

HEALTH INFORMATICS

Program	Bachelor of science in Public Health	
Module category	Core	
Module name	Health System Research and Application	
Module Code	PubH-M2091	
Module Credit& ECTS	13Cr.hours&21 ECTS	
Course: Health Informatics	Course code: PubH2092	Cr.hrs : 2 &ECTS: 3
Mode of delivery	Block	
Instructor's information	Name: email address: Phone: Office No:	
Course description <p>The course provides students a conceptual framework for understanding health informatics and information technology as applied in the healthcare environment. The course will include in depth discussion of ‘meaningful use’ of technology in health care systems with emphasis on leveraging technology to improve quality and efficiency in care delivery. The course will also highlight successes and failures in implementing health information technology and the critical role that informaticists play in each step of the developmental process from idea inception</p>		
Identify the basics of computer network and Internet 3. Define information management, information system (technology) and informatics 4. Explain the basic theoretical concept that underlies informatics practice 5. Identify how health information process data into information and knowledge for health care tasks with the support of information technology to improve patient care 6. Recognize and practice the concept of aHealth information system and its characteristics and describe the different types of Health information systems (routine and clinical information systems) specific to their disciplines. 7. Explain how the use of an Electronic health record system can affect patient care safety, efficiency of care practices, and patient outcomes 8. Identify how ongoing developments in biomedical informatics can affect future uses and challenges related to health information systems 9. Describe the history and evolution of clinical decision support and state the fundamental requirements of effective clinical decision support systems 10. Analyze how the integration of data from many sources assists in making clinical decisions and discuss how tele-health communication technologies support clinical care. 11. Understand and practice the concept of information retrieval techniques.		
Pre requisites:	None	
Course Expectations: <p>Students must avail themselves during all lecture and interactive learning sessions. Notwithstanding problems that are beyond the student's control, a student who misses more than 75% of such sessions will not qualify to sit for a final summative exam. Students must read the provided references before coming to lecture and interactive learning sessions. Assignments must be done carefully and with neatness by</p>		

<p>consulting the references provided above. Copying assignments from each other will result in nullification of the credit of the assignment for all involved. Sufficient time will be allotted for completion and submission of assignments. Assignments being brought after the set deadline will not be accepted.</p> <p>i. Preparedness: You must come to class, and to the community based on the schedule with fully prepared and ready with the necessary materials and by reading the given assessment</p>				
<p>Participation: Each student is strongly encouraged to participate in class room discussion, group work activity, group presentation, community activities.</p> <p>iii. Materials: reference materials are expected to be available in the library.</p> <p>iv. Mobile phone: Please turn/off or switch of your mobile phone during class and practical activity. Phone disturbs the flow of the class and practical work.</p>				
<p>Policies:</p> <p>Attendances: It is believed that attendance during all class in lecture, presentation and practical session greatly improves the probability of success in a course. Students are expected to attend all theoretical classes and during computer practice sessions.</p> <p>Assignment: The students are expected to carefully read all assignments before the class in which the material is to be discussed. Written assignments should be submitted on time. Any assignment turned in late shall result in an automatic 10 percent reduction in from the allocated mark.</p> <p>Tests/Quizzes: You will have short quizzes and tests at the end of each unit or topic, if you miss the class or late to class. You will miss the quizzes or tests, no makeup test will be given. final exam will be given on the date scheduled, unless prior arrangements have been made and it is expected that all students should take the exam</p> <p>Cheating/ plagiarizing: any cheating on an exam, test or quiz, plagiarizing assignment, not actively participating in group work and presentation will result in zero mark in that specific assignment or test or exam etc.</p>				
Schedule				
Days	Lecture Plan	Lecture hrs	Practice	Practical Hours

Day I and Day II	2	<ul style="list-style-type: none"> • Identify the types of computer • Observe and identify the components of computer • Distinguish inputs with output devices • Observe the processing devices • Identify the different memories 		
computer Types of computer Hardware Input output processing devices memory Software System software Operating system GUI Cmd based OS Utility softwares Application software	available from computer system <ul style="list-style-type: none"> • Operatingsystem installation <ul style="list-style-type: none"> ○ Demonstrate GUI ○ Demonstrate cmd ○ Demonstrate Utility softwares ○ Demonstrate basic types of application software • Practice on Microsoft word 			
Day III & IV	Networking & the internet	0	<ul style="list-style-type: none"> • Computer network overview • Types of computer network • Network components • Overview on the internet • Web • Tools and service on the internet • Purposes of the internet • Browsers • Browsers components • Email 	8
Day IV	<ul style="list-style-type: none"> • health informatics terminologies <ul style="list-style-type: none"> ○ Information management ○ Information system 			

	Information technology <ul style="list-style-type: none"> • Domains of Health informatics • Information hierarchy <ul style="list-style-type: none"> ○ Data ○ Information ○ Knowledge ○ Wisdom 			
Day V	<ul style="list-style-type: none"> • Health Information Systems Overview <ul style="list-style-type: none"> ○ Why health information system ○ Classification of health information system ○ Health information system reform 	2		0
Day V&VI	Routine health information system <ul style="list-style-type: none"> ○ Introduction ○ Information cycle <ul style="list-style-type: none"> ▪ Data collection ▪ Data processing ▪ Data presentation ▪ Information utilization ○ Data quality ○ Health management 			
information system				
○ HMIS in Ethiopia				
Day VI	<ul style="list-style-type: none"> • Clinical Information System <ul style="list-style-type: none"> ○ EMR ○ Patient Monitoring Systems ○ CDSS 	2	<ul style="list-style-type: none"> • Demonstration and practice on EMR software • Demonstration and practice on CDSS 	4
Day VII	<ul style="list-style-type: none"> • Information retrieval & EBM 	0	<ul style="list-style-type: none"> • Search tools <ul style="list-style-type: none"> ○ Search engine <ul style="list-style-type: none"> ▪ Google ▪ Google scholar ○ Database 	16

			<ul style="list-style-type: none"> ▪ pubmed ○ Gate way • HINARI ○ PubMed • Evidence based practice 	
Day VII	Information and computer ethics	1	0	
DAY VIII	Final exam	2		
16	40			
Summary of Teaching Learning Methods: The following teaching-learning methods will be in use for this course.				

i. Lectures and other interactive instruction: for the majority of the topics in the course there will be brief

lectures being given by the instructor(s) as per the schedule given below

ii. Question and answer in the form of home-take assignment: students will be given two home-take

assignments at different times and addressing different topics of the course.

iii. Tutorial session: tutorial classes will be arranged to work on home-take assignments and other suggested questions.