

# HEALTH INFORMATICS AND INFORMATION MANAGEMENT

The Department of Health Informatics and Information Management fosters a community, rooted in the Benedictine Values, that empowers students through transformative education to become impactful leaders in healthcare. The department offers undergraduate and graduate programs that prepare students with the professional knowledge necessary to assume management responsibility for health data and health information systems in a variety of health-related settings, including hospitals, clinics, long-term care settings, consulting firms, government agencies, insurance companies and software vendors.

## Programs

The Health Informatics and Information Management Department offers these programs:

- Health Informatics and Information Management, B.S. (<http://catalog.css.edu/programs-az/stender-business-leadership-professional-studies/health-informatics-information-management/health-informatics-information-management-bs/>)
- Health Informatics, M.S. (<http://catalog.css.edu/programs-az/stender-business-leadership-professional-studies/health-informatics-information-management/health-informatics-ms/>)
- Health Information Management, M.S. (<http://catalog.css.edu/programs-az/stender-business-leadership-professional-studies/health-informatics-information-management/health-information-management-ms/>)
- Health Informatics Graduate Certificate (<http://catalog.css.edu/programs-az/stender-business-leadership-professional-studies/health-informatics-information-management/health-informatics-certificate/>)
- Health Informatics and Information Management Post Baccalaureate Certificate (<http://catalog.css.edu/programs-az/stender-business-leadership-professional-studies/health-informatics-information-management/health-information-management-certificate/>)

## Contact Information

hiim@css.edu

The Health Informatics and Information Management program accreditor for The College of St. Scholastica is the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). The College's accreditation for the:

1. Bachelor's of Science degree in Health Informatics and Information Management and the Post-Baccalaureate Certificate in Health Information Management has been reaffirmed through 2029.
2. Master's of Science degree in Health Informatics has been reaffirmed through 2029.
3. Master's of Science degree in Health Information Management has been reaffirmed through 2022.

All inquiries about the program's accreditation status should be directed by mail to CAHIIM, 200 East Randolph Street, Suite 5100, Chicago, IL, 60601; by phone at (312) 235-3255; or by email at [info@cahiim.org](mailto:info@cahiim.org).

## Health Informatics Courses

### HIF 6010 - Foundations Health Informatics - 3 cr.

An introduction to the US healthcare system and the role of informatics. Examines clinical, research, and administrative applications of information technology applications used by healthcare professionals. The course will cover the history of the field, an introduction to clinical data, electronic health records, decision support systems, computerized order entry, and consumer applications.

### HIF 6210 - Health Information Technology in Practice - 3 cr.

Prepares students to appraise, implement, and optimize Electronic Health Record (EHR) technology to support the utilization and management of clinical information. Students will describe information infrastructure, data, and databases; employ processes for implementing healthcare information systems and clinical decision support tools; relate privacy and security issues to healthcare information; and explain personal health records and EHR applications used in acute, ambulatory, and specialty services.

### HIF 6230 - Human Factors and Usability Assessment - 3 cr.

Explore human factors principles and the application of usability assessments for the development and use of health information technology by clinicians and patients. The course covers the role of human factors and human-computer interactions in medicine, usability assessments and user-centered design, and theories of cognition, memory, and technology.

### HIF 6240 - Consumer Health Informatics - 2 cr.

Examine the field of consumer health informatics and apply analytic methods, system analysis and design, and research methods to address issues related to patient use of health information for individual decision-making. Students will also apply current theoretical models and research to gain knowledge regarding the information structures that facilitate patient engagement.

### HIF 6511 - Health Information Security Systems - 3 cr.

Strategies for designing, implementing, auditing and evaluating the technical, physical and human components of an information security system that adheres to a healthcare organization's legal, ethical and organizational requirements

### HIF 6522 - Seminar in Health Informatics - 1 cr.

A capstone seminar in which students present the results of their Final Research Projects and explore current issues relative to the field of Health Informatics in a rapidly changing healthcare delivery system. All health informatics students will conduct a formal presentation of their final research project. Faculty, staff, the student body, and the public will be invited to each presentation. The presentations are held virtually and aired live as well as recorded for later viewing. Enrolled students will present the background, research question/hypotheses, methods, results, discussion, and conclusions based on their research from their final research project.

**Prerequisite Courses:** HIF 6534

### HIF 6534 - Final Applied Research Project - 3 cr.

Working closely with the instructor, each student completes the applied research project and prepares a final manuscript that can be submitted for potential publication in a peer-reviewed journal or conference proceedings. The goal of the final applied research project is to increase students' research competencies through actively engaging in the research process. Not only will this further the student's education, but there is the potential that a student will have their work published and recognized by health informatics researchers and professionals.

**Prerequisite Courses:** HIF 6522

**HIF 6537 - Systems Design and Software Development - 3 cr.**

Introduction to computer programming with a focus on the phases of the systems development life cycle. Topics include: preliminary investigation, physical and logical documentation, detailed investigation of requirements and alternative specifications, analysis and design techniques, implementation considerations, development of logical and physical data flow diagrams, data modeling, prototyping, and tools.

**HIF 6777 - Topics in Health Informatics - 0-16 cr.**

Topics in Health Informatics.

## Health Information Management Courses

**HIM 2101 - Medical Language - 3 cr.**

Studies terminology common to medicine; utilizing word elements as a basis for building medical terms and analyzing meanings; defining, pronouncing, and spelling commonly used medical terms; conversion of layman's terms to appropriate medical terminology. In addition, terminology of specific medical allied health specialties (surgery, dentistry, radiology, etc.) and abbreviations are reviewed.

**HIM 2102 - Introduction to Pharmacotherapeutics - 1 cr.**

Introduces the variety of drugs used for disease treatment for each body system. A general understanding of how drugs work, their potential and limitations, as well as their diversity and number will be explored.

**HIM 2110 - Concepts and Principles of Health Information Management - 2 cr.**

Introduces the field of health information management. Content areas include an overview of the electronic patient record, professional roles within the field, professional organizations and the professional Code of Ethics; the content and structure of manual, computerized and hybrid health record and the standards that govern the development of the record within a health care facility; viewing medical documents and e-forms. Hands-on lab experience will be used by students to develop their confidence and competence with employing this type of clinical information technology in the practice of their profession.

**HIM 2111 - HIM Technologies in Practice - 2 cr.**

Applies technology to HIM practice including electronic health records, clinical information systems, and management information systems in HIM. Hands on experience with electronic systems and technology applications for creating, managing, and storing and retrieving electronic health data will be used by students to develop their confidence and competence with employing this type of clinical information technology in the practice of their profession.

**HIM 2777 - Independent Study - 0-4 cr.**

Includes courses not a part of the regular Health Information Management curriculum but taught because of a special need, interest or opportunity.

**HIM 3132 - Medicolegal Issues - 4 cr.**

Studies of the U.S. judicial system; hospital, medical staff and other professional liability; health information as evidence; consent for treatment; retention and release of medical information; the health record as a legal document; risk management, prevention and potential; confidentiality of health information; and a patient's right to know.

**Prerequisite Courses:** HIM 2110

**HIM 3211 - Classification of Clinical Data - 2 cr.**

Focuses on the roles of classification systems, vocabularies, and terminologies in the healthcare setting. Topics include the collection, maintenance, utilization, and retrieval of specified healthcare code sets, clinical terminologies, classification systems and data in healthcare facilities. The course will focus on the application of standard code sets most commonly used in healthcare facilities in the U.S.

**Prerequisite Courses:** (HIM 2101 or HSC 2209) and BIO 2002

**HIM 3212 - Clinical Terminologies and Health Data Standards - 2 cr.**

Focuses on the roles of coding management, clinical terminology standards, and administrative data sets in the healthcare setting. The course will focus on the methods and processes used to ensure efficient and compliant coding operations and will explore current and emerging reimbursement methodologies in healthcare in the U.S. The course also addresses the structure, collection and utilization of commonly used clinical terminology standards and explores the relationship between clinical data standards and processes to achieve standardization in health information exchange.

**Prerequisite Courses:** HIM 3211

**HIM 3777 - Topics: HIM Directed Practice - 0-4 cr.**

Includes courses not a part of the regular Health Information Management curriculum but taught because of a special need, interest or opportunity.

**HIM 4222 - Clinical Data Management - 3 cr.**

Managing coded data in healthcare organizations; uniform data sets and healthcare informatics standards for health data collection; evaluation of data quality; DRGs, MS-DRGs and other case mix systems; revenue cycle management; data collection for enterprise; reportable and specialized databases; data mining of healthcare data.

**HIM 4231 - Clinical Quality Management - 4 cr.**

Calculates meaningful clinical, administrative, vital, and public health statistics; addresses medical staff organization and function; evaluation of patient care; clinical information analysis; integrated quality improvement activities; patient safety; case management; utilization management; risk management; and performance improvement processes.

**HIM 4315 - Management Tools and Strategies - 4 cr.**

Focuses on the concepts, principles, tools, and strategies utilized in managing operations within a performance improvement model. It includes problem solving and decision making models as well as tools and techniques for planning, organizing, directing, and controlling the available resources which comprise a Health Information Service.

**HIM 4415 - Health Data Analytics - 4 cr.**

Provides a foundation for designing databases and analyzing healthcare data to enhance clinical and administrative decision-making. Topics include database management, data analysis, data reporting, SQL, statistics, data mining, and data visualization. Students will have practical experience with software applications used in the healthcare industry.

**Prerequisite Courses:** PSY 3331 and CIS 3107

**HIM 4421 - Alternative Health Record Systems - 2 cr.**

Analyzes health record content and format; regulatory and accreditation requirements; privacy & security requirements, data standards and classification systems; computerized information systems; reimbursement and compliance issues; quality measures and reporting, and current trends and issues in a variety of types of primary healthcare settings.

**Prerequisite Courses:** HIM 4520

**HIM 4423 - Applied Research in Health Information Management - 3 cr.**

Focuses on the role of applied research in health care services, health informatics, and health information management. Topics include research design, research methods, evaluation and outcomes research, research process, data analysis, the data-to-information-to-knowledge continuum, and ethical issues in research. Students will analyze published research projects, develop a research proposal and data collection tool(s), prepare an IRB submission, conduct and present the results of an applied research study.

**Prerequisite Courses:** PSY 3331

**HIM 4520 - Directed Practice - 2 cr.**

Focuses on the common functions, procedures and staffing requirements in hospital-based health information services.

**Prerequisite Courses:** HIM 2110

**HIM 4555 - Professional Practice Experience - 4 cr.**

This is a supervised professional practice experience (internship) that includes managerial or other related professional practice roles and experience in health information management departments and other health information related areas. Hospitals, medical centers, clinics and alternative healthcare facilities across the United States are used. An administrative project, visits with users of health information (finance, decision support, registries, etc.) or unique healthcare facilities or agencies are an integral component of the clinical internship.

**HIM 4556 - Seminar in Health Information Management - 2 cr.**

Seminar is a student-centered experience revolving around internship experiences. Students discuss and present professional practice experiences; share learning experiences, and present project work. In addition, employment preparation and career opportunities are a focus. HIM professionals in unique career settings are invited to interact with the students. Preparation for the credentialing examination is explored to help the student transition successfully into the professional world.

**Prerequisite Courses:** HIM 4555

**HIM 4777 - Topics in Health Information Management - 0-4 cr.**

Includes courses not a part of the regular Health Information Management curriculum but taught because of a special need, interest or opportunity.

**HIM 4999 - HIM Independent Study - 1-4 cr.**

Focuses on advanced investigation in an area of special interest. Topic must be approved by the department chair; may be related to a problem existing in a healthcare facility or may be research oriented.

**HIM 6502 - Develop Clinical Info Systems - 3 cr.**

Focused on providing students with the expertise to conceptualize and strategically plan and build the appropriate health information infrastructure for supporting the knowledge requirements of the healthcare organization. Topics to be addressed include information systems theory and strategic planning; clinical information systems applications and operations analysis, data and technical infrastructures for the electronic health records; information system acquisition and implementation, and the regulatory, standards and ethical environments and future trends of health information systems.

**HIM 6505 - Database Methods Clin Info Mgt - 3 cr.**

Addresses database theory, methodologies for database design and issues related to database administration. Emphasis is on requirements and methodologies for assuring data integrity and security in healthcare enterprise information systems, specifically in relationship to the database environment.

**HIM 6506 - Assessing Healthcare Quality - 3 cr.**

Assess outcomes research activities, exert leadership in implementing clinical outcomes measurement projects/programs within healthcare organizations and systems. The course focuses on the role patient-centered outcomes information plays in assuring that healthcare systems are able to establish cost-effective clinical practices that do improve the health, functional status and well-being of healthcare consumers, and accreditation and legislative initiatives impacting healthcare outcomes activities.

**HIM 6507 - Project Management - 3 cr.**

Project management, including the development of a project charter with emphasis on developing the competencies and skills required to successfully lead teams of clerical, technical and professional specialists through workflow and work process redesign activities within a healthcare organization or system. Criteria and techniques for evaluating the features, functionality and usability of project management (PM) software packages; advanced-level skills in using a PM application to create a project plan, schedule tasks and resources effectively, communicate with stakeholders, as well as track and report progress for both simple and complex projects.

**Prerequisite Courses:** Admission to a HIM graduate program or permission of department.

**HIM 6508 - Healthcare Data Analytics - 3 cr.**

Covers the techniques, strategies and the need/use of Information Technology (IT) tools for data collection, data analysis, reporting and knowledge management. Offers learners the foundational terminology, concepts, models, processes and tools associated with decision support and knowledge management systems to leverage data into information and knowledge to enhance care processes, data quality, cost effectiveness and decision-making, ultimately increasing the strategic acumen of the organization.

**Prerequisite Courses:** Finance or Accounting and HIM 6505, or permission of the department.

**HIM 6509 - Medical Vocabularies and Classification Systems - 3 cr.**

Build on knowledge and proper use of medical vocabularies and classification systems commonly used in contemporary healthcare systems. Clinical and administrative data standards are necessary for semantic interoperability which enables effective exchange of health information. Emphasis is placed on learning about medical vocabularies and classification systems for an area of domain coverage in accordance with regulatory requirements.

**HIM 6520 - Applied Project Research and Writing - 3 cr.**

The Final Applied Project starts with this course; methods of project research and writing are introduced and practiced. The student develops a project proposal and benchmarks the proposed project against existing applications in the field. Activities include selecting the topic, developing a problem definition/problem statement and the rationale for the selected applied project, developing a literature review, defining a design/solution model for the applied project product, and finalizing a Final Applied Project Proposal.

**Prerequisite Courses:** HIM 6502

**HIM 6522 - Final Applied Project - 3 cr.**

Working with an assigned Final Applied Project advisor, the student completes the applied project and prepares a project report to be submitted to the department for final approval. The goal of the Final Applied Project is to increase students' cognitive sophistication through an activity that requires reading, thinking, and writing, to only further the student's education, and make a meaningful contribution to HIM practice.

**Prerequisite Courses:** HIM 6520

**HIM 6523 - Graduate Seminar - 1 cr.**

A capstone seminar in which students present the results of their Final Applied Projects and explore current issues relative to the field of Health Information Management in a rapidly changing health care delivery system.

**Prerequisite Courses:** HIM 6522

**HIM 6524 - Strategic Management in Health - 3 cr.**

Explores the theory and leadership practice of strategy, strategic thinking and strategic management in healthcare for success in changing and turbulent times. Focus is on the phases of environmental assessment, business planning, implementation and evaluation. Prepares students to lead through organizational change, innovation, strategic management and execution. The course serves as a core curriculum capstone for the HIM program and requires students to synthesize and integrate lessons learned in their previous courses.

**HIM 6525 - Clinical Informatics in Practice - 3 cr.**

Provides nursing and other clinical professionals with the knowledge, skills and attitudes for participation in the planning, acquisition, design, management, and use of electronic health records and other health information technology. Topics include information systems theory and strategic planning; clinical information systems applications, data and technical infrastructures for an electronic health record system; information system acquisition and implementation; and the regulatory, standards and ethical environment of health information systems.

**HIM 6529 - Change Leadership - 3 cr.**

Develop a systems-based way of thinking about leadership and how people function in the workplace, self-assess leadership thinking and behavior, establish goals for a higher level of leadership functioning, and integrate System-based Leadership and Change Management™ with models of change management and transition. Also, identify patterns of behavior that sabotage change in your system and internalize behavior for leading change in your organization.

**Prerequisite Courses:** Admission to a HIM graduate program or permission of the department.

**HIM 6530 - Clinical Workflow & Process Redesign - 3 cr.**

This course explores how ancillary & clinical processes are designed and integrated together with the flow of information throughout a healthcare facility to bring decision-making value to healthcare professionals through quality information gathered in the most effective and efficient ways. Topics to be addressed include theory of quality and process improvement, workflow redesign, modeling techniques, use case scenario descriptions, clinical process reengineering, relationship to system infrastructure preparation and system build, outcomes measurement, and impact of change on organizational climate.

**Prerequisite Courses:** HIM 6502 or permission of the department.

**HIM 6531 - Best Practices/Implementation - 3 cr.**

Covers components of EHR implementation as identified through case studies of best practices. Examine how the EHR impacts patient care through the availability of information and clinical decision support, create and use rules and clinical protocols/tools for the EHR, and develop training methodologies.

**Prerequisite Courses:** HIM 6502

**HIM 6532 - Methods for Monitoring, Evaluation, and Research - 3 cr.**

Orients students to the methods and tools used for conducting research. Students will gain an understanding of the research process, including how to identify research problems, create appropriate research questions and hypotheses, and rationalize the importance of evaluating the problem. Additionally, the course will cover ethical considerations in research, including methods for ensuring the protection of human subjects. Students will apply their learning by creating a complete research proposal. The proposal will address a research problem related to their discipline of training, and students will prepare an application for review by the Institutional Review Board (IRB). By the end of the course, students will have gained a foundational understanding of research methods and will be prepared to conduct ethical and effective research in their field.

**HIM 6535 - FAP Research I - 3 cr.**

Provides students with an opportunity to identify and research a topic related to Health Informatics and Information Management and explore it in detail. The student will develop a research plan, identify and finalize the research topic, develop a research design utilizing appropriate methods and analysis, and submit an IRB (Institutional Review Board) proposal.

**Prerequisite Courses:** HIM 6532

**HIM 6536 - FAP Research II - 3 cr.**

Provides students with an opportunity to conduct in-depth research on a topic related to Health Informatics and Information Management. The student will continue the research they began in HIM 6535, culminating in the completion of a Final Applied Project. The student will deploy a data collection instrument, collect and analyze the data, and submit a written report summarizing their research and analyzing results that support their recommendation/conclusion.

**Prerequisite Courses:** HIM 6535

**HIM 6540 - Revenue Cycle Enhancement - 3 cr.**

Identify processes and develop strategies to enhance the performance of the healthcare organization's revenue cycle. Investigate each component of the process, along with mechanisms to monitor their efficiency and effectiveness. Learn to identify areas needing improvement, and techniques to implement and sustain those improvements in order to maximize cash flow.

**Prerequisite Courses:** Admission to a HIM graduate program or permission of the department.

**HIM 6545 - Corporate Compliance/Health Care - 3 cr.**

Addresses a growing need to adequately train health care leaders in the field of health care compliance and various topics in health care compliance, including corporate compliance (fraud and abuse), privacy, risk management and identity theft. Essential elements of a corporate compliance program will be presented as well as primary federal legislation addressing fraud and abuse. Privacy of patient information will be discussed in terms of the HIPPA and HITECH regulations. Risk management concepts will be presented as well as identity theft as relates to medical identity theft.

**HIM 6550 - Health Care - Global, Preventative, and Systemic Perspectives - 3 cr.**

Examines health in the global society with a specific focus on the U.S. Explores the meaning of population health, the culture of health and how that interacts with community culture. Covers the history, development, and future of the healthcare system in the United States including types of healthcare institutions, services, payment systems, the government's role and the people and professions that staff this industry.

**HIM 6555 - Prof Practice Internship - 1-8 cr.**

Internship.

**HIM 6560 - Foundations of Management & Leadership in HIM - 3 cr.**

Focuses on the concepts, principles, tools and strategies utilized in managing operations within a performance improvement model. The course includes tools and techniques for planning, organizing, directing, controlling, and improving productivity and performance in Health Information Management. All of these concepts are addressed through the lens of various leadership theories and strategies.

**HIM 6777 - Special Topics in HIM - 1-3 cr.**

A special offering presented by the HIM graduate program to present new and/or emerging developments in the field of health information management.

**HIM 6900 - Continuing Enrollment Final AP - 0 cr.**

Required registration for continuing work on the final applied project. This is a zero-credit course billed at one credit. Students not completing the Final Applied Project within one academic year after registering for HIM 6522 must register for HIM 6900 each semester until completion of the Final Applied Project.

**HIM 6999 - Independent Study in HIM - 1-3 cr.**

Opportunity available, with the approval of the graduate advisor, for a student to pursue a special project or special studies in an area of health information management that is not covered by the existing curriculum.