Master of Science – Health Informatics and Bioinformatics
2026-2027

REQUIREMENTS	CONT'D REQ/COURSE AVAILABILITY

Admission Requirements

Applicants must meet the general graduate admission criteria, along with the following program-specific requirements:

1. **Bachelor's degree** from an accredited institution is required, and a minimum **GPA** of 3.0 on a 4.0 scale is preferred. Applicants with a GPA below 3.0 may still be considered based on the overall strength of their application.

2. **Relevant academic background** in science, health, or technical fields is recommended. Common backgrounds include biochemistry, biology, computer science, engineering, health information management, mathematics, nursing, physics, or statistics.

3. **Core knowledge** in the following areas:
   - Computer Programming
   - Databases
   - Medical Terminology
   - Human Anatomy and Physiology
   - Applied Statistics

4. **Resume** outlining relevant academic, professional, or research experiences.

5. **Personal statement** describing your career goals, related background, and how this program your professional aspirations.

6. **Recommendations** Two academic or professional recommendations are required. Recommenders will receive a submission link after their contact information is provided in the application system at gvsu.edu/gradapply.

7. **GRE scores (optional)** may be submitted to strengthen your application.

Degree Requirements

All candidates must complete 36 credits with a cumulative GPA of 3.0.

Core Requirements (12 credits)
- CIS 661   Introduction to Health and Bioinformatics
- PSM 650   Ethics and Professionalism in Applied Science
- CMB 610 Foundations of Biotechnology
  - **OR**
- CMB 501 Scientific Communication for the Life Sciences and Professional Science Master's

Select One Stats Course:
- STA 610   Applied Statistics for Health Professions
  - **OR**
- STA 622   Statistical Methods for Biologists

Seminar Requirement (3 credits)
- PSM 662   Seminar in Professional Science Practice

Internship Requirement (3 credits)
- PSM 691   Internship

Capstone Requirement (3 credits)
- CIS 691   Medical and Bioinformatics Capstone

Degree Requirements, Continued

Directed Requirements (9 credits)
- CIS 635   Knowledge Discovery and Data Mining
- CIS 660   Data Engineering
- CIS 671   Information Visualization

Students choose between two concentrations to focus their degree:

Concentrations

Bioinformatics Concentration:
- CIS 678   Machine Learning
  AND one of the following as elective:
  - CIS 677   High-Performance Computing
  - CMB 552 Computer Modeling and Drug Design
  - CMB 560 Genomics and Molecular Diagnostics

Health Informatics Concentration:
- CIS 665   Clinical Information Systems
  AND one of the following as elective:
  - PNH 630   Health Administration and Service
  - PNH 635   Hospital Organization and Management
  - NUR 705   Health Care Decision Support
  - NUR 706   Telehealth

Course Availability
Fall or Winter Classes

CIS 635	Knowledge Discovery and Data Mining
CIS 660	Data Engineering
CIS 661	Introduction to Health & Bioinformatics
CIS 665	Clinical Information Systems
CIS 671	Information Visualization
CIS 677	High-Performance Computing
CIS 678	Machine Learning
CMB 610	Foundations of Biotechnology
PNH 630	Health Administration and Service
PSM 650	Ethics and Professionalism in Applied Science
PSM 662	Seminar in Professional Science Practice
STA 610	Applied Statistics for Health Professions

Fall-Only Classes

CMB 501	Scientific Communication
CMB 560	Genomics and Molecular Diagnostics
NUR 705	Health Care Decision Support
STA 622	Statistical Methods for Biologists
PNH 635	Hospital Organization and Management

Winter-Only Classes

CIS 691	Medical and Bioinformatics Capstone
CMB 552	Computer Modeling and Drug Design