



HAMILTON • MIDDLETOWN • VOICE OF AMERICA • GREENTREE HEALTH SCIENCE ACADEMY



Miami University's bachelor degree program in
Health Information Technology

regionals.muohio.edu/hit

Funded in part by grant awarded under
ARRA High Growth & Emerging Industries Grant
as implemented by the U.S. Department of Labor's
Employment & Training Administration.



Miami University's bachelor degree program in **Health Information Technology**

**Technically sound.
Academically proficient.
Exceptionally employable.**

Miami University's program in Health Information Technology (HIT) is designed to prepare students for jobs that integrate healthcare and technology in the evolving U.S. healthcare system. The new HIT degree program will be offered exclusively at Miami University's regional locations.

HIT graduates may work in technical support, data analysis, reporting, database administration, user education, software development, testing and customization.

**Miami ranks third in the
nation for commitment
to teaching, preceded by
Dartmouth and Princeton.**

—US News & World Report

Nationally recognized as an outstanding undergraduate institution, Miami University is a public university located in Oxford, Ohio. With a student body of 16,000, Miami effectively combines a wide range of strong academic programs with the personal attention ordinarily found only at much smaller institutions.

Wherever you are, Miami's within reach.

Miami University Regionals

Miami Hamilton

Miami Middletown

**Voice of America
Learning Center**

**Greentree
Health Science**

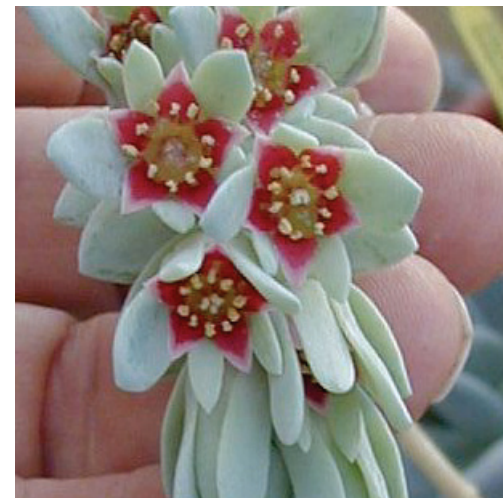
Miami University's regional locations make earning a nationally recognized Miami degree accessible, affordable, and convenient for area residents.

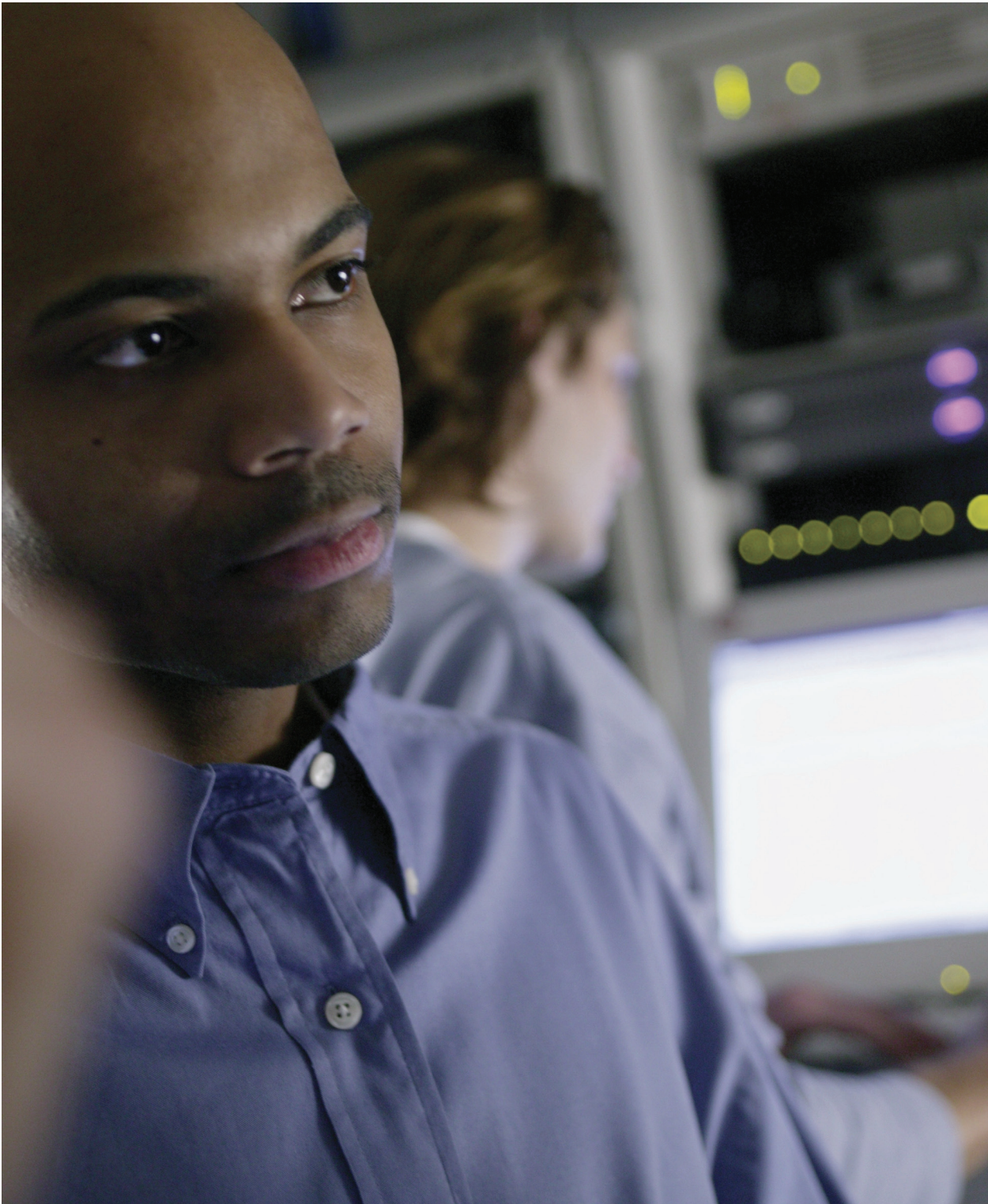
Campuses in Hamilton and Middletown, the Voice of America Learning Center in West Chester and the new Greentree Health Science Academy serve 5,850 undergraduates and 161 graduate students.

Nearly 35 percent of the student body is defined as nontraditional.

Flexible class schedules, hybrid course formats and much lower tuition have made higher education possible for thousands of first-time, returning, and transfer students. Tuition for lower division in-state students at Miami Regionals is \$2,396 per semester, with upper division in-state tuition at \$3,631.

The **Health Information Technology** program joins **Integrative Studies**, **Engineering Technology** and **Nursing** as four-year degrees that can be completed entirely at Miami's regional locations.





A young and rapidly expanding field...

Why is HIT so important?

The market for electronic medical record systems in North America will exceed \$5.4 billion by 2015."

— Global Industry Analysis

Health Information Technology lets healthcare providers manage patient care through secure use and sharing of health information. It promotes the use of electronic health records (EHRs) instead of paper medical records to maintain health information for patients and medical professionals.

Health Information Technology can substantially improve patient care and our nation's healthcare system by providing complete and accurate information about a patient's health. This will help doctors diagnose health problems sooner, reduce medical errors and provide safer care at lower costs.



Curriculum overview

HIT Course Requirements

Bachelor of Science in Information Technology, Health Information Technology Major

The program in Health Information Technology (HIT) is a bachelor’s completion degree that addresses the technology and processes used by healthcare providers and related organizations.

The program includes instruction in the technology used to acquire and direct the flow of information between the clinical, administrative, and financial systems in the healthcare industry as well as general principles of information technology.

Students who complete the program will obtain a strong background in technology including database, problem-solving, systems analysis, and project management skills as well as a foundation in the culture of the healthcare system. This program prepares students for jobs that integrate healthcare and technology in the evolving U.S. health-care system.

- PROGRAM REQUIREMENTS** (128 credit hours)
- Prerequisite and Foundation Requirements (65–69 credit hours):Please consult course descriptions to determine pre-requisites for each course.
- BTE 224 Medical Terminology (3)
 - CIT 154 Personal Computer Concepts & Applications (or BTE 181 or CSE 148) (3)
 - CIT 157 Foundations of Information Technology I (3)
 - CIT 158 Foundations of Information Technology II (3)
 - CIT 214 Database Design & Development (3)
 - CIT 268 Human Computer Interaction (3)
 - CIT 276 Systems Analysis & Design (3)
 - COM 135 Public Expression and Critical Rhetoric (3)
 - CSE 163 Intro to Computer Concepts & Programming (MPF V) (or any equivalent fundamental programming course) (3)
 - MTH 102 Intermediate Algebra (with a grade of C or higher) (3)
 - ZOO 171 Human Anatomy & Physiology (MPF IVA) (4)
 - ZOO 172 Human Anatomy & Physiology (4)
 - ZOO 325 Pathophysiology (4)or ZOO 342 Genetics (3) or ZOO 232 Human Heredity (3)
- Miami Plan English Composition (MPF I) (6)
{recommended: ENG 111 College Composition (3), ENG 112 Composition and Literature (3)}
- Miami Plan Fine Arts & Humanities (MPF IIA & MPF IIB) (3–6)
- Miami Plan Global Perspectives (MPF III) (9, or complete study abroad option)
- Miami Plan Natural Sciences (MPF IV) (6)

Additional Miami Plan note: All students must take at least one Foundation course that presents a cultural perspective (C) and at least one Foundation course that presents an historical perspective (H). Students satisfy this requirement by taking an appropriately designated course in any foundation area. The same course may meet both a Foundation areas requirement and the cultural and/or historical perspective requirement. Please see the Liberal Education section of the Miami Bulletin for the list of C and H courses.



- HIT COMMON CORE** (33 hours)
- Please consult course descriptions to determine pre-requisites for each course.
- CIT/CSE 262 Technology, Ethics & Global Society (MPF IIC) (3)
 - CIT 348 Information Management & Retrieval (3)
 - CIT 358 Information Technology Assurance & Security (3)
 - CIT 431 Health Information Technology I (3)
 - CIT 432 Health Information Technology II (3)
 - CIT 448 Global & Strategic Issues in Information Tech (3)
 - ENG 215 Technical Writing (3)
or ENG 313 Introduction to Technical Writing (3)
 - ENT 316 Project Management (3)
 - NSG 321 Healthcare Systems & Culture (3)
 - NSG 343 Healthcare Informatics (3)
 - STA 261 Statistics (3)
or STA 301 Applied Statistics (3)
or STA 368 Introduction to Statistics (4)
or DSC 205
- Business Statistics (4)
- Thematic Sequence (MPT minimum 9 hours):
Any Miami Plan Thematic Sequence.
- Capstone Course (MPC minimum 3 hours):
CIT 458 Collaborative System Design & Integration (3)
- Additional coursework to meet bachelor’s degree requirements of 128 earned credit hours.

CIT 431—Health Information Technology I

Catalog Description

Examination of information technology and related systems in healthcare settings, particularly as they pertain to clinical systems. Emphasis is on the analysis of data needs, interpretation of workflow analysis, and investigation into interoperability requirements and standards. Prerequisites: NSG321 and CIT348.

Course Purpose

This course is the first of a two-course sequence that is intended to provide an overall perspective on the use of information technology tools and techniques in healthcare settings such as hospitals, clinics, doctor’s offices or related areas. This course primarily examines the interaction of IT in clinical applications such as laboratory systems, pharmacy systems, imaging information systems, nursing support, and others. The course will also examine technologies such as electronic medical records along with current standards and best practices for information systems in healthcare.

Learning Objectives

1. Model IT and data needs for clinical healthcare systems.
2. Determine interoperability requirements for different healthcare systems based on common data needs.
3. Interpret requirements for Meaningful Use regulations.
4. Evaluate healthcare facilities based on the HIMSS Analytics Stages of Adoption and other standards.
5. Interpret workflow analysis of clinical areas.
6. Create map of clinical systems and interactions.

Possible Textbooks

Adaptive Health Management Information Systems: Concepts, Cases, and Practical Applications (3rd Edition). 2010. Joseph Tan and Fay Cobb Payton. Jones and Bartlett. ISBN: 978-0-7637-5691-8.

Medical Technology for the IT Professional: An Essential Guide for Working in Today’s Healthcare Setting. 2009. ECRQ Institute. ISBN: 978-0-9819241-1-3. Page 2

MediSoft Made Easy: A Step-by-Step Approach (2nd Edition). 2011. Lillian Burke, Barbara Weill, Lori Tyler. Pearson. ISBN: 978-0-13-813139-5.

Tentative Course Schedule

1. Overview of HIT and HMIS
2. Intro to Interoperability
3. Electronic Health Records
4. Electronic Health Records
5. Clinical Laboratory Information Systems
6. Pharmacy Information Systems
7. Radiology and Imaging Information Systems
8. Radiology and Imaging Information Systems
9. Nursing/Clinical Documentation Systems
10. Nursing/Clinical Documentation Systems
11. Emergency Department
12. Operating Room/Surgery & Anesthesia Information Systems
13. Workflows and Interoperability
14. EHR Adoption
15. Meaningful Use

CIT 432—Health Information Technology II

Catalog Description

Continued examination of information technology and related systems in healthcare settings, particularly as they pertain to non - clinical systems such as healthcare administration and financial systems. Emphasis is on the analysis of data needs, security analysis, data reporting, and the design and development of HIT projects. Prerequisite: CIT431.

Course Purpose

This course is the second of a two - course sequence that is intended to provide an overall perspective on the use of information technology tools and techniques in healthcare settings such as hospitals, clinics, doctor’s offices or related areas. This course primarily examines the interaction of IT in non - clinical systems such as healthcare administration, financial information, security, and data reporting. A focus of the course will be on designing and completing a project related to electronic health records, synthesizing the knowledge from both CIT 431 and CIT 432.

Learning Objectives

1. Model IT and data needs for administrative systems.
2. Model IT and data needs for financial systems.
3. Interpret workflow analysis of administrative and other non-clinical systems.
4. Create map of administrative and clinical systems and interactions.
5. Design a Health IT project.
6. Implement a Health IT project.

Possible Textbooks

Adaptive Health Management Information Systems: Concepts, Cases, and Practical Applications (3rd Edition). 2010. Joseph Tan and Fay Cobb Payton. Jones and Bartlett. ISBN:978-0-7637-5691-8.

Health Information Technology and Management. 2011. Richard Gartee. Pearson. ISBN: 978-0-13-159267-4.

EHR Project

As a group, you will design and implement a Health Information Technology Project. The HIT project will include a number of deliverables including status reports, requirements analysis, project plan, and project presentation. This HIT Project will focus on a specific aspect of health information technology systems, such as developing an Electronic Health Record (EHR), implementing a series of screens to efficiently capture clinician workflow, developing the interface to a Common Medical Vocabulary (CMV), or implementing interoperability standards. One of the skills that HIT professionals must have is the ability to explain technical information to both a technical audience and to a clinical audience and you will have the opportunity to improve those skills in HIT.

Tentative Course Schedule

1. Healthcare Administrative Applications
2. Healthcare Administrative Applications
3. Financial Information Systems
4. Financial Information Systems
5. Security
6. Data Reporting
7. Data Reporting
8. EHR Project / HIT System Implementation
9. EHR Project / HIT Systems Implementation
- 10-15. EHR Project



FOR ADDITIONAL INFORMATION:

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OR CONTACT

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