Program Guide for Health Informatics & Information Management

2021

Contents

Student Welcome

Dear Students,

Warm welcome to the Department of Health Informatics and Information Management

The purpose of this handbook is to provide you with key information regarding the Department of Health informatics and Information Management HINM and to explain to you how our program works. It is important that you read this handbook to familiarize yourself with your program of study and departmental policies and procedures before you begin the studies. Updates and policy/procedure changes will be posted on the student bulletin. Additional information can be found in the UOH catalog and the College Unified regulations for study and examinations. (http://www.UOH.edu.sa.).

The HINM Program is among the important programs at College of Public Health and Health Informatics in University of Hail. The health informatics domain, which is defined by the *American Medical Informatics Association* as "the science of how to use data, information and knowledge to improve human health and the delivery of health care services," is becoming more important as healthcare institutions face pressure to simultaneously reduce costs and improve the patient experience.

HINM professionals requires knowledge and skills of clinical medicine, the electronic health record EHR, health care database administration, data analytics, coding and classification systems, quality, and human resource management, as well as ethical, legal, regulatory and accrediting agency requirements. Our various courses demonstrate how this focus also informs our instruction. The academic staff at HINM is dedicated to training future health information managers for the Saudi healthcare system. We cordially invite you to our regular lectures and seminars, part of our continuing education program.

We wish you a rewarding learning experience in *HINM*

Introduction

Health Informatics & Information Management (HINM) Program seeks to provide education and distinguished training to prepare qualified cadres scientifically and practically, that can keep pace with health-sector developments and reforms and comply with the requirements of the local community by providing a high quality educational and training environment that, promotes the production of creative research and community partnership locally and regionally.

The plan is updated in line with the Ministry of Health's strategy in accordance with the Kingdom's Vision 2030, using health information technology in the management of health services. The 2020 Transformation Plan supports 70% electronic health file in Saudi Arabia. The program will keep abreast of modern scientific education in the field of health information technology and the needs of the labor market through the inclusion of curricula commensurate with the development of health information and technology management.

Program Mission

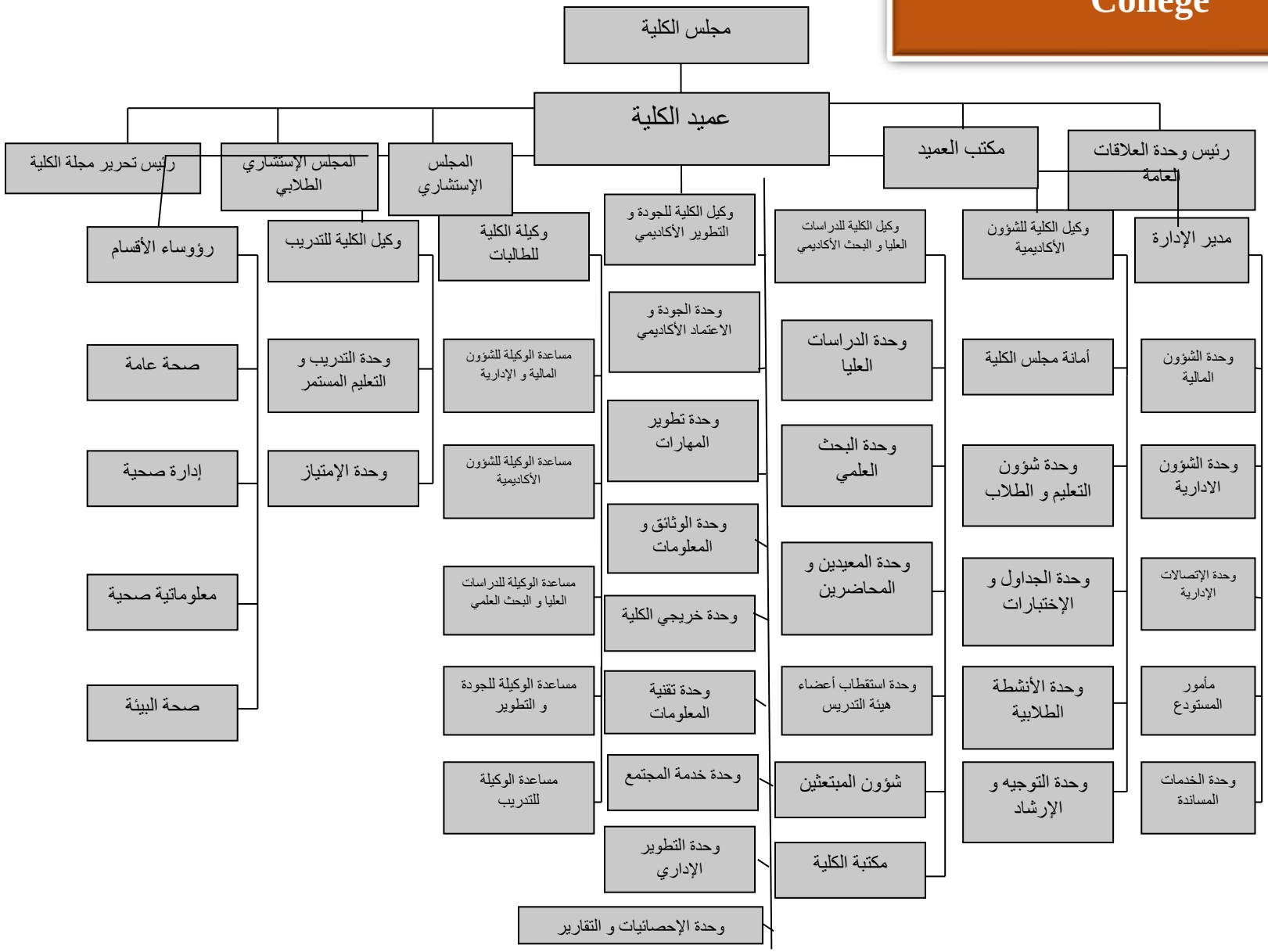
The mission of the department of Health Informatics is to educate and prepare professionals with the knowledge and skills to guarantee the usability, accuracy, availability, integrity, security, and accessibility of patient health information to enhance the efficiency and quality of healthcare delivery.

Program Objectives

1. Enable students to conduct and improve information applications and information management to suit the needs of the Saudi labor market.
2. Provide students with the necessary skills in the field of health informatics.
3. Prepare students to understand and keep abreast of various technical and scientific developments related to computer science in the health sector.
4. Enable students to develop practical knowledge and skills so that the student can use health informatics applications optimally.
5. Enable students to keep abreast of recent developments and applications in the field of health informatics.
6. Encourage students to excel in scientific research in health information and information management.

الهيكل التنظيمي لكلية الصحة العامة والمعلوماتية الصحية

Organization Chart of College



Organization Chart of Program

لجان الجودة في قسم المعلوماتية الصحية

Admission Requirements

شروط ومعايير التخصيص

م	الكلية	الأقسام	معايير التخصيص				شروط أخري
			طلاب		طالبات		
			المعدل المطلوب	الطاقة الاستيعابية	المعدل المطلوب	الطاقة الاستيعابية	
1	الصحة العامة والمعلوماتية الصحية	المعلوماتية الصحية	2	25	2	25	1- اجتياز جميع مقررات السنة التحضيرية للمسار الصحي بنجاح. 2- أن يكون الطالب لائقاً طبياً.

Admission of prospective students requires the following:

- The applicant must hold the General Secondary Certificate or its equivalent from inside or outside Saudi Arabia.
- Students must successfully pass all the preparatory year courses for the health track.
- The applicant must pass any interviews or tests decided by the University Council.
- The applicant must be medically fit.
- The applicant must obtain an approval to study from his employer if he works in any government or private institution.
- The applicant must meet any other conditions determined and announced by the University Council at the time of application.

Graduation Requirements

شروط ومعايير التحويل

الكلية	الأقسام	شروط ومعايير التحويل بين الأقسام داخل الكلية				شروط ومعايير التحويل من الكليات إلي كلية الصحة العامة				شروط أخري
		طلاب		طالبات		طلاب		طالبات		
		المعدل المطلوب	الطاقة الاستيعابية	المعدل المطلوب	الطاقة الاستيعابية	المعدل المطلوب	الطاقة الاستيعابية	المعدل المطلوب	الطاقة الاستيعابية	
الصحة العامة والمعلوماتية الصحية	المعلوماتية الصحية	2	5	2	5	2	5	2	5	**شروط للتحويل بين أقسام الكلية:** 1- لايحق لطالب التجسير التحويل من قسم إلي قسم داخل الكلية (التحويل الداخلي فقط للطلبة النظامين). **شروط للتحويل من الكليات إلى كلية الصحة العامة:** 1- أن يكون الطالب قد أنهي السنة التحضيرية في المسار الصحي.

Candidates for the Health Informatics and Information degree must

- Completed the prescribed curriculum with an overall cumulative grade point average of 2.00 or higher on a 4.00 scale.
- Following satisfactory completion of all requirements, students will be awarded the Bachelor of Science in Health Informatics and Information degree from college of public health and health informatics, University of Hail.

Academic Reference Standards of Program

Introduction

The growing role of information technology within healthcare delivery organizations has created the need to deepen and widen the pool of workers who can help organizations maximize the ongoing effectiveness of their investment in information technology, and in so doing maximize impact on equity, safety, patient-centeredness, timeliness, effectiveness and efficiency of care. Globally, the health industry is engaged in wide-scale implementation of information systems to support various national and international imperatives, including providing clinical care, research and education, public health reporting and surveillance, homeland security, and conquering diseases. The health sector faces an expanding array of sophisticated clinical information systems that are being implemented into a broader range of settings, thereby increasing the volume and complexity of data and giving evidence of the growing role that information systems will play in virtually every aspect of healthcare delivery [1].

In 2005, the American Medical Informatics Association (AMIA) and the American Health Information Management Association (AHIMA) created a process and a committee to jointly develop and address a common public policy agenda. One of the first action items on the joint committee's agenda was to address the urgent need to support investments in education and training for health informatics and health information management (HIM) professionals [1].

Health Informatics and Information Management (HINM) is the study of the principles and practices of acquiring, analyzing, and protecting digital and traditional medical information vital to providing quality patient care. It is the link to clinicians, technology designers, and information technology, and is the value-adding bridge between leadership and management of health information in all formats (paper, scanned, or computerized forms), and is a critical component of the electronic health record (EHR) workforce.

Health Informatics and Information Management also focuses on information systems, informatics principles, and information technology as it is applied to the continuum of healthcare delivery. In summary, Health Informatics and Information Management is a combination of business, science, and information technology.

HINM professionals also work on the classification of diseases and treatments to ensure they are standardized for clinical, financial, and legal uses in healthcare. HINM professionals care for patients by caring for their medical data and are responsible for the quality, integrity, security, and protection of patients' health information.

Health Informatics applications

Examples of Health Informatics applications include the design, development, implementation, maintenance and evaluation of the following:

1. Communication protocols for the secure transmission of healthcare data

2. Electronic patient record systems (regionally, provincially, territorially or nationally)
3. Evidence-based clinical decision support systems
4. Classification systems using standardized terminology and coding.
5. Case management systems (e.g., for community, home and long-term care) access and referral systems for healthcare services
6. Patient monitoring systems (e.g., computer controlled bedside monitors and patient home monitoring devices)
7. Digital imaging and image processing systems
8. Telehealth technologies facilitate and support remote diagnosis and treatment.
9. Internet and mobile technology and applications for engaging patients in their own care
10. Public health surveillance and protection systems
11. Methodologies and applications for data analysis, management and mining
12. Clinical information data warehouses and reporting systems
13. Business, financial, support and logistics systems.

Program Intended Learning Outcomes (PLO's)

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Program Learning Outcomes*	
Knowledge and understanding	
K1	Recognize the importance and potential of basic sciences, public health, health information and digital health technology.
K2	Demonstrate the standards, regulations, medical coding and classifications in health informatics.
K3	Describe the nature of medical data and electronic (medical/health) records (EMR/EHR) and requirements for compliance with the standards and regulations of current data collection systems.
K4	Identify the medical departments and clinical support systems connected to the informatics tools and systems used in healthcare, along with their respective.
K5	Recognize the impact of risk management, quality assurance, Big data, Data protection and patient safety in health informatics.
Skills	
S1	Be in charge of managing health information systems in accordance with the legal, ethical, administrative, and medical requirements of the healthcare delivery system.
S2	Able to perform project management, skill to work on EMR/EHR systems, and problem-solving skills in a variety of settings.
S3	Effectively communicate with other health informaticians when defining goals, putting solutions into practice with the right tools, and assessing the outcomes.
Values, Autonomy, and Responsibility	
V1	Maintain a professional attitude with colleagues, faculty, staff, and students.
V2	Apply best practices and professional attitude in business processes, ethical/security issues, and usage of informatics/computer sciences as part of solving problems. Holds Islamic principles of service and citizenship for the benefit of the organization and society

Study Plan of the Program

المقررات الدراسية للبرنامج وتوزيعها على المستويات:

1. عدد الساعات والمقررات للمتطلبات على مستوى الجامعة، الكلية والبرنامج:

Curriculum Structure

Program Structure	Required/ Elective	No. of courses	Credit Hours	Percentage
Institution Requirements	Required	7	15	11.36
	Elective	-	-	-
College Requirements	Required	14	38	28.79
	Elective	-	-	-
Program Requirements	Required	24	72	54.55
	Elective	2	4	3.03
Capstone Course/Project		1	3	2.27
Field Training/ Internship	Required	48 weeks		-
Residency year				
Others				
Total		48	132	100%

2. المقررات الدراسية للبرنامج:

Program Courses

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
Level 1	PENG001	Prep English 1	Required	-	3	College
	PENG 002	Prep English 2	Required	-	3	College
	PCHM 121	Preparatory Chemistry	Required	-	3	College

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
	PMDC 101	Medical Foundations	Required	-	2	College
	PCOS 001	Prep Computer Skills	Required	-	2	College
Level 2	PENG 003	Prep English 3	Required	-	3	College
	PENG 008	Prep English 4	Required	-	3	College
	PBIO 121	Preparatory Biology	Required	-	3	College
	PHYS 121	Medical Physics	Required	-	3	College
	PCSK 001	Communication Skills	Required	-	2	College
Level 3	PH 201	Epidemiology	Required	-	3	College
	PHHA 211	Introduction to Health Management	Required	-	3	College
	HINM 202	Introduction to Math	Required	-	2	Department
	HINM 204	Principles of Health Informatics & Information Management	Required	-	3	Department
	ENGL 110	Writing Skills	Required	-	3	Institution
	ARAB 101	Skills of Arabic Language	Required	-	2	Institution
	IC 101	Introduction to Islamic Culture	Required	-	2	Institution
Level 4	PH 206	Anatomy & physiology	Required	-	2	College
	PH 202	Biostatistics	Required	PH 201	3	College

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
	HINM 222	Fundamental of Information Systems	Required	HINM 202	3	Department
	HINM 223	Computer Program	Required	HINM 202	3	Department
	HINM 224	Legal & Ethical Issues in Health Informatics	Required	HINM 204	2	Department
	ARAB 102	Arabic Editing	Required	ARAB 101	2	Institution
	IC 102	Islamic & Society Building	Required	IC 101	2	Institution
Level 5	PHPH 317	Fundamentals of Human Diseases	Required	PH 206	3	Department
	HINM 310	E-health and Telemedicine	Required	HINM 204	3	Department
	HINM 317	Analytical Biostatistics	Required	PH 202	3	Department
	HINM 318	Health Care Accounting	Required	HINM 202	3	Department
	HINM 319	Systems Analysis and Design	Required	HINM 204	3	Department
	IC 103	Economic System in Islam	Required	IC 102	2	Institution
Level 6	HINM 325	Diagnosis Coding Systems	Required	HINM 223	3	Department
	HINM 326	Procedure Coding Systems	Required	HINM 223	3	Department
	HINM 327	Fundamentals of Computer Networks	Required	HINM 222	3	Department

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
	HINM 328	Information Security	Required	HINM 224	3	Department
	HINM 329	Computer Networking Systems	Required	HINM 222	4	Department
	IC 104	Political System in Islam	Required	IC 103	2	Institution
Level 7	HINM 411	Decision Support Systems	Required	HINM 319	3	Department
	HINM 417	Electronic Health Records	Required	HINM 310	3	Department
	HINM 418	Fundamental Geography Information System	Required	HINM 319	3	Department
	HINM 419	Database Management Systems	Required	HINM 319	4	Department
	PHPH 414	Research Methodology in Health Sciences	Required	HINM 317	3	Department
	HINM 410	Medical Imaging	Elective	-	2	Department
	HINM 412	Special Topics in Health Informatics	Elective	-	2	Department
Level 8	HINM 420	Health Application Development	Required	HINM 326	3	Department
	HINM 421	Health Care Insurance	Required	HINM 329	3	Department

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
	HINM 429	Hospital Information Systems	Required	HINM 328	3	Department
	HINM 423	Project Management	Required	HINM 327	3	Department
	HINM 424	Graduation Project	Required	PHPH 414	3	Department
	HINM 427	Contemporary Issues in Health Informatics	Elective	-	2	Department
	HINM 428	Health Information Standards	Elective	-	2	Department

Study Plan

BS Health Informatics & Information Management

PROGRAM - **132** Credit Hours

- **University Requirements**
- **College Requirements**
- **Department Requirements**

First Year (Preparatory year)							
I. First Semester (13 Cr. Hrs)				**II. Second Semester (14 Cr. Hrs)**			
Course No.	**Course Title**	**Cr. Hrs**	**Pre-requisite**	**Course No.**	**Course Title**	**Cr. Hrs.**	**Pre-requisite.**
PENG 001	Prep English 1	3		PENG 003	Prep English 3	3	
PENG 002	Prep English 2	3		PENG 008	Prep English 4	3	
PCHM 121	Preparatory Chemistry	3		PBIO 121	Preparatory Biology	3	
PMDC 101	Medical Foundations	2		PHYS 121	Medical Physics	3	
PCOS 001	Prep Computer Skills	2		PCSK 001	Communication Skills	2	
Second Year							
III. First Semester (18 Cr. Hrs.)				**IV. Second Semester (17 Cr. Hrs.)**			
PH 201	Epidemiology	3		PH 206	Anatomy & physiology	2	

PHHA 211	Introduction to Health Management	3		PH 202	Biostatistics	3	PH 201
HINM 202	Introduction to Math	2		HINM 222	Fundamental of Information Systems	3	HINM 202
HINM 204	Principles of Health Informatics & Information Management	3		HINM 223	Computer Program	3	HINM 202
ENGL 110	Writing Skills	3		HINM 224	Legal & Ethical Issues in Health Informatics	2	HINM 204
ARAB 101	Skills of Arabic Language	2		ARAB 102	Arabic Editing	2	ARAB 101
IC 101	Introduction to Islamic Culture	2		IC 102	Islamic & Society Building	2	IC 101
Third Year							
V. First Semester (17 Cr. Hrs.)				**VI. Second Semester (18 Cr. Hrs.)**			
PHPH 317	Fundamentals of Human Diseases	3	PH 211	HINM 325	Diagnosis Coding Systems	3	HINM 223
HINM 310	E-health & Telemedicine	3	HINM 204	HINM 326	Procedure Coding Systems	3	HINM 223
HINM 317	Analytical Biostatistics	3	PH 202	HINM 327	Fundamentals of Computer Networks (OLD NAME APPLIED)	3	HINM 222
HINM 318	Health Care Accounting	3	HINM 202	HINM 328	Information Security	3	HINM 224
HINM 319	Systems Analysis and Design	3	HINM 204	HINM 329	Computer Networking Systems	4	HINM 222
IC 103	Economic System in Islam	2	IC 102	IC 104	Political System in Islam	2	IC 103

Fourth Year							
VII. First Semester (18 Cr. Hrs.)				**VIII. Second Semester (17 Cr. Hrs.)**			
HINM 411	Decision Support Systems	3	HINM 319	HINM 420	Health Application Development	3	HINM 326
HINM 417	Electronic Health Records	3	HINM 310	HINM 421	Health Care Insurance	3	HINM 329
HINM 418	Fundamental Geography Information System	3	HINM 319	HINM 429	Hospital Information Systems	3	HINM 328
HINM 419	Database Management Systems	4	HINM 319	HINM 423	Project Management	3	HINM 327
PHPH 414	Research Methodology in Health Sciences	3	HINM 317	HINM 424	Graduation Project	3	PHPH 414
	Department's Elective Requirements	*2*			*Department's Elective Requirements*	2	
Fifth Year							
Internship 48 weeks (full year excluding public holidays)							
Department's Elective Requirements							
HINM 410	Medical Imaging	2		HINM 427	Contemporary Issues in Health Informatics	2	
HINM 412	Special Topics in Health Informatics	2		HINM 428	Health Information Standards	2	

Course Descriptions

Course Code: PH 201 Epidemiology
This course presents basic epidemiologic concepts used to study health and disease in populations. It provides an overview of the major causes of morbidity and mortality, including methods of measurement (e.g., incidence, prevalence). Observational and experimental epidemiologic studies will be described**,** and their advantages and disadvantages compared. The course aims for students to begin developing the skills needed to evaluate data, interpret reports, and design and conduct studies. Students will be introduced to the various areas of epidemiologic study- cancer, molecular/genetic, environmental, occupational, social and behavioral, and infectious disease/surveillance.
Course Code: PHHA 221 Introduction to Health Management
This course describe the concepts, principles, and theories of management and their application and function to health care in order to utilize them in practical setting, describe the different organizational designs for structuring a health care services, and the impact of each on the delivery of health care, differentiate theories and styles of leadership in order to act as an effective leader in achieving improvement of health care services, recognize the process, principles and strategies of problem solving and decision making in order to make effective decisions in day to day working situation, understand the concepts, theories,

principles and process of communication and group dynamics in order to maintain high moral among staff members.
Course Code: HINM 204 Principles of Health Informatics & Information Management
This course focuses broadly on health care delivery systems, legal and ethical issues in health care, compliance and regulatory requirements, healthcare data and its role in quality management, and information technology. This course presents documentation guidelines for health records and introduces compliance and regulatory requirements for the health care industry.
Course Code: PH 206 Anatomy & physiology
The course focuses on the study of the body's structure which contribute to the body's order and stability, the parts of the human body that contribute to the maintenance of homeostasis, the functions of the body systems in the protection, support, movement, regulatory control, integrative communication, systemic coordination, and the contribution to the reproduction, growth and development of the human body.
Course Code: PH 202 Introduction to Math
This course provides the basic knowledge and skills of biostatistics, designed to teach students how to use a broad base of statistical methods and concepts to organize, analyze, and interpret hypotheses developed in various applications. Main goal for this class is to familiarize students with the various techniques of

statistical analyses that are utilized in different disciplines. Emphasis will be on the basic concepts and their meaning, as well as their application and interpretation.
Course Code: HINM 222 Fundamental of Information Systems
The overall goal is a thorough understanding of concepts, methodologies and techniques available to support the patients care process through the use of information, communication and decision technologies
Course Code: HINM 223 Computer Program
Introduction to computer science is a one semester course in which students will learn how to manage computers applications and a variety of software packages. Understanding the computer system logical operations by introducing basics of computer programming languages and how to manage the databases. This course will cover the following topics: Basics (HTML – CSS), Programing language (PHP), Database management systems (MySQL), Data mining.
Course Code: HINM 224 Legal & Ethical Issues in Health Informatics
The objective of course is to provide students with understanding of the legal terminology that is used within the health information management field, importance of all ethical and legal issues of health information as well as the procedures used to ensure the privacy of patient information.
Course Code: PHPH 317 Fundamentals of Human Diseases
The course concentrates on the fundamental aspects of animal physiology with an emphasis on the human body. The course is focused on the evolution, development, structure, function, health and disease of major physiological

systems and regulatory mechanisms coordinating their function in the human organism.
Course Code: HINM 310 E-health and Telemedicine
This course provides an introduction to e-Health without borders. The course will cover Telecommunication systems and their use in transferring biological and medical data, Organization of health-care systems. Organization, collection, handling and use of medical data in telemedicine.
Course Code: HINM 317 Analytical Biostatistics
This course is designed to give students a basic understanding of statistical methods and tools in biostatistics and hands on experience of analyzing data by using relevant statistical packages.
Course Code: HINM 318 Health Care Accounting
This course focus on accounting principles, concepts, and techniques that guide healthcare providers through concentration on the tools and models available to health care managers that assist them in their financial decision support and decision-making processes as well as retrospectively evaluating and reviewing resource allocation decisions.
Course Code: HINM 319 Systems Analysis and Design
This course focus on developing these systems analyst skills as they apply to the designing, developing and implementing business application software that runs on large mainframe to client-server systems.
Course Code: HINM 325 Diagnosis Coding Systems

Diagnosis coding system is one of the most important courses in HIIM because it provides the student with the exercises and knowledge to understand how to perform diagnosis code using latest version of international classification of diseases (ICD) and their application in Health informatics and reimbursement system.
Course Code: HINM 326 Procedure Coding Systems
Procedure Coding course is one of the most important courses in Health informatics & Information Management because it provides the student with the fundamentals knowledge to do procedure coding.
Course Code: HINM 327 Fundamentals of Computer Networks
The course aim**s** to teach students the fundamental concepts behind operating systems, management of resources (e.g.**,** CPU time, memory) and to control users and software and to examine the ways that design goals can be achieved.
Course Code: HINM 328 Information Security
The course aim**s** to familiarize students with the terminology in use in computer security. They learn the application of information security in diverse areas and are aware of modern threats and mitigation techniques.
Course Code: HINM 329 Computer Networking Systems
The course aims to familiarize students with the concepts, methodologies and techniques of modern networking. manage resources (e.g., CPU time, memory) and to control users and software.
Course Code: HINM 411 Decision Support Systems

Familiarizes students with the main developments of decision support systems in healthcare. The theoretical concepts and the technology including data mining, clinical decision support systems, diagnostic systems and decision support in managed care are outlined. Ethical issues are also addressed.
Course Code: HINM 417 Electronic Health Records
In this course the students will be taught what an EHR is, its components, types and benefits. They will also be introduced to some of the existing system in the world and also in Saudi Arabia. The practical Part will introduce the working of Electronic Health Records in hospital settings.
Course Code: HINM 418 Fundamental Geography Information System
This introductory course includes an overview of maps and computer systems, a look at models for attribute and spatial data, how a GIS can be used, and future trends for this technology Student of MSHI will be able to understand about GIS and its role, student will have knowledge about GIS software. Student**s** will be able to think geographically and will understand the application of GIS as a tool in health domain, primarily focusing public health planning, Epidemiology, disease surveillance. Student**s** will be able to understand the use of GPS for mapping purposes.
Course Code: HINM 419 Database Management Systems
This course aim**s** to develop an appreciation of the role of data, files and databases in information systems. Students will understand the database development activities during the System Development Life Cycle (SDLC). They will study data

modeling concepts (E-R and Class diagrams) used in database development and how to create databases and SQL queries of relational databases.
Course Code: PHPH 414 Research Methodology in Health Sciences
The course is focused on the art and science of research. It introduces fundamental concepts of research, the stages for learning the research process from the development of research questions, formulation of hypotheses, preparation of literature, design a theoretical or conceptual framework, research design, data collection, analysis and interpretation, conclusion to recommendation. It also develops students' research inquiry and the use of research findings into practice.
Course Code: HINM 420 Health Application Development
This course explores concepts and issues surrounding the development of health applications. It covers the design of various health applications including mobile applications. Students will use current technology to develop health apps.
Course Code: HINM 421 Health Care Insurance
The course is designed to provide the student with a comprehensive understanding of how the public/private health insurance system functions. It also presents an overview of healthcare insurance and introduces the student to the basics of healthcare insurance theories and practices.
Course Code: HINM 429 Hospital Information Systems
This course provides the student with the knowledge to hospital information system (HIS) as a comprehensive, integrated information system designed to manage all the aspects of a hospital's operation, such as medical, administrative, financial, and legal issues and the corresponding processing of services.

Course Code: HINM 423 Project Management
The course provides the student with a core project management body of knowledge needed to manage various projects. The course covers the basic fundamentals of project management that are established by the Project Management Institute. This course provides an opportunity for students to apply project management models to situations relevant to healthcare project management.
Course Code: HINM 424 Graduation Project
This course provides experiential knowledge and skills to design a research project or health informatics project as part of the requirement of graduation. The topics for project should related with any topics in health informatics such as clinical information system, medical record, nursing info system, coding and classification, appointment scheduling, dissemination of diagnostic information, registration and general administration & productivity.
Course Code: HINM 410 Medical Imaging (Elective)
The course will cover common imaging methods used in hospitals today -- i.e., x-ray, CT, MRI, and ultrasound -- as well as discuss emerging techniques, such as photoacoustic imaging.
Course Code: HINM 412 Special Topics in Health Informatics (Elective)
This course provides an overview of the main topics in the field of Health informatics. Students will prepare presentations to share their understanding of various topics they have been exposed in field of health informatics.
Course Code: HINM 428 Health Information Standards (Elective)

Health information standards course is one of the most important courses in Health informatics & Information Management because it provides the student with the fundamental'**s** knowledge of importance of standards.
Course Code: HINM 427 Contemporary Issues in Health Informatics (Elective)
This course explores issues in healthcare informatics, including health data and standards, electronic health records (EHR) and other healthcare information, data management concerns, and technology governance in the healthcare environment.
Internship
As a requirement for the Bachelor of Science in Health Informatics and Information Management major, students must complete an internship within the HINM realm of an actual healthcare organization. The internship program takes 48 weeks (12 months) to complete. The Health Informatics and Information Management program cannot guarantee internship placement or subsequent degree completion for students who do not pass an internship.

Program Key Performance Indicators (KPIs)

Code	Key Performance Indicators	Description
KPI-P-01	Percentage of achieved indicators of the program operational plan objectives **(i8)**	Percentage of performance indicators of the operational plan objectives of the program that achieved the targeted annual level to the total number of indicators targeted for these objectives in the same year
KPI-P-02	The awareness and support of the teaching staff and administrators of the mission of the program/institution **(i2)**	Percentage of faculty and program staff who are aware of the program / institution's mission using a questionnaire / interview to the total number of faculty and staff.
KPI-P-03	Students' Evaluation of quality of learning experience in the program **(i10)**	Average of overall rating of final year students for the quality of learning experience in the program on a five-point scale in an annual survey
KPI-P-04	Students' evaluation of the quality of the courses **(i6)**	Average students overall rating for the quality of courses on a five-point scale in an annual survey

Code	Key Performance Indicators	Description
KPI-P-05	Completion rate **(i12)**	Proportion of undergraduate students who completed the program in minimum time in each cohort
KPI-P-06	First-year students retention rate **(i1)**	Percentage of first-year undergraduate students who continue at the program the next year to the total number of first-year students in the same year
KPI-P-07	Students' performance in the professional and/or national examinations	Percentage of students or graduates who were successful in the professional and / or national examinations, or their score average and median (if any)
KPI-P-08	Graduates' employability and enrolment in postgraduate programs **(i14,19)**	Percentage of graduates from the program who within a year of graduation were: a. employed. b. enrolled in postgraduate programs during the first year of their graduation to the total number of graduates in the same year
KPI-P-09	Average number of students in the class	Average number of students per class (in each teaching session/activity: lecture, small group, tutorial, laboratory or clinical session)

Code	Key Performance Indicators	Description
KPI-P-10	Employers' evaluation of the program graduates proficiency **(i26)**	Average of overall rating of employers for the proficiency of the program graduates on a five-point scale in an annual survey
KPI-P-11	Student evaluation of the Value and Quality of Field Activities **(i15)**	Percentage of students' satisfaction with the presence and quality of field activities during the semester and the academic year at the program / college / university.
KPI-P-12	Students' satisfaction with the offered services **(i18,28)**	Average of students' satisfaction rate with the various services offered by the program (restaurants, transportation, sports facilities, academic advising, ...) on a five-point scale in an annual survey
KPI-P-13	Ratio of students to teaching staff **(i9)**	Ratio of the total number of students to the total number of full-time and full-time equivalent teaching staff in the program
KPI-P-14	Percentage of teaching staff distribution	Percentage of teaching staff distribution based on: a. Gender b. Branches c. Academic Ranking

Code	Key Performance Indicators	Description
KPI-P-15	Proportion of teaching staff leaving the program **(i37)**	The proportion of teaching staff leaving the program annually for reasons other than age retirement to the total number of teaching staff.
KPI-P-16	Percentage of publications of faculty members **(i36)**	Percentage of full-time faculty members who published at least one research during the year to total faculty members in the program
KPI-P-17	Rate of published research per faculty member **(i42)**	The average number of refereed and/or published research per each faculty member during the year (total number of refereed and/or published research to the total number of full-time or equivalent faculty members during the year)
KPI-P-18	Citations rate in refereed journals per faculty member **(i44)**	The average number of citations in refereed journals from published research per faculty member in the program (total number of citations in refereed journals from published research for full-time or equivalent faculty members to the total research published)
KPI-P-19	Relevance of the qualifications and experience of faculty members to the courses they teach **(i17)**	Percentage of faculty members with qualifications and experience of the courses they are studying compared to the total number of courses offered during the academic year.

Code	Key Performance Indicators	Description
KPI-P-20	The percentage of full-time teaching staff members and the others of administrative staff that participate in community services activities **(i49)**	Number of full-time faculty, other staff and administrators engaged in a community service activity during the academic year compared to the total number of faculty, other staff and administrators
KPI-P-21	Satisfaction of beneficiaries with the learning resources **(i13,27,33)**	Average of beneficiaries' satisfaction rate with the adequacy and diversity of learning resources (references, journals, databases… etc.) on a five-point scale in an annual survey.
KPI-P-22	PLOs' achievement	average of overall assessment of PLOs (direct & indirect)

Facilities (Classrooms-Laboratories-Specialized Equipment…. Etc.)

FACILITIES:

1. Library
2. Computer lab
3. Classrooms for group discussions
4. Blackboard

SOFTWARE APPLICATIONS:

1. Simulation laboratory for electronic medical records
2. MED-CIN
3. Coding Software
4. SPSS
5. R studio
6. Visual Basic 2012

Graduate Employment Opportunities

Employment Opportunities for The Health Informatics Professionals:

1. Coding Professional
2. Business Process Engineer
3. Healthcare consumer Advocate
4. Clinical Data Analyst
5. E-HIM Project Manager
6. Compliance Officer
7. Health Information System Application Designer
8. Health Data/ Information Resource Manager
9. Project Manager
10. Assistant HIM Director
11. HIM Director
12. Consultant

Contact

College

College of Public Health and Health Informatics

Department

Health Informatics

Program

Health Informatics and Information Management

Program Website

https://www.uoh.edu.sa/en/faculties/type=medical/college-of-public-health-and-health-informatics-69/faculty_page=sections/health-informatics-department-73/section_page=details

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