

# HIM - HEALTH INFORMATION MGMT

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## HIM 1013 Anatomy & Physiology (3-1-3)

This course provides a comprehensive study of the structure and function of the human body, emphasizing their relevance to medical coding and health information management. Students will explore the structure and function of major body systems, understanding how these systems interrelate and how disorders can affect them. By the end of the course, students will be proficient in identifying and describing anatomical structures and physiological processes, crucial for accurate medical coding and documentation in healthcare settings.

## HIM 1033 Introduction to Healthcare Statistics (2-2-3)

This course introduces students to the realm of statistical analysis as applicable to healthcare environment. It enables students to use statistics terms effectively, organize and display data in multiple formats, and analyze univariate as well as bivariate data at a basic level. The course introduces students to the concepts of probability, data distribution and the relationship of probability to statistics. This course is a pre-requisite for the year two (2) HIM 2223 Principles of Epidemiology, Biostatistics & Population Health.

## HIM 1103 Health Information Management Studies & Healthcare Careers (2-2-3)

This course offers an introductory overview of topics addressed within the health information management (HIM) program. It affords students a chance to develop an understanding of comprehensive HIM skills, as it covers the activities and functions of a typical HIM department. It also introduces computerized record processing, data quality concepts and confidentiality, using related patient data systems as examples. Students will have hands-on experience by using EHR Go application, which will encourage them to see the holistic nature of healthcare while becoming proficient in its technology.

## HIM 1113 Introduction to Programming & Health Data Standards (2-2-3)

This course introduces students to fundamental programming concepts and data health standards using Python. Students will learn to write basic Python scripts, understand data types, control structures, functions, and libraries relevant to health information management. The course also covers key health data standards such as HL7 and FHIR.

## HIM 1123 Introduction to Management & Entrepreneurship in Healthcare (2-2-3)

This course covers essential aspects of organizational management, motivation, leadership, and conflict resolution from a managerial perspective. It integrates a robust approach to innovation and entrepreneurship, focusing on identifying and solving local or global problems pertinent to healthcare management. Through project-based learning, students analyze healthcare business challenges and explore the deployment of tools/frameworks required to start new, innovative healthcare-related ventures.

## HIM 1133 Applied Pathophysiology (3-1-3)

This course explores the physiological and pathological processes underlying various diseases and disorders. The course emphasizes understanding etiology, pathogenesis, clinical manifestations, and complications of common health conditions. Students will develop a comprehensive knowledge base of pathophysiological mechanisms, enabling them to critically analyze & interpret clinical data, and appreciate the formulation of appropriate interventions & treatments. The course integrates case studies and problem-based learning to enhance students' analytical and decision-making skills.

**Prerequisites:** HIM 1013

## HIM 1203 Health Information Coding I (2-2-3)

This course introduces students to basics of applying codes from the latest International Classification of Diseases (ICD). It guides students in selecting appropriate ICD codes for health-related events such as morbidity, mortality, surgical procedures and other healthcare interventions. With emphasis on accuracy, completeness, and sequencing, students will explore the usage of ICD codes. By the end of the course, students will have knowledge of ICD guidelines and conventions, and possess the skills to abstract and code basic hospital encounters using ICD code sets.

**Prerequisites:** (HSC 1033 or HIM 1013), HSC 1803

## HIM 2003 Health Information Coding II (3-1-3)

Offers a comprehensive approach to incorporate coding principles from theory to practice at an intermediate level, as well as introducing students to the science of pharmacology, focusing on the rationale for appropriate code assignment. Students are required to apply their knowledge of pharmacology when coding case studies. Students are also required to successfully complete HIM 1203 HI Coding I before commencing this course.

**Prerequisites:** HIM 1203

## HIM 2013 Health Database Systems (2-2-3)

This course provides a foundation for students to query healthcare data and focuses on development and use of SQL (Structured Query Language) to access, analyze and present meaningful data to pertinent stakeholders. As part of the course, students will write basic queries to extract useful data and will develop more complex queries to address increasingly complex healthcare-related use-cases and contextual requirements. The course incorporates hands-on experience by affording students practical opportunity to apply their knowledge of SQL in exploring data pertinent to UAE healthcare industry.

**Prerequisites:** HIM 1113

## HIM 2123 Health Information Coding III - ICD Diagnosis & CPT Procedure Coding (3-1-3)

This course affords the development of further knowledge on health information coding using the latest ICD version, along with the application of abstracting complex case studies and the implication of these processes on the provision of better health planning, financing and administration. An understanding of the link between case-mix, diagnostic related groups (DRGs) and health funding models and how these tools contribute to the provision of better health outcomes is also developed. Students need to successfully complete HIM 2003 (Health Information Coding II) before commencing this course.

**Prerequisites:** HIM 2003

**HIM 2133 Health Informatics I - Basic Informatics Concepts (2-2-3)**

This course introduces essential concepts and applications of information and communication technologies in healthcare. Upon successful completion of this course, students are expected to understand and apply system thinking to describe healthcare services; and assess computer hardware, software and networking technologies as components of healthcare information systems.

**Prerequisites:** HIM 2013

**HIM 2213 Intermediate Programming (2-2-3)**

This course builds on foundational programming concepts from HIM 1113 with a focus on health information management applications. Students will enhance their programming skills using Python, exploring intermediate topics such as object-oriented programming, data structures, algorithms, database integration, and healthcare data processing. Practical sessions will involve real-world health data scenarios to develop problem-solving and analytical skills crucial for managing healthcare information systems.

**Prerequisites:** HIM 1113

**HIM 2223 Principles of Epidemiology, Biostatistics & Population Health (2-2-3)**

This course covers statistical concepts such as levels of measurement, frequencies, normal distributions, rates, proportions, confidence intervals & p-value. It also includes descriptive & inferential procedures typically used in exploring healthcare data. It supports the development of an appreciation for epidemiology & other public health tools/processes/practices. Principles & methods of population health will be discussed, and additional topics such as research ethics, critical reviews of the literature, and clinical research study designs will be covered within the purview of this course.

**Prerequisites:** HIM 1033

**HIM 2323 Legal and Ethical Aspects in HIM (2-2-3)**

This course provides knowledge of medico legal issues and how this affects the health information manager. It also explores ethical challenges in the management of health information as well as the contemporary health care setting. Upon successful completion of this course, students possess knowledge of medical - legal issues and how this affects the health information manager. Students learn to appreciate the ethical challenges in the management of health information in contemporary health care settings.

**HIM 2333 Health Database Design and Administration (2-2-3)**

This course builds on the foundation students have developed from the HIM 2013 (Health Database Systems), as it enhances their knowledge of SQL queries and report generation by introducing concepts of database design, data modeling and database normalization. In this course, students will understand healthcare-related use-cases and business requirements and transform their understanding of the healthcare system into meaningful data models and database schemas that efficiently store information while meeting the business and technical requirements of the often-complex healthcare system.

**Prerequisites:** HIM 2013 or CIS 1303

**HIM 2916 Health Information Coding Apprenticeship (0-24-6)**

This course is a work-experience for HIM students that is mainly geared towards health information coding. The course will enable students to consolidate coding knowledge & skills gained in the program and prepare them for future roles as qualified coding professionals. To verify students' suitability for employment & certification, they will need to demonstrate knowledge of ICD-10-CM & CPT coding guidelines and legal aspects of patient records management. Besides, they will be required to conduct a project pertinent to clinical coding & pass a skills assessment during this work experience.

**Prerequisites:** HIM 1103, HIM 2003, HIM 2013, HIM 2323

**HIM 3023 Health Information Coding IV – Revenue Cycle Management & AI Assisted Coding (2-2-3)**

This course continues to develop students' understanding of coding function with an emphasis on using health information technology (HIT) applications to assist in coding process. It examines key elements of revenue cycle management & analyzes function of HIM professionals using HIT applications in this process. Students evaluate issues of coding compliance & recommend a coding compliance program based on national & international standards. The course covers contemporary concepts of Artificial Intelligence (AI), and how such technologies continue to shape health information coding landscape.

**Prerequisites:** HIM 2123

**HIM 3213 Health Informatics II - Application of Informatics Concepts (2-2-3)**

This course applies concepts related to strategic planning, analysis, design, evaluation, selection and implementation of health information systems (HIS). The course develops further understanding of the field of health informatics and different patient care applications. Additionally, this course applies assessment and evaluation methodologies to e-health applications adoption and affords students introductory exposure to HIS/HIT project management. Students need to successfully complete HIM 2133 (Health Informatics I - Basic Informatics Concepts) before commencing this course.

**Prerequisites:** HIM 2133

**HIM 3323 Healthcare Finance Management (2-2-3)**

This course introduces accounting systems and controls in healthcare, the accounting cycle and books of original entry, accrual accounting as well as reporting and interpreting financial statements. Topics covered in the course include assets, liability, equity, balance sheets, income statements, cashflow, inventory, depreciation, managerial accounting concepts, financial accounting basic principles, budgeting and decision making as related to cost control. The financial concepts in the course will be covered in terms of its applications to the healthcare industry.

**Prerequisites:** HIM 1123

**HIM 3403 Health Data Analytics & Healthcare Performance Measurement (2-2-3)**

This course covers collection, interpretation and uses of health data beyond the client/patient treatment and disease/operation classification stages. Key emphases include health data applications in management and clinical decision-making; performance indicators, evaluation of coded & non-coded sources of health data for research, data management for clinical trials, and regulatory & management issues surrounding registries & databases. Students will explore computer tools for manipulation, analysis and presentation of data using real-world examples across a wide range of healthcare settings.

**Prerequisites:** HIM 2223

**HIM 3413 HIS/IT Project Management (2-2-3)**

This course affords students the knowledge and skills needed to manage projects within the healthcare IS/IT realm. The course covers basics of project management concepts & methods, identifies skills & competencies of an effective project manager, and explores project management frameworks. As part of the course requirements, using project management software, students will demonstrate their skills in "IS/IT project management" by embarking on a major project specific to the healthcare context.

**Prerequisites:** HIM 3213

**HIM 3423 Healthcare Human Resource Management (3-1-3)**

This course introduces human resource management (HRM) as related to health information management. The course will cover the basic functions of HRM and will examine processes such as acquiring employees, establishing good relationships with them, training & developing them, retaining them, and how to deal with problem situations in the employer-employee relationship.

**Prerequisites:** HIM 1123

**HIM 3433 Healthcare Quality Management (2-2-3)**

This course focuses on the concepts and processes of quality and how quality is applied throughout healthcare. It discusses activities and methods of quality improvement in health care facilities generally, and in the health information management department specifically. It addresses the attributes of an effective quality improvement team and includes an introduction to & application of the concept of risk management as well as utilization review processes.

**Prerequisites:** HIM 1123, HIM 2223

**HIM 3904 HIM Hospital & Coding Preceptorship (0-16-4)**

This course provides an opportunity for the application of knowledge and skills in an active health information management department. The course is a clinical preceptorship where students apply diagnosis and procedure coding techniques to actual complex patient records. The coding aspect of this preceptorship provides opportunities to code increasingly complex records with an emphasis on speed, accuracy, completeness and sequencing. In addition, the preceptorship provides an opportunity to analyze and suggest improvements for HIM practices and standards.

**Prerequisites:** HIM 1103, HIM 2003, HIM 2133, HIM 2333, HIM 3403

**HIM 3922 Seminar Series in HIM (1-1-2)**

This course affords students the opportunity to benefit from hearing about contemporary health information management (HIM) methods, tools, processes, and/or procedure from speakers from both academia and industry. The course focuses on developing an understanding of current and future directions in the realm of HIM and facilitating students' grasp of how HIM skills could be harnessed to improve the health and healthcare of patients served/cared for within the UAE health system.

**Prerequisites:** HIM 1103

**HIM 4083 HIM Capstone Project I (3-1-3)**

This course affords students an understanding of the process of scientific inquiry. Quantitative and qualitative methods pertinent to Health Information Management (HIM) are covered within the purview of the course. Emphasis is placed on developing a critical scientific approach to evaluating scientific literature, developing a research proposal and data collection tools. This course serves as "theoretical backbone" to a capstone research project that would be completed by HIM students in their final semester.

**Prerequisites:** HIM 2223, HIM 3922

**HIM 4093 HIM Capstone Project II (1-3-3)**

This course is mainly focused on the implementation and completion of the research project proposed in "HIM 4083 – HIM Capstone Project I." Students will execute their research plans by making necessary refinements to their proposals with updated literature review, obtaining pertinent ethical approval, collecting and analyzing data, and interpreting results. The research process in this course culminates in a comprehensive final capstone report and presentation.

**Prerequisites:** HIM 4083

**HIM 4303 Health Care Economics and Health Insurance (3-1-3)**

Develops an understanding of health economics and economic analysis of the health care market. Identifies and assesses factors that control the health care insurance industry; describes and discusses the different models of health care cost control, including case mix funding systems and managed care programmes; describes and discusses the impact of adopting new technologies on cost of health care services; and finally, considers and discusses the ethical and political aspects of these new health care funding models from a global perspective.

**HIM 4413 Strategic Management in Health Care (3-1-3)**

Focuses on strategic management and its application in health care. Topics covered include: strategic planning and forecasting; marketing; organizational assessment; benchmarking; quality improvement; workplace re-design; and process re-engineering. Applies knowledge and skills gained to develop and evaluate departmental strategic plan and demonstrate the implementation of the plan at departmental and organizational levels.

**Prerequisites:** HIM 2403

**HIM 4423 Big Data Analytics & AI in Healthcare (2-2-3)**

This course will give students a broad overview of the theory and practice of big data analytics and the myriads of ways in which artificial intelligence (AI) contributes to it. The course also affords students a robust foundation in developing solutions that need to manipulate big data within the healthcare realm, whilst exploring contemporary issues surrounding usage of Big Data Analytics and AI Tools in healthcare.

**Prerequisites:** HIM 2213, HIM 2333, HIM 3403

**HIM 4433 Interoperability & Health Information Exchange (2-2-3)**

This course examines contemporary internationally accepted approaches to interoperability and explores the development of electronic health record architectures to support such capabilities. The course examines clinical coding/ health data programming, as well as how coding/ programming schemes are devised and maintained. Approaches to modelling clinical contents – information models and semantic models – are covered within the purview of the course, while standards for interoperability such as DICOM, HL7, FHIR, IHE, and openEHR are also explored.

**Prerequisites:** HIM 1113, HIM 2213, HIM 3213

**HIM 4443 Decision Support Systems (2-2-3)**

This course affords students the opportunity to learn about the myriad forms of healthcare knowledge and decision making. It also explores how knowledge can be represented in computable format making it amenable for decision support purposes. This course also considers the design and evaluation of clinical decision support (CDS) systems, viewing this from a wider perspective of methodological and technological challenges involved in integrating such systems into clinical practice or healthcare service provision.

**Prerequisites:** HIM 1113, HIM 2213, HIM 3213

**HIM 4453 Consumer Health Informatics (Personalized Health Informatics) (2-2-3)**

This course exposes students to a range of Consumer Health Informatics (CHI) applications, and covers the needs or issues the applications address, the theories that underpin their design and deployment. Students will also learn how to evaluate existing CHI applications and assess the needs of potential users of such applications taking into consideration plausible disparities that exist in access to health information and healthcare services.

**Prerequisites:** HIM 1113, HIM 2213, HIM 3213

**HIM 4916 HIM Professional Experience I (0-24-6)**

This course is the penultimate work experience for HIM students before graduating and being able to function as HIM professionals. This course will enable students to consolidate the knowledge & skills gained throughout the program in practical & theory-based courses to effectively prepare them for future roles as qualified professionals in the diverse field of HIM. To verify students' prowess and their suitability for employment & future professional certifications they will be required to conduct a project pertinent to HIM & pass a practical skills assessment during this work experience.

**Prerequisites:** HIM 1103, HIM 2003, HIM 2133, HIM 2323, HIM 2333, HIM 3403, HIM 3904

**HIM 4926 HIM Professional Experience II (0-24-6)**

This course is the final work experience for HIM students before graduating and being able to function as qualified HIM professionals. This course will enable students to consolidate the knowledge & skills gained throughout the program in practical & theory-based courses to effectively prepare them for future roles as qualified professionals in the diverse field of HIM. To verify students' prowess and their suitability for employment & future professional certifications they will be required to conduct a project pertinent to HIM & pass a practical skills assessment during this work experience.

**Prerequisites:** HIM 1103, HIM 2003, HIM 2133, HIM 2323, HIM 2333, HIM 3403, HIM 3904, HIM 4916