Credits	Total Credits
Semester I	20	4	24
Semester II	20	4	24
Summer Term	0	8	8
Semester III	20	4	24
Semester IV	16	4	20
Total	**76**	**24**	**100**

7. Academic Progression Logic

The Program shall follow the progression below:

Personalized Foundation Elevation → Track Bridging → Health Data and AI Readiness → Summer Merger Readiness → Advanced Integrated M.Sc. Merger → Specialization → Clinical Validation / Health AI Systems → Capstone → Professional Readiness

The first year shall be personalized as:

- **Track A:** Biology-to-Health-AI computational elevation pathway
- **Track B:** Computing/Math-to-Health-Systems clinical elevation pathway

From the second year onwards, both tracks shall merge into a common advanced M.Sc. stage.

PART A

YEAR I: PERSONALIZED FOUNDATION-ELEVATION PHASE

8. Semester I — Track A

For Biology / Life Sciences / Health-Science Background Learners
Computational and Mathematical Elevation for Intelligent Health Systems
Qualifying Credits: 20
Compulsory Add-on Major Track Credits: 4
Total Credits: 24

8.1 Semester I Qualifying Courses — Track A

Course Code	Course Title	L:T:P	Credits	Academic Purpose
GFT-MIHA4101	Python Programming and Computational Thinking for Health Sciences	1:1:2	4	To build programming and computational problem-solving capability from beginner level for health-science learners.
GFT-MIHA4102	Mathematics, Linear Algebra and Biostatistics Readiness for Health AI	2:1:1	4	To strengthen mathematical, statistical and matrix foundations required for health AI and clinical analytics.
GFT-MIHA4103	Data Structures, Algorithms and Health Data Processing	1:1:2	4	To build algorithmic thinking and structured data processing ability for health applications.
GFT-MIHA4104	Databases, Health Data Modelling and Digital Records	1:1:2	4	To develop understanding of databases, patient records, health data tables and structured health information systems.
GFT-MIHA4105	Foundations of AI, Machine Learning and Intelligent Health Systems	2:1:1	4	To introduce AI and ML foundations with health, diagnosis, public health and hospital application contexts.

Total Qualifying Credits: 20

8.2 Semester I Compulsory Add-on Major Track Course — Track A

Course Code	Course Title	L:T:P	Credits	Academic Purpose
GFT-MIHAO4101	Major Track Studio A-I: Programming, Mathematics and Health Data Practice Intensive	0:1:3	4	To provide intensive hands-on practice in Python, mathematical readiness, health data representation and beginner analytics.

Total Add-on Credits: 4

9. Semester I — Track B

For CS / Mathematics / Statistics / Data / Physical Sciences Background Learners

Health, Biology and Clinical Systems Elevation for Intelligent Health Systems

Qualifying Credits: 20
Compulsory Add-on Major Track Credits: 4
Total Credits: 24

9.1 Semester I Qualifying Courses — Track B

Course Code	Course Title	L:T:P	Credits	Academic Purpose
GFT-MIHB4101	Human Biology, Physiology and Disease Systems for Health AI	2:1:1	4	To introduce human body systems, health, disease and clinical reasoning for non-biology learners.
GFT-MIHB4102	Medical Terminology, Clinical Workflows and Patient Journey	2:1:1	4	To develop familiarity with medical language, care pathways, hospital workflows and clinical documentation.
GFT-MIHB4103	Health Data Literacy, EHR, HIS and Patient Data Systems	1:1:2	4	To build understanding of clinical data, electronic health records, hospital information systems and patient data structures.
GFT-MIHB4104	Biostatistics, Epidemiology and Clinical Evidence Foundations	2:1:1	4	To orient learners to health statistics, population health, epidemiological measures and evidence-based healthcare.
GFT-MIHB4105	Foundations of Digital Health, Public Health and Intelligent Health Systems	2:1:1	4	To introduce digital health, telehealth, public health systems, clinical decision support and intelligent healthcare technologies.

Total Qualifying Credits: 20

9.2 Semester I Compulsory Add-on Major Track Course — Track B

Course Code	Course Title	L:T:P	Credits	Academic Purpose
GFT-MIHBO4101	Major Track Studio B-I: Human Health Systems, EHR and Clinical Data Practice Intensive	0:1:3	4	To provide intensive practice in medical terminology, patient data tables, EHR workflows, public health data and clinical documentation interpretation.

Total Add-on Credits: 4

10. Semester II — Track A

AI, Health Data and Digital Health Application Strengthening

Qualifying Credits: 20
Compulsory Add-on Major Track Credits: 4
Total Credits: 24

10.1 Semester II Qualifying Courses — Track A

Course Code	Course Title	L:T:P	Credits	Academic Purpose
GFT-MIHA4201	Machine Learning for Health Data and Clinical Prediction	2:1:1	4	To enable learners to build, evaluate and interpret ML models for health data.
GFT-MIHA4202	Deep Learning and Biomedical Data Representation	2:1:1	4	To introduce neural networks, representation learning and biomedical data applications.
GFT-MIHA4203	Health Data Engineering, FHIR, APIs and Interoperability Foundations	1:1:2	4	To build data pipeline, FHIR-style data exchange and health API foundations.
GFT-MIHA4204	Digital Health Application Engineering and Health Product Prototyping	1:1:2	4	To build digital health application workflows, dashboards, APIs and prototype systems.
GFT-MIHA4205	Applied Health AI Lab I: ML and Digital Health Prototype	0:1:3	4	To integrate health data, ML, software and digital health concepts into a working prototype.

Total Qualifying Credits: 20

10.2 Semester II Compulsory Add-on Major Track Course — Track A

Course Code	Course Title	L:T:P	Credits	Academic Purpose
GFT-MIHAO4201	Major Track Studio A-II: Applied Biostatistics, Model Evaluation and Health AI Reasoning	0:1:3	4	To strengthen clinical model evaluation, biostatistical reasoning, risk prediction and health AI interpretation.

Total Add-on Credits: 4

11. Semester II — Track B

AI and Computational Elevation for Health Systems Learners

Qualifying Credits: 20
Compulsory Add-on Major Track Credits: 4
Total Credits: 24

11.1 Semester II Qualifying Courses — Track B

Course Code	Course Title	L:T:P	Credits	Academic Purpose
GFT-MIHB4201	Python for Health Data Science and Applied Analytics	1:1:2	4	To adapt existing computing/math capability into Python-based health data science practice.
GFT-MIHB4202	Machine Learning for Clinical and Public Health Applications	2:1:1	4	To apply ML models to health, public health, hospital and clinical datasets.
GFT-MIHB4203	Health Data Engineering, FHIR, HL7 and Interoperability Foundations	1:1:2	4	To build health data pipeline, interoperability and health information exchange foundations.
GFT-MIHB4204	Clinical AI, Decision Support and Model Evaluation Foundations	2:1:1	4	To introduce clinical prediction, decision support, model evaluation, explainability and clinical validation thinking.
GFT-MIHB4205	Applied Health Systems Lab I: EHR, Analytics and Clinical AI Prototype	0:1:3	4	To build a working prototype using EHR-style data, health analytics and basic clinical AI methods.

Total Qualifying Credits: 20

11.2 Semester II Compulsory Add-on Major Track Course — Track B

Course Code	Course Title	L:T:P	Credits	Academic Purpose
GFT-MIHBO4201	Major Track Studio B-II: Health Data, Clinical Validation and Digital Health Practice Intensive	0:1:3	4	To strengthen health data interpretation, clinical evaluation, EHR workflows and digital health application practice.

Total Add-on Credits: 4

12. Summer Term

Common Merger-Readiness Block for Track A and Track B

After Semester II, both Track A and Track B learners shall enter a common summer merger-readiness block.

Compulsory Add-on Major Track Credits: 8

12.1 Summer Add-on Major Track Courses — Common to Track A and Track B

Course Code	Course Title	L:T:P	Credits	Academic Purpose
GFT-MIHO4S01	Major Track Studio III: Medical AI, Clinical NLP, Imaging AI and GenAI Foundations	0:1:3	4	To provide hands-on exposure to medical imaging AI, clinical NLP, medical LLMs, RAG, health AI agents and advanced health AI applications.
GFT-MIHO4S02	Major Track Studio IV: Research, Product Thinking, Clinical Validation and Minor Capstone Definition	0:1:3	4	To prepare learners for health-tech research, clinical validation, product thinking, literature review, problem definition and capstone-style work.

Total Summer Add-on Credits: 8

12.2 Summer Term Outcome

At the end of the summer term, learners from both tracks should be able to:

- Demonstrate exposure to advanced health AI areas.
- Understand foundations of medical imaging AI, clinical NLP and medical GenAI.
- Interpret clinical validation requirements.
- Read health AI research papers with structured understanding.
- Define a health-tech research, product or hospital problem.
- Prepare a minor capstone concept note.
- Demonstrate readiness to merge with the advanced Integrated M.Sc. Intelligent Health Systems stage.

13. Fourteen-Course Preparation Architecture Before Merger

Each learner, whether from Track A or Track B, shall complete a 14-course preparation of architecture before merger.

Track A Preparation Architecture

No.	Stage	Course Code	Course Title	Credits
1	Semester I	GFT-MIHA4101	Python Programming and Computational Thinking for Health Sciences	4
2	Semester I	GFT-MIHA4102	Mathematics, Linear Algebra and Biostatistics Readiness for Health AI	4
3	Semester I	GFT-MIHA4103	Data Structures, Algorithms and Health Data Processing	4
4	Semester I	GFT-MIHA4104	Databases, Health Data Modelling and Digital Records	4
5	Semester I	GFT-MIHA4105	Foundations of AI, Machine Learning and Intelligent Health Systems	4
6	Semester I Add-on	GFT-MIHAO4101	Major Track Studio A-I: Programming, Mathematics and Health Data Practice Intensive	4
7	Semester II	GFT-MIHA4201	Machine Learning for Health Data and Clinical Prediction	4
8	Semester II	GFT-MIHA4202	Deep Learning and Biomedical Data Representation	4
9	Semester II	GFT-MIHA4203	Health Data Engineering, FHIR, APIs and Interoperability Foundations	4
10	Semester II	GFT-MIHA4204	Digital Health Application Engineering and Health Product Prototyping	4
11	Semester II	GFT-MIHA4205	Applied Health AI Lab I: ML and Digital Health Prototype	4
12	Semester II Add-on	GFT-MIHAO4201	Major Track Studio A-II: Applied Biostatistics, Model Evaluation and Health AI Reasoning	4
13	Summer Add-on	GFT-MIHO4S01	Major Track Studio III: Medical AI, Clinical NLP, Imaging AI and GenAI Foundations	4
14	Summer Add-on	GFT-MIHO4S02	Major Track Studio IV: Research, Product Thinking, Clinical Validation and Minor Capstone Definition	4

Track B Preparation Architecture

No.	Stage	Course Code	Course Title	Credits
1	Semester I	GFT-MIHB4101	Human Biology, Physiology and Disease Systems for Health AI	4
2	Semester I	GFT-MIHB4102	Medical Terminology, Clinical Workflows and Patient Journey	4
3	Semester I	GFT-MIHB4103	Health Data Literacy, EHR, HIS and Patient Data Systems	4
4	Semester I	GFT-MIHB4104	Biostatistics, Epidemiology and Clinical Evidence Foundations	4
5	Semester I	GFT-MIHB4105	Foundations of Digital Health, Public Health and Intelligent Health Systems	4
6	Semester I Add-on	GFT-MIHBO4101	Major Track Studio B-I: Human Health Systems, EHR and Clinical Data Practice Intensive	4
7	Semester II	GFT-MIHB4201	Python for Health Data Science and Applied Analytics	4
8	Semester II	GFT-MIHB4202	Machine Learning for Clinical and Public Health Applications	4
9	Semester II	GFT-MIHB4203	Health Data Engineering, FHIR, HL7 and Interoperability Foundations	4
10	Semester II	GFT-MIHB4204	Clinical AI, Decision Support and Model Evaluation Foundations	4
11	Semester II	GFT-MIHB4205	Applied Health Systems Lab I: EHR, Analytics and Clinical AI Prototype	4
12	Semester II Add-on	GFT-MIHBO4201	Major Track Studio B-II: Health Data, Clinical Validation and Digital Health Practice Intensive	4
13	Summer Add-on	GFT-MIHO4S01	Major Track Studio III: Medical AI, Clinical NLP, Imaging AI and GenAI Foundations	4
14	Summer Add-on	GFT-MIHO4S02	Major Track Studio IV: Research, Product Thinking, Clinical Validation and Minor Capstone Definition	4

PART B

YEAR II: MERGER WITH INTEGRATED M.Sc. INTELLIGENT HEALTH SYSTEMS SEMESTER IX AND X

14. Merger Principle

After successful completion of the first-year personalized foundation-elevation architecture and the summer merger-readiness block, Track A and Track B learners shall merge academically with the Integrated M.Sc. Intelligent Health Systems learners in their advanced M.Sc. stage.

Therefore:

- Post-B.Sc. M.Sc. Semester III shall be the same as Integrated M.Sc. Intelligent Health Systems Semester IX.
- Post-B.Sc. M.Sc. Semester IV shall be the same as Integrated M.Sc. Intelligent Health Systems Semester X.
- The same courses, outcomes, assessments, capstone expectations and professional standards shall apply.
- The structural difference shall be the compulsory Add-on Major Track credits required for Post-B.Sc. learners.
- Final graduate quality shall be equivalent across Integrated M.Sc. and Post-B.Sc. M.Sc. learners.

15. Semester III

Same as Integrated M.Sc. Intelligent Health Systems Semester IX

Specialization, Clinical Validation, Scalable Health Platforms and Capstone Definition

Qualifying Credits: 20
Compulsory Add-on Major Track Credits: 4
Total Credits: 24

15.1 Semester III Qualifying Courses

Course Code	Course Title	L:T:P	Credits	Prerequisite / Readiness Requirement
GFT-IHS5101	Specialization Elective I	2:1:1	4	Completion of first-year Post-B.Sc. foundation-elevation architecture or equivalent
GFT-IHS5102	Specialization Elective II	2:1:1	4	Completion of relevant specialization foundation
GFT-IHS5103	Clinical Validation, Real-World Evidence and Health AI Evaluation	2:1:1	4	Completion of health AI, biostatistics, ML and clinical evaluation readiness
GFT-IHS5104	Scalable Health Platforms, Cloud Architecture and Interoperability	1:1:2	4	Health data engineering, FHIR/interoperability and cloud/application readiness
GFT-IHS5105	Capstone Phase I: Industry / Hospital / Research Product Definition	0:1:3	4	Approved capstone proposal area

Total Qualifying Credits: 20

15.2 Semester III Compulsory Add-on Major Track Course

Course Code	Course Title	L:T:P	Credits	Academic Purpose
GFT-MIHO5101	Major Track Studio V: Health-Tech Specialization Practice and Minor Capstone Phase I	0:1:3	4	To deepen specialization practice and convert the summer capstone definition into a structured health-tech minor capstone / major-track practice project.

Total Add-on Credits: 4

16. Semester IV

Same as Integrated M.Sc. Intelligent Health Systems Semester X

Governance, Global Compliance and Capstone Completion

Qualifying Credits: 16
Compulsory Add-on Major Track Credits: 4
Total Credits: 20

16.1 Semester IV Qualifying Courses

Course Code	Course Title	L:T:P	Credits	Prerequisite / Readiness Requirement
GFT-IHS5201	Specialization Elective III	2:1:1	4	Completion of Specialization Elective I / II or equivalent
GFT-IHS5202	Health AI Governance, Regulation, Quality and Global Compliance	2:1:1	4	Responsible health AI, patient safety and model governance readiness
GFT-IHS5203	Capstone Phase II: Implementation, Validation, Dissertation and Product Portfolio	0:2:6	8	GFT-IHS505 and approved capstone proposal

Total Qualifying Credits: 16

16.2 Semester IV Compulsory Add-on Major Track Course

Course Code	Course Title	L:T:P	Credits	Academic Purpose
GFT-MIHO5201	Major Track Studio VI: Health-Tech Professional Portfolio, Minor Capstone Phase II and Deployment Readiness	0:1:3	4	To complete the health-tech minor capstone / major-track practice evidence and prepare professional portfolio, product note, clinical validation note or deployment evidence.

Total Add-on Credits: 4

PART C

COMMON SPECIALIZATION BASKET FOR YEAR II

Learners from both Track A and Track B shall choose one specialization pathway at the time of entering the merged advanced stage, subject to approval of the Program Committee.

The specialization pathway shall influence:

- GFT-IHS5101 Specialization Elective I
- GFT-IHS5102 Specialization Elective II
- GFT-IHS5201 Specialization Elective III
- GFT-MIHO5101 Major Track Studio V
- GFT-MIHO5201 Major Track Studio VI
- Capstone topic, wherever appropriate

Track 1: Clinical AI and Decision Intelligence

Indicative courses:

1. Advanced Clinical AI
2. Clinical Prediction Models and Risk Stratification
3. Explainable AI and Clinical Validation
4. Medical AI Safety and Bias Evaluation
5. Clinical Decision Support System Design

Track 2: Medical Imaging and Visual Intelligence

Indicative courses:

1. DICOM, PACS and Radiology Workflow
2. Advanced Medical Image Analysis
3. Pathology Image Intelligence
4. Imaging AI Validation and Reader Studies
5. Visual Decision Support Systems

Track 3: Health Informatics and Digital Health Platforms

Indicative courses:

1. Advanced Health Informatics
2. FHIR, HL7 and Health Information Exchange
3. EHR Product Architecture
4. Health Information Governance
5. Digital Health Platform Engineering

Track 4: Remote Monitoring, Wearables and Medical Device Intelligence

Indicative courses:

1. Biomedical Signal Intelligence
2. Wearable and Remote Monitoring Analytics
3. Edge AI for Medical Devices
4. Device Data Pipelines and Safety
5. Software as a Medical Device and Connected Care Product Design

Track 5: Genomics, Precision Medicine and Biomedical Data Intelligence

Indicative courses:

1. Bioinformatics and Omics Data Foundations
2. Genomics Data Analytics
3. Precision Oncology Data Systems
4. Biomedical Knowledge Graphs
5. AI for Translational Health Research

Track 6: AI for Drug Discovery and Life Sciences Intelligence

Indicative courses:

1. Computational Biology for AI
2. Molecular Data Representation
3. Biomedical Knowledge Graphs
4. AI for Drug Discovery
5. Generative AI for Molecules and Therapeutics

Track 7: Hospital Intelligence and Healthcare Operations

Indicative courses:

1. Hospital Operations Analytics
2. Patient Flow and Queue Intelligence
3. Healthcare Resource Optimization
4. Quality, Safety and Performance Analytics
5. Value-Based Care and Health Economics

Track 8: Generative AI and Health Knowledge Systems

Indicative courses:

1. Medical LLM Engineering
2. RAG Systems for Medical Knowledge
3. Health AI Agents and Workflow Automation
4. Medical LLM Safety and Evaluation
5. Clinical Knowledge Graphs and Reasoning Systems

PART D

COMPULSORY ADD-ON MAJOR TRACK STRUCTURE

The learner shall complete:

24 Compulsory Add-on Major Track Credits

These shall be offered through six 4-credit courses.

No.	Stage	Course Code	Course Title	Credits
1	Semester I	Track-specific	Major Track Studio I	4
2	Semester II	Track-specific	Major Track Studio II	4
3	Summer	GFT-MIHO481	Major Track Studio III: Medical AI, Clinical NLP, Imaging AI and GenAI Foundations	4
4	Summer	GFT-MIHO482	Major Track Studio IV: Research, Product Thinking, Clinical Validation and Minor Capstone Definition	4
5	Semester III	GFT-MIHO501	Major Track Studio V: Health-Tech Specialization Practice and Minor Capstone Phase I	4
6	Semester IV	GFT-MIHO551	Major Track Studio VI: Health-Tech Professional Portfolio, Minor Capstone Phase II and Deployment Readiness	4
			Total	**24**

PART E
PROGRAM OUTCOME EQUIVALENCE

At the end of the Program, both Track A and Track B learners shall demonstrate common outcome equivalence.

They should be able to:

1. Understand human health systems, clinical workflows and patient data systems.
2. Apply mathematics, biostatistics and epidemiology to health data problems.
3. Write programs and build software systems for digital health and intelligent healthcare applications.
4. Work with EHR, FHIR, HL7, DICOM and health data models.
5. Build, evaluate and interpret machine learning and AI models for healthcare.
6. Understand clinical decision support, explainability and patient safety.

7. Build digital health prototypes, dashboards, APIs and health data products.
8. Work with medical imaging, clinical NLP, wearable data or biomedical datasets depending on specialization.
9. Understand medical LLMs, RAG, health AI agents and health knowledge systems.
10. Evaluate AI systems using clinical validation, real-world evidence, safety and regulatory principles.
11. Conduct research, prepare dissertation work, and build capstone-ready health-tech solutions.
12. Demonstrate professional readiness for health-tech, medical AI, digital health, hospital intelligence, public health analytics, med-tech, genomics and life-science AI roles.

PART F

FINAL CURRICULUM INTENT

The Post-B.Sc. M.Sc. in Intelligent Health Systems shall be designed as a personalized but convergent academic pathway.

It shall not assume that all B.Sc. learners enter with the same readiness.

Instead:

- Biology and life-science learners shall be elevated in computing, mathematics, AI and data systems.
- CS, mathematics, statistics and physical-science learners shall be elevated in human biology, clinical systems, healthcare data and patient-centered health technology.
- Both groups shall pass through a common summer merger-readiness block.
- Both groups shall merge into the same advanced Intelligent Health Systems stage in Year II.
- Both groups shall graduate with the same final M.Sc. identity and outcome quality.

The learner progression is:

Post-B.Sc. Entry → Track A / Track B Personalization → Foundation Elevation → Health AI Readiness → Common Summer Merger Block → Advanced Integrated M.Sc. Merger → Specialization → Clinical Validation → Capstone → Global Health-Tech Professional Readiness.

The final graduate should not merely be a learner who knows AI in healthcare.

The final graduate should be an intelligent health systems professional who can understand healthcare, reason with data, build intelligent systems, validate AI responsibly, design health-tech products, and contribute meaningfully to global health technology and human health systems.