HEALTH RECORDS OFFICERS REGISTRATION BOARD OF NIGERIA
Course: Bachelor of Health Information Management (B.HIM)
30% Addition to Core Curriculum and Minimum Academic Standards (CCMAS)

LEVEL	NUC 70%		University 25%	Units	Sub-total Units	Total units
100	24	HIM 111	History and Development of Medical Records	3		
			Management	2	7	31
		HIM 121	Language of medicine	2		
		HIM 112	Nigerian Healthcare System			
200	23	HIM 213	Health Insurance Principles and programmes	2		
		HIM 214	Intro M & E of health programmes	2		
		HIM 215	Anatomy and Physiology of Human body for HIM II	3		
		HIM 225	Fundamental Health Records documentation and		13	36
			Analysis	3		
		HIM 226	Information and Computer skills	3		
300	24	HIM 316	M & E of health programmes	2		
		HIM 317	Health Informatics	3		
		HIM 324	Biometrics	2	11	35
		HIM 325	Introduction Electronic Health Records	2		
		HIM 326	Application of HIM in other Organisation	2		
400	21	HIM 415	Clinical Coding and Indexing II	2		
		HIM 416	Design and Analysis of experiment	2	9	30
		HIM 421	Electronic Health Records	3		
		HIM 422	Medical Billing and Reimbursement	2		
500	20	HIM 515	Artificial Intelligence in HIM	2		
		HIM 516	Health Data Analytics	2		
		HIM 517	Health Management Information System	2	12	32
		HIM 525	Health Economics	2		
		HIM 526	International Health	2		
		HIM 527	Human Nutrition	2		
	105			52	52	157

100 LEVEL COURSES

Course Code	Course Title	Unit	Status
HIM 111	History and Development of Health Information Management	3	C
HIM 112	Language of medicine	2	C
HIM 121	Nigerian Healthcare System	2	C
Total		**7**	

200 LEVEL COURSES

Course Code	Course Title	Unit	Status
HIM 213	Health Insurance Principles and programmes	2	C
HIM 214	Introduction to Monitoring & Evaluation of Health programmes	2	C
HIM 215	Anatomy and Physiology of Human body for HIM II	3	C
HIM 225	Fundamental Health Records Documentation and Analysis	2	C
HIM 226	Information and Computer skills	2	C
Total		**11**	

300 LEVEL COURSES

Course Code	Course Title	Unit	Status
HIM 316	Monitoring & Evaluation of Health programmes	2	C
HIM 317	Health Informatics	3	C
HIM 324	Biometrics	2	C
HIM 325	Introduction Electronic Health Records	2	C
HIM 326	Application of HIM in other Organisation	2	E
HIM 327	Introduction to Clinical Diagnosis	2	C
Total		**13**	

400 LEVEL COURSES

Course Code	Course Title	Unit	Status
HIM 415	Clinical Coding and Indexing II	2	C
HIM 416	Design and Analysis of experiment	2	C
HIM 421	Electronic Health Records	3	C
HIM 422	Medical Billing and Reimbursement	2	C
Total		**9**	

500 LEVEL COURSES

Course Code	Course Title	Unit	Status
HIM 515	Artificial Intelligence in HIM	2	C
HIM 516	Health Data Analytics	2	C
HIM 517	Health Management Information System	2	C
HIM 525	Health Economics	2	C
HIM 526	International Health	2	E
HIM 527	Human Nutrition	2	E
Total		**12**	

HIM 111 History and Development of Medical Records (3 Units Compulsory; L= 45; P = 15)

HRORBN Approval Relevance

Graduates who are highly skilled and knowledgeable in history and development of medical records in accordance with HRORBN Mission to provide exceptional quality and comprehensive health care and integrated education and research in all health-related sciences, to expand access to compassionate and high quality health care for under-served populations within and outside Nigeria, and to lead the scientific pathway for reducing the burden of disease in our areas of operation.

Overview

History and development of medical records is a pool historical knowledge in which the student will learn the origin of the medical records keeping globally. The knowledge of various historical medical services rendered by various key physicians in the olden day will afford the health information management practitioners to be able to give vivid historical account of the profession. This course will equip the health information management practitioners with the historical background and various development transformations medical records has pass through.

Objectives

The objectives are to train graduates who are able to:

1. describe and trace the history of medical records the early age
2. explain development of medical records at different periods
3. identify different people that contributed to the history and development of medical records
4. explain different period in medical records history and development globally and indeed in Africa.
5. identify the emergence of ARM programs in Africa's colonial and post-colonial periods.
6. describe and trace the history of medical records in Nigeria
7. explain the contributions of individuals in the development of medical records in Nigeria
8. understand the functions and contributions of the regulatory Board to the development of the profession

Learning Outcomes

On Completion of this course, students should be able to:

1. understand early history of medical records

2. describe various developmental period of medical records.
3. explain at least five periods of medical records keeping
4. explain and trace the history of medical records in Nigeria
5. explain historical background education and training programs in Nigeria
6. discuss history of medical records in Nigeria during colonial and post-colonial periods.

Course Contents

Explain records and human existence. Explain history of medical records management. Discuss evolution and developmental stages of medical records during the following periods:

i. Egyptian Period
ii. Greek Period
iii. Ancient Greek and Roman Period
iv. Byzantine Period
v. Jewish Period
vi. Islamic period
vii. Medieval Period
viii. Renaissance Period
ix. Seventeenth Century
x. Eighteenth Medical Records etc.

The development of archives and records management education and training in Africa – challenges and opportunities. Historical background on Africa and the emergence of ARM education and training programs. Historical information on Africa. European control of Africa. Emergence of ARM programs in Africa's colonial and post-colonial periods. Regional centres for ARM education and training. Current structure of ARM education and training in Africa. Different levels of qualifications in ARM education and training programs. Graduate-level education and training for ARM in Africa. Medical Records: A Historical Narrative. Why sub-Saharan Africa lags in electronic health record adoption and possible strategies to increase its adoption in this region. Revolutionizing Patient Care: EMR Implementation in Africa. Health Information Management History: Past, Present & Future. . Evolution of Association of Health Records (AHR): Mandate and Achievements. Growth of the Practice under AHR. Establishment of Training Institutions in Southern Nigeria. Expansion of the frontiers of Training across Nigeria. Establishment of a Regulatory Board. Structures and Functions of the Regulatory Board. Inter-sectorial relationship of the Regulatory Board. The Regulatory Board and the Professional Association. Synopses of the Professional Associations. Practices and the Practitioners. Developmental land marks in Nigeria.

Minimum Academic Standards

A minimum lecture hall capacity of 50 students with a projector and access to wireless network.

HIM 112 Nigerian Healthcare System (2 Units Compulsory; L=30; P = 0)

HRORBN Approval Relevance

Graduates who are highly skilled and knowledgeable in Nigerian Healthcare System in accordance with **HRORBN** Mission to provide exceptional quality and comprehensive health care and integrated education and research in all health-related sciences, to expand access to compassionate and high quality health care for under-served populations within and outside Nigeria, and to lead the scientific pathway for reducing the burden of disease in our areas of operation.

Overview

Understanding of Nigerian Healthcare System is very important for comprehensive capturing of the identification, medical, surgical and diagnostic information, so as for health record to contain adequate facts and figures that are needed for the treatment, research, legal, statistical, administrative and other uses.

Health information management practitioner creates health record for each of the patients that visit the hospital to receive healthcare. This course is designed to avail health information management students the required skills for better understanding of the Nigerian Healthcare System, and **in** qualitative documentation of the contents of health records, cards and hospital registers. Based on this knowledge health information management practitioner can discover deviations from documentation standers, omission of relevant content of records and call the

Objectives

The objectives are to train graduates who are able to:

1. explain the historical development of health care systems
2. explain the nature and characteristics of healthcare system in Nigeria
3. Describe types of services provided in health facilities for treatment and management of infectious and chronic diseases.
4. explain the organisation and structure of healthcare system in Nigeria.
5. identify different patterns of healthcare system in Nigeria.
6. identify factors affecting making decision in the choice and patterns of healthcare.
7. describe the managerial process and tasks expected of healthcare managers.
8. explain the theoretical foundations and qualitative tools of the areas of specialization, as well as the ability to apply this knowledge to address actual problems
9. Demonstrate problem-solving capacity through critical, innovative and creative thinking in the area of study.

Learning Outcomes

On Completion of this course, students should be able to:

1. understand the historical development of health care systems
2. understand the nature and characteristics of healthcare system in Nigeria
3. understand types of services provided in health facilities for treatment and management of infectious and chronic diseases.
4. understand the organisation and structure of healthcare system in Nigeria.
5. understand different patterns of healthcare system in Nigeria.
6. understand factors affecting making decision in the choice and patterns of healthcare.
7. understand the managerial process and tasks expected of healthcare managers.
8. understand the theoretical foundations and qualitative tools of the areas of specialization, as well as the ability to apply this knowledge to address actual problems
9. Demonstrate problem-solving capacity through critical, innovative and creative thinking in the area of study.

Course content

Understanding Health. Overview of Healthcare Delivery System. Concept of Healthcare Delivery System. Characteristics of Healthcare System. Resources for Healthcare Delivery. Healthcare Services. Scope of Healthcare Services. Basic Healthcare Service. Healthcare Providers. Structure and Organisation of Healthcare in Nigeria. Structure of Healthcare System. Healthcare Facilities. Healthcare Regulators. Patterns of Healthcare. Patterns of Healthcare Delivery System. Alternative and Complimentary Healthcare. Factors influencing choice of Healthcare Patterns. Management of Healthcare System. Overview of Healthcare Management. Task of the Health Managers. Public Health Laws. Agencies that promote health care delivery. Health agencies e.g. WHO, UNICEF, UNESCO, under 5 clinics, Federal Ministry of Health, state monitoring of health, state hospital management board, pioneers of the health professions

Minimum Academic Standards

A minimum lecture hall capacity of 50 students with a projector and access to wireless network.

HIM 121 Language of medicine (2 Units Compulsory; L= 30; P = 0)

HRORBN Approval Relevance

Graduates who are highly skilled and knowledgeable in Language of medicine in accordance with **HRORBN** Mission to provide exceptional quality and comprehensive health care and integrated education and research in all health-related sciences, to expand access to

compassionate and high quality health care for under-served populations within and outside Nigeria, and to lead the scientific pathway for reducing the burden of disease in our areas of operation.

Overview

Understanding of the Language of medicine is very important for comprehensive capturing of the identification, medical, surgical and diagnostic information, so as for health record to contain adequate facts and figures that are needed for the treatment, research, legal, statistical, administrative and other uses.

Health information management practitioner creates and analysis health record for each of the patients that visit the hospital to receive healthcare. This course is designed to avail health information management students the required skills for qualitative documentation and analysis the contents of health records, cards and hospital registers.

Based on this knowledge health information management practitioner can discover deviations from documentation standers, omission of relevant content of records and call the attention of the author of the content of the case note to the needed correction or omission.

Objectives

The objectives are to train graduates who are able to:

1. defines medical terminologies
2. explain prefixes, stems, suffixes
3. form medical term by using vowels to combine words
4. explain common terms in medical terminology
5. use of homonyms, synonyms and eponyms in medical terminology
6. Know lay terms applicable to medicine
7. Explain common abbreviations
8. Know disease causation and process
9. Know degenerative diseases process
10. Know causes and process of cellular growth changes

Learning Outcomes

On Completion of this course, students should be able to:

1. Understand the basic medical terminologies
2. Understand common terminologies
3. explain lay terms applicable to medicine
4. Understand Medical Terminology of the body systems
5. Understand the language of medicine in different medical specialties
6. Understand common medical abbreviations
7. Explain degenerative diseases process

Course Contents

Explain Medical Terminology; history of medical terminology; prefixes in medical terminology; prefixes in medical terminology; diagnostic prefixes; operative prefixes; symptomatic prefixes; explain stems in medical terminology; list common stem; explain suffixes in medical terminology; List common suffixes; list diagnostic suffixes; List operative suffixes; symptomatic suffixes; explain Combining vowels in medical terminology, Analysis Medical Word, Construct Medical terms; Illustrate the use of slashes (/) in word construction in medical terminology; explain singulars and plurals in medical terminology; used singulars and plurals in health terms; explain nouns in medical terminology, List the commonly used singulars and plurals in medical terminology; Explain homonyms, synonyms, eponyms; List examples of each and their meanings in medical terminology; translate lay terms to medical meanings, List common lay terms and medical meanings; medical terms for colours and numbers; Explain abbreviations; State common diagnostic abbreviations; Identify common medical signs and symbols; medical acronyms with examples and their meanings. Explain specialties in medicine. explain various medical specialties in the hospitals - Family medicine, Surgery, Orthopedic, Psychiatrics, Paediatrics, Clinical Coding, Health Informatics, etc., Explain the functions of various medical specialties in the hospitals.

HIM 213 Health Insurance Principles and programmes (2 Units Compulsory; L= 45; P = 0)

HRORBN Approval Relevance

Graduates who are highly skilled and knowledgeable in Health Insurance Principles and programmes in accordance with **HRORBN** Mission to provide exceptional quality and comprehensive health care and integrated education and research in all health-related sciences, to expand access to compassionate and high quality health care for under-served populations within and outside Nigeria, and to lead the scientific pathway for reducing the burden of disease in our areas of operation.

Overview

Understanding of Health Insurance Principles and programmes is very important for comprehensive capturing of the identification, medical, surgical and diagnostic information, so as for health record to contain adequate facts and figures that are needed for the treatment, research, legal, statistical, administrative and other uses.

Health information management practitioner creates health record for each of the patients that visit the hospital to receive healthcare. This course is designed to avail health information

management students the required skills for qualitative documentation of the contents of health records, cards and hospital registers.
Based on this knowledge health information management practitioner can discover deviations from documentation standers, omission of relevant content of records and call the attention of the author of the content of the case note to the needed correction or omission.

Objectives
The objectives are to train graduates who are able to:

1. explain health insurance scheme.
2. describe assumption of Private Insurance
3. explain the topology of health insurance
4. highlight the scope of coverage and benefits of national health insurance scheme,
5. discuss the examination of decree establishing the National Health Insurance Scheme

Learning Outcomes
At the end of the course, the students should be able to:

6. explain health insurance scheme.
7. describe assumption of Private Insurance
8. explain the topology of health insurance
9. highlight the scope of coverage and benefits of national health insurance scheme,
10. discuss the examination of decree establishing the National Health Insurance Scheme

Course Contents
Define health insurance, purpose of health insurance scheme. Assumption of private health insurance. Comparison of private and government-sponsored health insurance. Analysis of diversity of voluntary medical care insurance plans under different sponsorships, scope of coverage and benefits of national health insurance scheme, analysis and critique of National Health Insurance scheme, examination of decree establishing the National Health Insurance Scheme

HIM 214 Introduction to Monitoring & Evaluation of Health programmes (2 Units Compulsory; L= 30; P = 0)

HRORBN Approval Relevance

Graduates who are highly skilled and knowledgeable in the Monitoring and Evaluation of Health Healthcare Programs in accordance with the HRORBN will apply their foundational and

theoretical knowledge acquired by participating in various M & E of healthcare programmes which will lead to the improvement of health in communities with a high burden of disease.

Overview

Monitoring and Evaluation of Health Intervention Program is highly essential skills for competent Health Information Management Practitioners in the 21st Century. In order to accomplish the healthcare program's target and evaluates its impact on the Nation's Healthcare Services, the skills of monitoring and Evaluation is inevitable.

Monitoring and Evaluation impact greatly across the Primary, Secondary, and Tertiary levels of Health care delivery through which the activities of both the consumers and suppliers of healthcare services and consumables are determined and provided, thereby assisting Government to make meaningful health plans.

Government and Non-Governmental health agencies depend majorly on Monitoring and Evaluation reports as the basis upon which health programs, budget and policies are formulated.

Objectives

The objectives are to train graduates who are able to:

1. Know the difference between Monitoring and Evaluation (M&E)
2. describe the components of Monitoring and Evaluation
3. state the functions of Monitoring and Evaluation
4. identify the rationales for Monitoring and Evaluation Plan
5. explain Monitoring and Evaluation framework
6. discuss the concept of project, program, and intervention with reference to Health programs
7. describe how to formulate Health indicators
8. describe the impact and outcome evaluation of healthcare programs

Learning Outcomes

On Completion of this course, students should be able to:

1. explain 8 fundamental principles of monitoring and evaluation of healthcare programs
2. highlight at least 7 criteria to be considered in the evaluation of specific program/intervention
3. describe five functions of monitoring and evaluation in healthcare programs
4. explain 3 applicable frameworks to monitor and evaluate health programs
5. state at least 5 characteristics of good health indicators

6. explain the planning, implementation and evaluation of healthcare program, project and intervention activities.
7. identify at least ten rationales for Monitoring and Evaluation of health intervention programs.
8. summarize the impacts and outcomes of health intervention programs
9. identify at least 10 health indicators

Course Contents

Fundamentals of Monitoring, Evaluation, Activities and Program. Principles and Scope of M & E. Components of M & E. Functions of M & E. M & E plan. M & E framework and uses for program planning. Types of M&E Frameworks. Steps to development of M & E system. Projects, programs, and intervention with reference to Health programs. Health Indicators. Types of Health Indicators. Theory and practice of Evaluation. Types of Evaluation. Importance of Evaluation. Sources of Data Collection for M&E program. Tools and Methodology for Monitoring and Evaluation of Health Program. Knowledge Management. Application of M&E.

Minimum Academic Standards
A minimum lecture hall capacity for 50 students with a projector.
Computers for Easy reporting

HIM 215 Anatomy and Physiology of Human body for HIM II (3 Units Compulsory; L= 45; P = 15)

HRORBN Approval Relevance

Graduates who are highly skilled and knowledgeable in Anatomy and Physiology of Human body in accordance with HRORBN Mission to provide exceptional quality and comprehensive health care and integrated education and research in all health-related sciences, to expand access to compassionate and high quality health care for under-served populations, and to lead the scientific pathway for reducing the burden of disease in our areas of operation.

Overview

Understanding of the Anatomy and Physiology of Human body is very important for comprehensive capturing of the identification, medical, surgical and diagnostic information, so as for health record to contain adequate facts and figures that are needed for the treatment, research, legal, statistical, administrative and other uses.

Health information management practitioner creates and analysis health record for each of the patients that visit the hospital to receive healthcare. This course is designed to avail health

information management students the required skills for qualitative documentation and analysis of the contents of health records, cards and hospital registers.
Based on this knowledge health information management practitioner can understand the the contents and discover deviations from documentation standers, omission of relevant content of records and call the attention of the author of the content of the case note to the needed correction or omission.

Objectives
The objectives are to train graduates who are able to:

1. describe the structure of the kidneys including microstructures and functions of the kidneys
2. explain the structure of the brain and its blood simply, spinal cord and neurons demonstrate advanced knowledge in biological and behavioral biometrics.
3. discuss the endocrine and other secretary organs
4. describe the Digestive system, structure of digestive systems, process of digestion and absorption of foods, fats, proteins and carbohydrates in the intestine

Learning Outcomes
On the completion of this course, students should be able to:

1. describe the structure of the kidneys including microstructures and functions of the kidneys
2. explain the structure of the brain and its blood simply, spinal cord and neurons demonstrate advanced knowledge in biological and behavioral biometrics.
3. discuss the endocrine and other secretary organs
4. describe the Digestive system, structure of digestive systems, process of digestion and absorption of foods, fats, proteins and carbohydrates in the intestine

Course Content

The structure of the kidneys including microstructures and functions of the kidneys. The structure of the respiratory system, pelvic organs. The structure of the brain and its blood simply, spinal cord and neurons. The endocrine and other secretary organs including anatomical structures of special senses such as skin, ear, eyes, etc. the physiological functions of the central nervous system including neurotransmission. Renal respiratory, other regulatory system physiology such as control of electrolyte/ water and buffers. Membrane physiology particularly

its functions as transport system for nutrients and electrolytes including electro physiology of evitable tissues. Definition of Digestive system, structure of digestive systems, process of digestion and absorption of foods, fats, proteins and carbohydrates in the intestine. Basic principles of gastro-intestine absorption. Nutrition to the body metabolism, basic metabolic rate, diet and calorific values, gastro-intestinal disorder, disorder of the small and large intestine, general disorder of the gastrointestinal tract

Minimum Academic Standards
A minimum lecture hall capacity for 50 students with a projector.
Computers for Easy reporting

HIM 225 Fundamental Health Records Documentation and Analysis (3 Units Compulsory; L= 45; P = 15)

HRORBN Approval Relevance

Graduates who are highly skilled and knowledgeable in Health Records Documentation and Analysis in accordance with the HRORBN Mission to provide exceptional quality and comprehensive health care and integrated education and research in all health-related sciences, to expand access to compassionate and high quality health care for under-served populations, and to lead the scientific pathway for reducing the burden of disease in our areas of operation.

Overview
Understanding of health records documentation and Analysis is very important for comprehensive capturing of the identification, medical, surgical and diagnostic information, so as for health record to contain adequate facts and figures that are needed for the treatment, research, legal, statistical, administrative and other uses.
Health information management practitioner creates, maintain and analysis health record for each of the patients that visit the hospital to receive healthcare. This course is designed to avail health information management students the required skills for qualitative documentation, maintain and analysis the contents of health records, cards and hospital registers.
Based on this knowledge health information management practitioner can discover deviations from documentation standers, omission of relevant content of records and call the attention of the author of the content of the case note to the needed correction or omission.

Objectives

The objectives are to train graduates who are able to:

1. describe the meaning of document and documentation.
2. explain the importance of health records documentation.
3. develop the standard (criteria) for quality health records documentation.
4. identify the elements of proper records documentation.
5. state factors militating against quality documentation.
6. analyze methods of documentation (manual, mechanical, electronic, voice recognition).
7. examine the influence of technology on health records documentation.

Learning Outcomes
At the end of this course, the student should be able to:

1. explain the needs for standardized system of health records documentation.
2. describe documentation management and cost (policy, resources/tools, time, money, etc.).
3. highlight legal implication of letterhead, signature, date, time, cancellation and alteration of document in the health records.
4. discuss the elements of proper records documentation (timely, accurate, complete, using only approved abbreviations).
5. analyze at least 5 factors militating against quality documentation in the hospital.
6. utilize different methods of documenting patient's information (manual, mechanical, electronic, voice recognition).
7. understand authentication and authorship of health records.
8. state five features of good health records documentation (chronological, complete, consistent, confidential and demonstrate case management)
9. explain the adoption of technology into health records documentation (voice to text, image to text, etc.).

Course Contents
Documentation. Purpose of documentation. Patient documentation format (Problem oriented, Source oriented and Integrated approach). Documentation management and cost (resources, time, money, etc.). Documentation control. Standard (criteria) for health records documentation. Components of document (identification part, information part, authentication part). Legal implication of signature, date, time, cancellation and alteration of patient documentation. Elements of proper patient documentation (timely, accurate, complete, using only approved abbreviations). Factors militating against quality documentation. Methods of documentation (manual, mechanical, electronic, voice recognition). Documentation cycle. Five features of good health records documentation (chronological, complete, consistent,

confidential and demonstrate case management) Influence of technology on health records documentation (voice to text, image to text, etc.).
Health records analysis. Essential qualities of a good health records. Component of a complete health record. Qualitative and quantitative analysis of health records. Design and use of deficiency slip. Records falsification and addendum. Characteristics (six C's) of medical records. Features of personal health record, electronic medical records, and electronic health records. Analysis of electronic health records Characteristics of quality health care. Arrangement of the contents of health records.

Minimum Academic Standards

A minimum lecture hall capacity for 50 students with a projector.

Computers for Easy reporting

HIM 226 Information and Computer skills (2 Units Compulsory; L= 30; P = 0)

HRORBN Approval Relevance

Graduates who are highly skilled and knowledgeable in Information and Computer skills in accordance with the HRORBN Mission will apply their foundational and theoretical knowledge acquired by participating within and outside Nigeria to expand access to compassionate and high quality health care for under-served populations and will lead to the improvement of health in communities with a high burden of disease.

Overview

Understanding of Information and Computer is very important for comprehensive capturing of the identification, medical, surgical and diagnostic information, so as for health record to contain adequate facts and figures that are needed for the treatment, research, legal, statistical, administrative and other uses.
Health information management practitioner creates, manage and analysis health record for each of the patients that visit the hospital to receive healthcare. This course is designed to avail health information management students the required skills for qualitative documentation of the contents of health records, cards and hospital registers.
Based on this knowledge health information management practitioner can discover deviations from documentation standers, omission of relevant content of records and call the attention of the author of the content of the case note to the needed correction or omission.

Objectives

The objectives are to train graduates who are able to:

1. understand the basic knowledge and skills of ICT.
2. provide the knowledge and skills necessary to use efficiently ICT
3. retrieve, assess, store, produce, communicate with ICT
4. present and participate in collaborative networks via the internet.
5. gain the skills necessary to become self-directed learners who possess critical-thinking and problem-solving abilities.

Learning Outcomes

At the end of this course, the student should be able to:

1. explain Information Communication Technology Components
2. understand ICT knowledge and skills
3. use efficiently ICT to retrieve, assess, store, produce, communicate,
4. present and participate in collaborative networks via the internet.
5. gain the skills necessary to become self-directed learners who possess critical-thinking and problem-solving abilities.

Course Content

Introduction to computer and Computer basics. Definition of a computer. Main parts of the computers. Different types of software. Using the Computer. Managing Files. Types of networks. Virus and internet. Local area Network. Information Security. Microsoft office suite - Word Processing - Creation and opening of a document Word. Format of a text. Table management. Creation of a table of contents. Layout and impression(printing), Mail merge. Spread Sheet- Worksheet and Excel table basic. Edit a Worksheet. Problems. File management. Using formulas. Function reference. Layout and impression(printing). Presentation - Create a new presentation. Save a presentation. Change between available design. Change text apparence : font sizes, font. Change the background. Slide Show Effects. Delete a slide. Database - Introduction to Database and DBMSs. How database work Database design. MS integration - Integration of Excel in Word. Integration of Excel in Access. Integration of Word, Excel in PowerPoint. Internet - Web browsers and Search Engines. Web navigation. Accessing web pages. Search Engine. Electronic mail. Use of internet to search for information. Browsing and accessing relevant information on internet. UR-e leaning platform - Introduction to

Learning management system: ; authentication and login access; Enrolment; Assignments and quiz; Participate in forum and Chat; Feedback and Grades

Minimum Academic Standards

A minimum lecture hall capacity for 50 students with a projector.

Computers for practicing

HIM 316 Monitoring & Evaluation of Health programmes (2 Units Compulsory; L= 30; P = 0)

HRORBN Approval Relevance

Graduates who are highly skilled and knowledgeable in Monitoring & Evaluation of Health programmes in accordance with the HRORBN mission will apply their foundational and theoretical knowledge acquired by participating within and outside Nigeria which will lead to the improvement of health in communities with a high burden of disease.

Overview

Understanding of Monitoring & Evaluation of Health programmes is very important for comprehensive capturing of the identification, medical, surgical and diagnostic information, so as for health record to contain adequate facts and figures that are needed for the treatment, research, legal, statistical, administrative and other uses.

Health information management practitioner creates health record for each of the patients that visit the hospital to receive healthcare. This course is designed to avail health information management students the required skills for qualitative documentation of the contents of health records, cards and hospital registers.

Based on this knowledge health information management practitioner can discover deviations from documentation standers, omission of relevant content of records and call the attention of the author of the content of the case note to the needed correction or omission.

Objectives

The objectives are to train graduates who are able to:

1. Know the criteria for selection of indicators
2. Explain how indicators are linked to M&E frameworks
3. Explain the principles and implementation of data quality
4. Explain basic concepts in Knowledge Management.
5. identify key steps in the development of M&E systems
6. Explain the theory and practice of evaluation

7. Explain the different tools and methodologies for M & E of Health Programmes
8. Understand the application of M&E in different aspects of life (M&E in health, etc.)

Learning Outcomes

At the end of this course, the student should be able to:

1. understand criteria for selection of indicators
2. Understand how indicators are linked to M&E frameworks
3. Understanding the principles and implementation of data quality
4. Understanding basic concepts in Knowledge Management.
5. Understand key steps in the development of M&E systems
6. Understand the theory and practice of evaluation
7. Know the different tools and methodologies for Health Programme Monitoring and Evaluation
8. Apply M&E to different aspects of life (M&E in health, etc.)

Course Content

Types of indicators - Input, process, output, outcome, impact and quantitative vs. qualitative indicators. Differentiate between types of indicators. Importance of indicators in program performance measurement. steps in developing indicators. characteristics of indicators. Lick indicators to M&E framework i.e. Results framework, logic model or log frame, logical framework. challenges in selecting indicators. guidelines for selecting. data quality, data quality assurance and data quality improvement. common errors or biases in data collection. data quality issues and dimension. steps for improving data quality. Knowledge Management. the six components of knowledge – Experience, Ground Truth, Complexity, Judgement, Rules of Thumb, Values and Beliefs. knowledge as an organizational asset. Data, Information and Knowledge. Data Transformation process – Contextualization, categorization, Calculation, Correction and Condensation. steps in developing M&E systems. assessment to identify gaps. develop performance results. Selecting key performance indicators. setting baselines and gathering data on indicators. setting performance targets. monitor for results. evaluate outcomes and impact. report findings. using findings. strategies for sustaining the system. M & E designs. choosing a design. link evaluation designs with decisions. evaluate problems using various designs. tools and methodologies of M&E in health. Apply M&E Health programs.

Minimum Academic Standards

A minimum lecture hall capacity for 50 students with a projector.

HIM 317 Health Informatics for HIM (3 Units Compulsory; L= 45; P = 15)

HRORBN Approval Relevance

Graduates who are highly skilled and knowledgeable in Health Informatics in accordance with the HRORBN mission will apply their foundational and theoretical knowledge acquired by participating within and outside Nigeria which will lead to the improvement of health in communities with a high burden of disease.

Overview

Understanding of Health Informatics is very important for comprehensive capturing of the identification, medical, surgical and diagnostic information, so as for health record to contain adequate facts and figures that are needed for the treatment, research, legal, statistical, administrative and other uses.

Health information management practitioner creates health record for each of the patients that visit the hospital to receive healthcare. This course is designed to avail health information management students the required skills for qualitative documentation and analysis of the contents of health records, cards and hospital registers.

Based on this knowledge health information management practitioner can discover deviations from documentation standers, omission of relevant content of records and call the attention of the author of the content of the case note to the needed correction or omission.

Objectives

The objectives are to train graduates who are able to:

1. Understand a problem and apply an appropriate algorithm to solve that problem;
2. explain formulate a solution to a problem in algorithmic form using pseudocode;
3. understand the correctness of an algorithm
4. understand the runtime of an algorithm;
5. understand the theoretical and practical foundations of health informatics;
6. discuss the applications of ICT to healthcare and patient management
7. understand how ICTs are changing healthcare services and provision
8. understand how ICTs are changing health information management practices;
9. Explain issues relating to the adoption of *ICT* systems
10. explain emerging trends in health informatics.

Learning Outcomes

At the end of this course, student should be able to:

1. read a problem description and apply an appropriate algorithm to solve that problem;
2. formulate a solution to a problem in algorithmic form using pseudocode;
3. reason about the correctness of an algorithm
4. reason about the runtime of an algorithm;
5. describe the theoretical and practical foundations of health informatics;
6. explain how ICTs are changing healthcare services and provision of health information;
7. discuss the applications of ICT to healthcare and patient management;
8. discuss issues related to the adoption of *ICT* systems
9. explain emerging trends in health informatics.

Course Contents

Role of Algorithms in problem solving process, concepts and properties of Algorithms. Implementation strategies, Development of Flow Charts, Pseudo Codes. Program objects. Implementation of Algorithms in a programming Language - Visual BASIC/JAVA/C/C++ Basic concepts, knowledge and skills of Health Informatics. Way data, information and knowledge are created, managed and processed using Information and Communication Technology. Introduction to Health Informatics as a Discipline, Basics of Electronics Health Records, Computerized Physician Order Entry, Medical databases, Imaging, Tele-health, Consumer Health Informatics, Ethics in Health Informatics, social and organisational factors involved in implementation of electronic health systems, and Integration standards such as HL7. Historical perspectives of computing in health

Minimum Academic Standards

A minimum lecture hall capacity for 50 students with a projector.
Minimum 50 Computer systems

HIM 324 Biometrics (2 Units Compulsory; L= 30)

HRORBN Approval Relevance

Graduates who are highly skilled and knowledgeable in **Biometrics** in accordance with the HRORBN mission will apply their foundational and theoretical knowledge acquired by participating within and outside Nigeria which will lead to the improvement of health in communities with a high burden of disease.

Overview

Understanding of Health Informatics is very important for comprehensive capturing of the identification, medical, surgical and diagnostic information, so as for health record to contain adequate facts and figures that are needed for the treatment, research, legal, statistical, administrative and other uses.

Health information management practitioner creates health record for each of the patients that visit the hospital to receive healthcare. This course is designed to avail health information management students the required skills for qualitative documentation of the contents of health records, cards and hospital registers.

Based on this knowledge health information management practitioner can discover deviations from documentation standers, omission of relevant content of records and call the attention of the author of the content of the case note to the needed correction or omission.

Objectives

The objectives are to train graduates who are able to:

1. Understand basic concepts of cells in biology.
2. Understand the basis for the inheritance theory.
3. Understand population genetics.
4. Understand basic distributions in biological models.
5. Understand the basic assay methods.
6. Understand the transformation needed in bio-medical responses.
7. Understand the estimations and uses of potency of substances.
8. Understand other biometric distributions and their uses.

Learning Outcomes

At the end of this course, student should be able to:

1. explain basic concepts of cells in biology.
2. know the basis for the inheritance theory.
3. explain population genetics.
4. explain basic distributions in biological models.
5. know the basic assay methods.
6. explain the transformation needed in bio-medical responses.
7. know the estimations and uses of potency of substances.
8. know other biometric distributions and their uses.

Course content

Basic concept of cell in biology, inheritance theory, distribution in biological models. population genetics Assay methods, biomedical responses, potency of substances, biometric distributions. estimations and uses of potency of substances. Miscellaneous statistics techniques in the bioscience and earth science. Statistical problems in plant and animal breeding, bioassay statistics techniques,

Minimum Academic Standards

A minimum lecture hall capacity for 50 students with a projector.

HIM 325: Introduction Electronic Health Records (2 Units Compulsory; L= 30)

HRORBN Approval Relevance

Graduates who are highly skilled and knowledgeable in Electronic Health Records **in** accordance with the HRORBN Mission will apply their foundational and theoretical knowledge acquired by participating within and outside Nigeria which will lead to the improvement of healthcare in communities with a high burden of disease.

Overview

Understanding of Electronic Health Records is very important for comprehensive capturing and reporting of the identification, medical, surgical and diagnostic information, so as for health record to contain adequate facts and figures that are needed for the treatment, research, legal, statistical, administrative and other uses.

Health information management practitioner creates health record for each of the patients that visit the hospital to receive healthcare. This course is designed to avail health information management students the required skills for qualitative documentation, maintain, analysis and reporting of the contents of health records, cards and hospital registers.

Based on this knowledge health information management practitioner can analysis and discover deviations from documentation standers, omission of relevant content of records and call the attention of the author of the content of the case note to the needed correction or omission.

Objectives

The objectives are to train graduates who are able to:

1 Understand the concepts of Electronic Health Records
2 explain the process of Adopting EHR system
3 identify the basic components/modules of Electronic Health Records
4 explain how to determine the right hardware for Electronic Health Records
5 explain the various ICT techniques required for implementing Electronic Health Records
6 explain how to apply Entity Relationship model for design of health records/documents
7 Know how to use Electronic Health Records in Health Information Management practices

Learning Outcomes

At the end of this course, student should be able to:

1. understand the concepts of Electronic Medical Records, Electronic Health Records & Electronic Personal Records
2. understand the basic components/modules of Electronic Health Records
3. understand how to determine the right hardware for Electronic Health Records
4. know the various ICT techniques required for implementing Electronic Health Records
5. know how to apply Entity Relationship model for design of health records/documents
6. understand Electronic Health Records use in Health Information Management practices

course content

Electronic Medical Records. Electronic Health Records. Concept of Electronic Health Records. Features of Electronic Health Records. Electronic Health Records Applications. Component of Electronic Health Records. Evolution of computerized health information management. Electronic Health Records Market Survey and Vendor Partner. EHR Contract. EHR Implementation process. EHR new roles and responsibility. Health Records Linkage. EHR Access and Security Measure. EHR Change-over system. EHR Maintenance and Customization. Cost-Benefit Analysis of EHR. Advantages of EHR over Paper-based Record. Benefit of Electronic Health Records

Minimum Academic Standards

A minimum lecture hall capacity for 50 students with a projector.
Computer systems

HIM 326: Application of Health Information Management in other Organisation (2 Units Compulsory; L= 30 P=0)

HRORBN Approval Relevance

Graduates who are highly skilled and knowledgeable in Application of Health Information Management in other Organization in accordance with **HRORBN** Mission to provide exceptional quality and comprehensive health care and integrated education and research in all health-related sciences, to expand access to compassionate and high quality health care for under-served populations within and outside Nigeria, and to lead the scientific pathway for reducing the burden of disease in our areas of operation.

Overview

Understanding of the Application of Health Information Management in other Organisation is very important for comprehensive capturing of information, to create, maintain and use, retention and the disposition of records in organizations, which are tools needed for decision-making, research, legal, statistical, administrative and other uses. Health information management practitioner creates and manage records for each of the patients that visit the hospital to receive healthcare and this knowledge and skill can be used in the management of records in other non-healthcare organization. This course is designed to avail health information management students the required skills to efficiently document, create and manage records of an organization. Graduates of this course can work as information/records managers or information specialists in various organizations, including government agencies, corporations, research institutions, or non-profit organizations, overseeing the management and preservation of organizational records. They can also be responsible for managing information

resources, developing information policies, and ensuring efficient access to information. As digital content managers, focusing on the organization and management of digital resources and be responsible for digitization projects, digital preservation, metadata creation, and ensuring access to digital collections or work as information consultants, providing advisory services on information management, knowledge organization, and information retrieval to organizations or clients.

Objectives

The objectives are to train graduates who are able to:

1. Explain the concept of records and archives management
2. Explain the Records Life cycle theory
3. Describe the Records Life cycle management model
4. Explain Records Management Compliance and Standards
5. Explain Records Management Responsibilities and Functions
6. Explain how to digitalize and manage electronic records
7. Describe Creation of Records
8. Explain Classification of Records
9. Explain Records storage and retention
10. Destruction and Termination of Records
11. Understand the various records management standards
12. Understand different types of records and associated risks
13. Understand Vital records, and implement a vital records plan
14. Explain records movement and control

Learning Outcomes

At the end of this course, student should be able to:

1. Understand the concept of records and archives management
2. Understand the Records Life cycle theory
3. Describe the Records Life cycle management model
4. Understand Records Management Compliance and Standards
5. Understand Records Management Responsibilities and Functions
6. Explain how to digitalize and manage electronic records
7. Describe Creation of Records
8. Explain Classification of Records
9. Explain Records storage and retention
10. D Understand destruction and termination of Records
11. Understand the various records management standards
12. Understand different types of records and associated risks
13. Understand vital records
14. know records movement and control

Course content

Document and Records Management. Records Lifecycle. Records Management Compliance and Standards. Records Management Responsibilities and Functions. Classification of Records. Creation of Records. Records Storage. Records Retention Strategies. Records and Information access, storage and retrieval. Disposition methods Destruction and Termination of Records. Records Management Systems. Development of RIM programs and policy. Information governance. Electronic records and electronic records management systems. Emerging technologies. Vital records. Disaster preparedness and recovery. Risk management. Inactive records management. Archives management. Preservation and conservation of records. RIM education and training

Minimum Academic Standards

A minimum lecture hall capacity for 50 students with a projector.

HIM 327 Introduction to Clinical Diagnosis (2 Units Compulsory; L= 30; P = 15)

HRORBN Approval Relevance:

In accordance with the HRORBN Mission, the Introduction to Clinical Diagnosis course is crucial for Health Information Management graduates, offering specialized insights into healthcare diagnostics. It empowers graduates to contribute effectively to clinical teams, clinical coding leveraging their skills in health data collection and management. This training ensures their pivotal role in ability to identify correct and accurate diagnoses, minimizing errors, and navigating ethical considerations. Graduates would emerge well-equipped to integrate seamlessly into healthcare environments, where their expertise enhances the precision and ethical integrity of clinical diagnoses.

Overview:

The Introduction to Clinical Diagnosis course provides an in-depth exploration of the essential components involved in the diagnostic process within healthcare. Designed for Health Information Management students, the course delves into the significance of clinical diagnosis, the role of Health Information Management professionals, and the systematic steps and techniques employed in arriving at accurate clinical diagnoses. Additionally, the course addresses the challenges, ethical considerations, and the integration of technology into modern diagnostic practices.

Objectives:

1. Explain the process and importance of taking patient history for clinical diagnosis
2. Explain importance of clinical documentation to clinical diagnosis
3. Enable students to grasp the systematic steps of clinical diagnosis, emphasizing patient history, physical examination, and diagnostic tests.
4. Equip students with the ability to identify and mitigate common errors in clinical diagnosis.

5. Foster awareness of ethical considerations in diagnostic procedures, including informed consent and privacy,
6. To explore the integration of technology, such as Electronic Health Records (EHR) and telemedicine, in modern clinical diagnosis.
7. Develop students' critical thinking skills through the analysis of real-world clinical cases, group discussions, and problem-solving activities.
8. Prepare students for effective collaboration within diagnostic teams, emphasizing communication and teamwork skills necessary for successful interactions with various healthcare professionals during the diagnostic process.

Learning Outcomes:

1. Understand the sequential steps involved in clinical diagnosis, showcasing proficiency in interpreting patient history, conducting physical examinations, and utilizing diverse diagnostic tests.
2. Demonstrate the ability to recognize common errors and challenges in clinical diagnosis, employing critical thinking to minimize cognitive biases, pitfalls, and enhance overall diagnostic accuracy.
3. Exhibit ethical awareness by incorporating principles of informed consent, privacy, and confidentiality into diagnostic procedures, recognizing and addressing ethical dilemmas inherent in the diagnostic decision-making process.
4. Showcase competence in integrating technology, such as Electronic Health Records (EHR) and telemedicine, into clinical diagnosis, ensuring proficiency in leveraging modern tools to enhance diagnostic precision and efficiency.

Course Content:

Definition and significance of clinical diagnosis, Overview of the diagnostic process in healthcare, Contribution of Health Information Management to clinical diagnosis, Patient history and information gathering, Physical examination and its significance, Diagnostic tests and imaging procedures, Collaboration among healthcare professionals, Laboratory tests: blood, urine, and other samples, Medical imaging: X-rays, CT scans, MRIs, Biopsy and pathological examinations, Cognitive biases in clinical diagnosis, Diagnostic errors and their consequences, Strategies to minimize diagnostic errors, Electronic Health Records (EHR) in diagnosis, Telemedicine and its impact on diagnostic accuracy, Emerging technologies in diagnostic procedures, Informed consent in diagnostic procedures, Privacy and confidentiality in patient information management, Ethical dilemmas in diagnostic decision-making, and Analyzing real-world clinical cases. Importance of quality patient clinical documentation

Minimum Academic Standards
A minimum lecture hall capacity for 50 students with a projector.

HIM 415: Clinical Coding and Indexing II (2 Units Compulsory; L= 30)

HRORBN Approval Relevance

Graduates who are highly skilled and knowledgeable in Clinical Coding and Indexing in accordance with the HRORBN mission will apply their foundational and theoretical knowledge acquired by participating within and outside Nigeria which will lead to the improvement of health in communities with a high burden of disease.

Overview

Understanding of Clinical Coding and Indexing of diagnostic and procedural statements is very important for comprehensive capturing of hospital based morbidity and mortality data on medical, surgical and diagnostic information obtain adequate and quality facts and figures that are needed for the treatment, research, legal, statistical, administrative and other uses. Health information management practitioner creates, maintain and analysis health information in the health record for each of the patients that visit the hospital to receive healthcare. This course is designed to avail health information management students the required skills for qualitative documentation of the contents and management of health records, and hospital registers.

Based on this knowledge health information management practitioner can discover deviations from documentation standers, omission of relevant content of records and call the attention of the author of the content of the case note to the needed correction or omission.

Objectives

The objectives are to train graduates who are able to:

1 explain how to abstract diagnosis and procedures from patient health record
2 explain the assignment of ICD code numbers to diagnosis and procedures
3 explain diagnostic and procedures indexing
4 explain qualitative analysis of morbidity and mortality data from indexed data
5 explain the rules and classification of death certification
6 explain e-coding /online coding system of the ICD-11
7 explain the steps for establishing a coding and indexing unit

Learning Outcomes

At the end of this course, student should be able to:

1. understand how to abstract diagnosis and procedures from patient health record
2. understand the assignment of ICD code numbers to diagnosis and procedures
3. understand diagnostic and procedures indexing
4. understand qualitative analysis of morbidity and mortality data from indexed data
5. know the rules and classification of death certification
6. understand e-coding /online coding system of the ICD-11
7. know the steps for establishing a coding and indexing unit

course content

Principal, Secondary, complication and associated diagnosis. Rules for coding. Abstract final diagnoses and procedures from patient health record. assign code numbers to diagnoses and procedures. Diagnostics and procedures indexing systems. e-coding /online coding system. Qualitative analysis of coded and indexed data. death certification and rules for classification. morbidity and mortality data reporting system

Minimum Academic Standards

A minimum lecture hall capacity for 50 students with a projector.
Disease and procedure classification tools
Computers for Practical Demonstration

HIM 416: Design and Analysis of experiment (2 Units Compulsory; L= 30)

HRORBN Approval Relevance

Graduates who are highly skilled and knowledgeable in Design and Analysis of experiment in accordance with the HRORBN mission will apply their foundational and theoretical knowledge acquired by participating within and outside Nigeria which will lead to the improvement of health in communities with a high burden of disease.

Overview

Understanding of Design and Analysis of experiment is very important for comprehensive capturing analysis of hospital based morbidity and mortality data on medical, surgical and diagnostic information obtain adequate and quality facts and figures that are needed for the treatment, research, legal, statistical, administrative and other uses.

Health information management practitioner creates, maintains patient records, derives and analysis health information in the health records for each of the patients that visit the hospital to receive healthcare. This course is designed to avail health information management students the required skills for qualitative documentation of the contents and management of health records, and hospital registers.

Based on this knowledge health information management practitioner can discover deviations from documentation standers, omission of relevant content of records and call the attention of the author of the content of the case note to the needed correction or omission.

Objectives

The objectives are to train graduates who are able to:

1. explain the principles of planning simple statistical experiments.
2. explain simple experimental designs.
3. explain the role of analysis of variance in experimental design.

4. describe methods of increasing the accuracy of experiments.
5. explain classification of designs and analysis of variance.
6. explain the randomized block design with one observation per cell.
7. describe the RBD with more than one observation per cell.
8. explain Latin square design

Learning Outcomes

At the end of this course, student should be able to:

1. demonstrate exploratory data analysis
2. describe the process of designing and the analysis of experiment
3. explain variable classifications.
4. analyze and interpret the results of statistical output
5. interpret statistical models to ensure they are valid and appropriate
6. design a suitable experiment given a set of criteria and/or information
7. illustrate and interpret appropriate hypotheses and confidence intervals
8. describe the correct statistical methods to analyze a set of data
9. write a report for a non-technical individual

Course content

Overview of design and analysis of experiment. Variable classification. Randomization and Design. Review of probability. Exploratory data analysis. One-way ANOVA. Threats to experiment. Simple linear regression. Analysis of Covariance. Two-way ANOVA. Statistical power. Within-subjects Design. Mixed models. Categorical outcomes. Research instruments. Analysis with SPSS. Analysis with excel. Test of hypothesis.

Minimum Academic Standards

A minimum lecture hall capacity for 50 students with a projector.
Computers for Practical Demonstration
SPSS, stata & R theory software

HIM 421: Electronic Health Records (3 Units Compulsory; L= 45 P=15)

HRORBN Approval Relevance

Graduates who are highly skilled and knowledgeable in Electronic Health Records in accordance with HRORBN Mission to provide exceptional quality and comprehensive health care and integrated education and research in all health-related sciences, to expand access to compassionate and high quality health care for under-served populations within and outside

Nigeria, and to lead the scientific pathway for reducing the burden of disease in other areas of operation.

Overview

Understanding of the Electronic Health Records is very important for comprehensive of electronic capturing of the identification, medical, surgical and diagnostic information, so as for health record to contain adequate facts and figures that are needed for the treatment, research, legal, statistical, administrative and other uses. In line with global IT trends. Health information management practitioner creates health record for each of the patients that visit the hospital to receive healthcare. This course is designed to avail health information management students the required IT skills for qualitative documentation and analysis of the contents of electronic health records system, cards and hospital registers. Based on this knowledge, health information management practitioner can discover deviations from documentation standers, omission of relevant content of records and call the attention of the author of the content of the patients case note to the needed correction or omission.

Objectives

1 know emerging trends in Electronic Health Records

2 explain the processes of adopting an Electronic Health Records

3 explain the processes of implementing an electronic Health Records

4 describe the application of Electronic Health Records in the various components of a healthcare system

5 explain inter-operability and confidentiality issues in electronic Health Records system

6 identify issues with Electronic Health Records.

7 explain emerging trends in Electronic Health Records

Learning Outcomes

At the end of this course, student should be able to:

1. understand emerging trends in Electronic Health Records
2. explain the processes of adopting an Electronic Health Records
3. understand the processes of implementing an electronic Health Records
4. understand the application of Electronic Health Records in the various components of a healthcare system
5. understand emerging trends in Electronic Health Records

6. understand inter-operability and confidentiality issues in electronic Health Records system
7. understand issues with Electronic Health Records.

Course content

Technical components to design and build Electronic Health Records. Management and social aspects of Electronic Health Records. Ethical & Legal issues in Electronic Health Records. Analysis Electronic Health Record data. security principles in Electronic Health Records. Cost-benefit and Return On Investment (ROI) of an Electronic Health Records. Market survey in Electronic Health Records. Implementing electronic health records. Workflow and Redesign. Adopting an Electronic Health Records. Know emerging trends in Electronic Health Records. inter-operability and confidentiality in Electronic Health Records. Issues with Electronic Health Records.

Minimum Academic Standards

A minimum lecture hall capacity for 50 students with a projector.
Computers & e-Records software for Practical Demonstration

HIM 422: Medical Billing and Reimbursement (2 Units Compulsory; L= 30)

HRORBN Approval Relevance

Graduates who are highly skilled and knowledgeable in Medical Billing and Reimbursement in accordance with **HRORBN** Mission to provide exceptional quality and comprehensive health care and integrated education and research in all health-related sciences, to expand access to compassionate and high quality health care for under-served populations within and outside Nigeria, and to lead the scientific pathway for reducing the burden of disease in our areas of operation.

Overview

The need for professionals to understand how to abstract and code outcomes of healthcare services and procedures for morbidity and mortality data is fundamental, and also for third-party insurance reimbursement is growing substantially. Physician practices, hospitals, pharmacies, long-term care facilities, chiropractic practices, physical therapy practices, and other healthcare providers all depend on medical billing and coding for insurance carrier reimbursement.

This billing and coding program offers the skills needed to perform complex coding and billing procedures. The program covers: CPT (Introduction, Guidelines, Evaluation and Management), specialty fields (such as medicine, surgery, radiology and laboratory), the ICD-10 for both

diagnosis and procedure coding, and basic claims processes for insurance reimbursements. It details proper assignment of codes and the process to file claims for reimbursement.
Learners who complete this program are eligible to participate in an Internship opportunity with a local company/agency/organization whose work aligns with this area of study in order to gain valuable hands-on experience. As learners progress through their eLearning program, an Internship Coordinator will reach out to coordinate placement.

Objectives

The objectives are to train graduates who are able to:

1. describe types of classification systems (ICD-9, ICD-10, ICD-11,) used in coding & billing,
2. identify crucial roles of clinical documentation in the coding process;
3. explain the importance of quality coding in Billing & reimbursements.
4. identify different types of private and government-sponsored health insurance plans
5. explain billing and claims processing, appeals, and collections process;
6. evaluate the strengths and weaknesses of different types of healthcare reimbursement methods.
7. apply concepts related to payment formulas and reimbursement methods to practical situations to compute reimbursements.
8. identify the basic language associated with reimbursement

Learning Outcomes

On Completion of this course, students should be able to:

1. understand diagnostic and procedure classification systems (ICD-9, ICD-10, ICD-11, ICD-10-PCS, OPCS) used in coding & billing,
2. understand the roles of clinical documentation in the coding process;
3. know the importance of quality coding in Billing & reimbursements.
4. know different types of private and government-sponsored health insurance plans
5. understand billing and claims processing, appeals, and collections process;
6. know the strengths and weaknesses of different types of healthcare reimbursement methods.
7. know concepts related to payment formulas and reimbursement methods to practical situations to compute reimbursements.
8. know the basic language associated with reimbursement
9. know different types of managed care organizations, and discuss the concept of integrated delivery systems.

Course Contents

Fundamentals of medical billing and reimbursement. Healthcare Reimbursement Methodologies. Clinical Coding and Reimbursement. Coding Compliance. Healthcare Insurance Plans. Roles of physician documentation in the coding process. Government-Sponsored Healthcare Programs. Payment Systems for Inpatients. Payment Systems for outpatients.

Ambulatory Reimbursement Systems. Payment Systems for Post-Acute (Emergency) Care. Revenue Cycle Management. Value-Based Purchasing. Coding Compliance. The Various Medical Specialties. Important role of a medical coder in upholding ethical billing practices and in obtaining reimbursement for healthcare services. The purpose and use of ICD-10-PCS code. Coding and fraud prevention

Minimum Academic Standards

A minimum lecture hall capacity for 50 students with a projector.
Diagnostic and Procedure Classification systems, EHR Application
Computers for Practical Demonstration

HIM 515: Artificial Intelligence in Health Information Management (3 Units Compulsory; L= 45 P=15)

HRORBN Approval Relevance

Graduates who are highly skilled and knowledgeable in Artificial Intelligence (AI) in accordance with **HRORBN** Mission to provide exceptional quality and comprehensive health care and integrated education and research in all health-related sciences, to expand access to compassionate and high quality health care for under-served populations, and to lead the scientific pathway for reducing the burden of disease in our areas of operation.

Overview

This course teaches what every health-related sciences student should know about Artificial Intelligence. Artificial Intelligence is a fast-moving technology with impacts and implications for both our individual lives and society as a whole. In this course, students will get a basic introduction to the building blocks and components of artificial intelligence, learning about concepts like algorithms, machine learning, and neural networks. Students will also explore how Artificial Intelligence is already being used in the healthcare and patient information management and evaluate problem areas of Artificial Intelligence, such as bias. a

The course also contains a balanced look at Artificial Intelligence's impact on existing healthcare jobs, most especially health information management, as well as its potential to create new and exciting career in healthcare fields in the future. Students will leave the course with a solid understanding of what AI is, how it works, areas of caution, and what they can do with the technology.

Objectives

The objectives are to train graduates who are able to:

1. explain an overview of the field of artificial intelligence, its background, history, fundamental
2. explain issues, challenges and main directions of the field of artificial intelligence;
3. interpret and formulate knowledge representations in the form of logic expressions;
4. explain basic concepts, methods and theories for search;
5. account for classical planning of proactive agents;
6. describe methods and theories for reactive agents, architectures based on subsumption, and potential fields;
7. describe the physical structure of robots;
8. account for different degrees of autonomy of robots;
9. explain concepts, methods and theories of embodied cognition and situatedness;
10. explain basic concepts, methods and theories of sensing; and
11. explain basic concepts, methods and theories of neural networks and learning.

Learning Outcomes

On the completion of this course, students should be able to:

1. understand the field of artificial intelligence, its background, history, fundamental
2. know the issues, challenges and main directions of the field of artificial intelligence;
3. interpret and formulate knowledge representations in the form of logic expressions;
4. understand the basic concepts, methods and theories for search;
5. know how to account for classical planning of proactive agents;
6. know the methods and theories for reactive agents, architectures based on aubsumption, and potential fields;
7. understand the physical structure of robots;
8. understand account for different degrees of autonomy of robots;
9. understand concepts, methods and theories of embodied cognition and situatedness;
10. explain basic concepts, methods and theories of sensing; and
11. understand basic concepts, methods and theories of neural networks and learning.

Course Contents

foundations, scope, problems, and approaches of AI. Intelligent agents: reactive, deliberative, goal-driven, utility-driven, and learning agents; Artificial Intelligence programming techniques. Problem-solving through Search: forward and backward, state-space, blind, heuristic, problem-reduction, A, A*, AO*, minimax, constraint propagation, neural, stochastic, and evolutionary search algorithms, sample applications. Knowledge Representation and Reasoning: ontologies, foundations of knowledge representation and reasoning, representing and reasoning about objects, relations, events, actions, time, and space; predicate logic, situation calculus, Content logics, reasoning with defaults, reasoning about knowledge, sample

applications. Planning: planning as search, partial order planning, construction and use of planning graphs. Representing and Reasoning with Uncertain Knowledge: probability, connection to logic, independence, Bayes rule, bayesian networks, probabilistic inference, sample applications. Decision-Making: basics of utility theory, decision theory, sequential decision problems, elementary game theory, sample applications. Machine Learning and Knowledge Acquisition: learning from memorisation, examples, explanation, and exploration. learning nearest neighbor, naive Bayes, and decision tree classifiers, Q-learning for learning action policies, applications. Sample Applications of AI, student project presentations

Minimum Academic Standard

A minimum lecture hall capacity for 50 students with a projector.
Computers for Practical Demonstration

HIM 516: Health Data Analytics (2 Units Compulsory; L= 30)

HRORBN Approval Relevance

Graduates who are highly skilled and knowledgeable in health data analytics in accordance with **HRORBN** Mission to provide exceptional quality and comprehensive health care and integrated education and research in all health-related sciences, to expand access to compassionate and high quality health care for under-served populations, and to lead the scientific pathway for reducing the burden of disease in our areas of operation.

Overview

Processing of health data into meaningful information is one of the fundamental skills in health information management. It is expected of qualified health information management practitioner to adequately capture health data, accurately process and analysis it and properly present the statistical report in the appropriate form and format that meet the needs of the users of health data and fulfill the purpose for which the data are captured.

This course will enable health information management professional to identify, collect, organize, integrate, verify, manipulate, represent and present quality health data which enhances the quality of decision making in the health sector through the appropriate medium data communication/dissemination.

Objectives

The objectives are to train graduates who are able to:

1. describe sourcing and sources of health data in health facilities.
2. explain type of health data analysis.
3. demonstrate health data uses' and users' inventory.
4. identify features of quality health data.
5. illustrate data analysis with Excel, SPSS, stata and other statistical application packages

6. demonstrate importation and exportation of data, table and chart across application packages
7. explain preparation and dissemination of health statistical report.

Learning Outcomes

On Completion of this course, students should be able to:

1. explain primary and secondary sources of data in health facilities
2. extract facts and figures from at least 6 sources of health data in the tertiary hospital
3. collate and organize health data from different sources across the primary, secondary and tertiary hospitals.
4. explain four (4) type of health data analysis.
5. conduct health data uses' and users' inventory.
6. identify at least ten (10) features of quality health data.
7. analyze health data with Excel, SPSS and other statistical application packages
8. import and export health data, table and chart across application packages
9. conduct health data verification and integration
10. prepare and disseminate of health statistical report appropriately.

Course Contents

Fundamentals of health data analytics. Sourcing and sources of health data in health facilities. Type of health data analysis (descriptive analysis, diagnostic analysis, predictive analysis and prescriptive analysis). Areas of analytics [customer (patients' case) analytics, performance analytics, industry-focus (intervention/program-focus) analytics, financial analytics and risk analytics]. Health data uses' and users' inventory. Features of quality health data. Data capturing mechanism in the hospital. Data cleaning with excel (sort, filter, group, ungroup, remove duplicate and data validation). Data formatting (font type, font size, font color, rows and column color, etc.). Conditional formatting rules in excel. Excel formulas. Data visualization (charts, lines, graphs, tables, etc.). Pivot table and Statistics functions in excel (SUMIF, COUNTIF, STDEV, PERCENTILE, QUARTILES, etc.). Dash-boarding. Import data into Excel and other statistical packages. Export output (charts, graph, etc.) from statistical packages to Microsoft Word. Preparation of statistical report. Data verification and integration. Dissemination of health statistical report. Analysis data with Excel, SPSS, Stata.

Minimum Academic Standards

A minimum lecture hall capacity of 50 students with a projector and access to wireless network. Data analytics packages and tools such as: Microsoft Excel, SPSS, Python, Tableau, SAS, etc.

HIM 517: Health Management Information System (2 Units Compulsory; L= 30)

HRORBN Approval Relevance

Graduates who are highly skilled and knowledgeable in Health Management Information System in accordance with **HRORBN** Mission to provide exceptional quality and comprehensive health care and integrated education and research in all health-related sciences, to expand access to compassionate and high quality health care for under-served populations within and outside Nigeria, and to lead the scientific pathway for reducing the burden of disease in our areas of operation.

Overview

Understanding of the Health Management Information System is very important for comprehensive capturing of the identification, medical, surgical and diagnostic information, so as for health record to contain adequate facts and figures that are needed for the treatment, research, legal, statistical, administrative and other uses. Health information management practitioner creates health record for each of the patients that visit the hospital to receive healthcare. This course is designed to avail health information management students the required skills for qualitative documentation, reporting and analysis of the contents of health records, cards and hospital registers. Based on this knowledge health information management practitioner can discover deviations from documentation standers, omission of relevant content of records and call the attention of the author of the content of the patient's case note to the needed correction or omission.

Objectives

The objectives are to train graduates who are able to:

1. describe the fundamentals of Health Management Information System (HMIS) and National Health Management Information System.
2. explain the operation of district health information system (DHIS2).
3. explain indicators for trends over time and compare health status across districts.
4. describe the influence of Information Technology in the management of national health database.
5. explain the benefits of HMIS to the government and nongovernmental agencies and organizations.
6. explain the role of health information in the planning, implementation and evaluation of healthcare delivery.
7. discuss HMIS security (security of data and Information technology infrastructure).
8. describe data quality assurance.

Learning Outcomes

On the completion of this course, students should be able to:

1. explain emerging issues in the National Health Management Information System (NHMIS)
2. describe the structure of Health Management Information System (HMIS) and National Health Management Information System.
3. explain the features and operation of DHIS2.
4. demonstrate the capturing and integration of health data across health facilities in Nigeria using Information Technological devices.
5. identify characteristics of robust health management information system.
6. explain factors militating against effective NHMIS.
7. describe information society (informed society).
8. explain how health information is utilized for the planning, implementation and evaluation of healthcare services.
9. discuss the quality of HMIS and the reliability of health data

Course Contents

Fundamentals of Health Management Information System (HMIS). National Health Management Information System. Overview of Management Information System (MIS) and Hospital Information System (HIS). The principles of an action-led, district-based information system. Features and Operation of DHIS2. Development of goals, targets and indicators for district-level programs. Analyze indicators for trends over time and compare different facilities and districts. Provision of feedback to data collectors and community structures. Information technology infrastructure. Objectives of health management information system. Characteristics of health management information system. Benefits of HMIS and NHMIS to the government and nongovernmental agencies and organizations. Factors militating effective and robust NHMIS. Hierarchical structure of Health Management Information System (health facilities, LGA, SMOH, FMOH, WHO). Information society (informed society). Roles of health information in the planning, implementation and evaluation of healthcare delivery. HMIS security (security of data and Information technology infrastructure). Data quality assessment. Data quality assurance.

Minimum Academic Standard

A minimum lecture hall capacity for 50 students with a projector.
Computers for Practical Demonstration

HIM 525: Health Economics (2 Units Compulsory; L= 30)

HRORBN Approval Relevance

Graduates who are highly skilled and knowledgeable in Health Economics in accordance with **HRORBN** Mission to provide exceptional quality and comprehensive health care and integrated

education and research in all health-related sciences, to expand access to compassionate and high quality health care for under-served populations, and to lead the scientific pathway for reducing the burden of disease in our areas of operation.

Overview

Health economics is the study of how scarce healthcare resources are allocated among competing interventions and among groups in society. This course introduces basic concepts and practical issues faced by decision makers at all levels in the health system in allocating scarce resources so that the choices they make maximize health benefits to the population.

This course has four main learning modules each comprising a set of lectures: (1) An introduction to key concepts of health economics (e.g. opportunity costs) and how better choices in resource allocation might be made. There will be an introduction to the demand for and supply of health services, fundamentals of markets and the price mechanism with a focus on the healthcare market; (2) An introduction to economic evaluation in healthcare, with an emphasis on identifying, measuring, valuing and analyzing health outcomes and costs. This module also discusses how economic evaluation can be used to allocate limited health care resources; (3) Equity: this module includes a reflection on equity in health care and the relationship between equity and economic evaluation (measuring efficiency) in priority setting; (4) An overview of the organization of health care (provision and funding). The organization and finance of the health system will be specifically analyzed and compared internationally.

Objectives

The objectives are to train graduates who are able to:

1. explain the application economic concepts into healthcare financing.
2. identify the relative merits of equity considerations in setting priorities for health system.
3. analyze approaches to identify and value costs and outcomes to include in economic evaluation.
4. discuss major types of economic evaluation and to understand their use in the decision-making process.
5. explain approaches to reduce the cost of health care consumables
6. describe the main features of Nigeria health system- in particular and how it differs from other developed nations health systems according to how services are delivered and purchased.
7. identify health economic issues demonstrating sound knowledge and skills to apply analytic thinking for a scientific debate and/or problem solving.

Learning Outcomes

On the completion of this course, students should be able to:

1. understand the influence of economic status in the demand and supply of health products and services
2. explain how hospitals are being reimbursed for health insurance, subsidized care and free/sponsored health programs
3. apply the key concepts of economics within the context of the health system.
4. identify the relative merits of equity considerations in setting priorities for a health system;
5. describe approaches to curtail the cost of health care consumables and how it influences the cost of health care delivery.
6. conduct cost effective evaluation of health care services and to understand their use in the decision-making process.
7. recognize and apply key steps in critically reviewing economic evaluations;
8. compare Nigeria healthcare system with the health systems of some developed nations according to how services are delivered and purchased.
9. write concise reports on health economic issues demonstrating sound knowledge and skills to apply analytic thinking for a scientific debate and/or problem solving.

Course Contents

Fundamentals of Health Economics. Introduction to Healthcare consumables. Demand and Supply of Health care and healthcare consumables. Influence of economic status in the demand and supply of health products (consumables) and services. Concept of Healthcare Markets. Approaches to cost curtailment. Concept of Free Market. Market Failure and Intervention in Health and Healthcare. Health Insurance. Economic Evaluation of Health Interventions. Health and Development. Health System Efficiency. Healthcare Financing. Concept of Managed Care. Health Policy and Reforms I. Health Policy and Reforms II. Hospital Services in Healthcare Market. Healthcare Fraud. Abuse of health insurance, subsidized or free/sponsored health services/programs.

Minimum Academic Standards

A minimum lecture hall capacity for 50 students with a projector.

HIM 526: International Health (2 Units Elective; L= 30)

HRORBN Approval Relevance

Graduates who are highly skilled and knowledgeable in International Health Health Safety and Environment in accordance with **HRORBN** Mission to provide exceptional quality and

comprehensive health care and integrated education and research in all health-related sciences, to expand access to compassionate and high quality health care for under-served populations, and to lead the scientific pathway for reducing the burden of disease in our areas of operation.

Overview

International health is a recent quest for knowledge on global health challenges among which are many emerging and re-emerging communicable diseases; not to mention the alarming increase in the mortality arising from non-communicable diseases such as cancer, stroke, motor accidents and injuries. All these necessitate the expansion of knowledge in International Health; a course that will address the factors contributing to the health of individuals and communities at both the local and International levels.

International health is an area for training, study, research, and practice that places a priority on improving health and achieving equity and equality in health for all people worldwide". This course emphasizes "transnational health issues, determinants, and solutions; it involves many disciplines within and beyond the health sciences and promotes interdisciplinary collaboration, and is a synthesis of population-based prevention with individual-level clinical care" as opined by Koplan et al. (2009).

Objectives

The objectives are to train graduates who are able to:

1. explain the concept of international and global health.
2. identify the social determinants of health.
3. describe the challenges of healthcare financing across countries.
4. analyze the concept of financial management.
5. describe the effect of politics and policies on global health.
6. explain how to address global health disparities.
7. describe health-related targets and sustainable development.
8. illustrate the concepts of health services monitoring and evaluation.

Learning Outcomes

At the end of the course, students should be able to:

1. demonstrate knowledge of history and initiatives of global health.
2. identify major players and explain their role in promoting international health.
3. discuss models of assistance in global health.
4. identify sources of international health funding and assistance.
5. demonstrate clear understanding on the workings of Agencies such as WHO, UNICEP, UNDP etc.

6. recognize the role of international donor agencies and philanthropic organizations and their role in global health.
7. illustrate the concepts of health services monitoring and evaluation.

Course Contents

Fundamentals of international and global health. Social determinants of global health. Introduction to global healthcare delivery. Health services administration. Health sector reform: a worldwide perspective. Leadership and management in global health. Global health politics and policy. Political economy of global health. Essential skills in global health. Interdisciplinary topics in global health historical perspective of the international health agencies. Policies governing international collaboration. Coordination on issues relating to health and development at the global level. Various agencies involved and activities of these bodies. Historical backgrounds to the development of international collaboration in health issues. Activities of the United Nations Agencies, W.H.O, UNICEF, UNDP, UNFPA. Bilateral agencies such as ODA, USAID, World Bank, amongst others. The policies governing International Coordination of Global health. Role of International Philanthropic organizations such as Melinda and Bill Gates Foundation in Health care. Sources of funding global Health and access to funding.

Minimum Academic Standards

A minimum lecture hall capacity for 50 students with a projector.

HIM 527: Human Nutrition (3 Units Compulsory; L= 45)

HRORBN Approval Relevance

Graduates who are highly skilled and knowledgeable in Human Nutrition in accordance with HRORBN Mission to provide exceptional quality and comprehensive health care and integrated education and research in all health-related sciences, to expand access to compassionate and high quality health care for under-served populations, and to lead the scientific pathway for reducing the burden of disease in our areas of operation.

Overview

Human Nutrition is designed to equip students with the requisite knowledge and skills to utilize food and science of nutrition in the prevention and treatment of diseases, and to respond to the diverse needs of patients, families and patients, within a variety of settings using evidence-based approaches and ethics. In addition, it will enable students to assess nutritional status, understand how food intake and dietary requirements can be altered by illness to translate nutritional science and information about food, into practical dietary advice. Human Nutrition is designed to produce graduates who would apply the knowledge and principles of the, multifaceted scientific domain of human nutrition in tackling the current and future food, nutrition and health challenges of society in order to enhance sustainable development.

Objectives

The objectives are to train graduates who are able to:

1. assess the nutritional problems of population groups, identify the causes and design interventions for their solution.
2. plan, implement, monitor and evaluate nutrition programs.
3. exhibit the necessary understanding of the scientific basis of health and disease;
4. provide the skilled manpower in the area of nutrition and dietetics to take up management and leadership positions in the public and private sectors;
5. create small to medium scale businesses in the areas of human nutrition
6. promote scholarship and high quality research aimed at solving contemporary nutrition problems as well as expand the frontiers of knowledge in human nutrition
7. contribute to global discourse on nutrition and dietetics and international perspectives of nutrition challenges.

Learning Outcomes

At the end of this course, the student should be able to:

1. discuss food classes, sources and their functions;
2. explain terminologies associated with nutrition in health and illness;
3. identify criteria for food selection, preservation, preparation and budgeting; and
4. understand the relationship between nutrition and disease control and management.
5. discuss the skilled manpower in the area of nutrition to take up management and leadership positions in the public and private sectors
6. demonstrate the skills required to contribute to global discourse on nutrition and dietetics and international perspectives of nutrition challenges.
7. create small to medium scale businesses in the areas of human nutrition

Course Contents

Historical perspectives of Human nutrition as a science. Food classes (organic and inorganic) and their functions. Food nutrients. Relationship of digestion and absorption of food to health. Nutrient quality of local foods and diets. Factors affecting choice of food such as culture, religion, socioeconomic status, food availability, health status, natural disasters and political instability. Food selection/choice, purchasing, preservation, preparation and budgeting. Diet therapy for control and treatment of disease conditions. Planning and provision of special therapeutic diets to clients and patients. Nutrition education. Use of nutritional supplements. Factors that affect nutrition. Diet, food habits and choice. Selection and formulation of balanced and weaning diets. Use of food composition tables. Nutrient requirements and recommended daily calorie requirements (RDA)/micronutrient requirements. Food in relation to the life cycle. The role of the nurse in promotion of good nutrition in hospital (in and out patient), schools, and community.

Minimum Academic Standards

A minimum lecture hall capacity for 50 students with a projector

INDEXING OF STUDENTS

All newly admitted students must be indexed with the HRORBN within the first semester of the programme.

Professional Licensing Examination to Practice

At the end of the programme and having satisfy all academic requirements, graduates will write and pass the Board (HRORBN) practicing licensing examination for the Health Information Management Officers cadre.