

Template for Course Plan(Nursing information)

Course Description:

This course explores the role of information technology and data management in nursing practice, education, administration, and research. Students will learn how to apply informatics tools to enhance patient care, improve decision-making processes, and support evidence-based practice. Topics include electronic health records (EHR), data privacy and security, health information systems, clinical decision support systems, and the ethical and legal considerations of healthcare informatics. Through practical exercises and case studies, students will develop skills in data analysis, system implementation, and user interface design, contributing to the efficient operation of healthcare systems

IV. Course Contents:

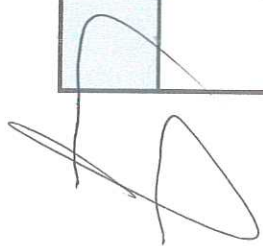
A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
1	1. Introduction to Nursing Informatics	<input type="checkbox"/> Overview of nursing informatics: definitions and history <input type="checkbox"/> Role of informatics in nursing practice, education, and research <input type="checkbox"/> Core competencies for nursing informaticians	1	2
2	2. Information Systems in Healthcare	Electronic Health Records (EHR) and Electronic Medical Records (EMR) Hospital information systems (HIS) and clinical information systems (CIS) Interoperability and health information exchange (HIE) System implementation, evaluation, and maintenance	1	2

3	. Data Management and Analytics	<p>Data collection, storage, and retrieval</p> <p>Data quality, validation, and cleaning processes</p> <p>Using data for evidence-based practice</p> <p>Introduction to health analytics: data mining, predictive analytics, and big data in healthcare</p>	1	2
4	4. Clinical Decision Support Systems (CDSS)	<p>Introduction to CDSS and their role in improving patient outcomes</p> <p>Types of CDSS: alerts, reminders, clinical guidelines, and diagnostic tools</p> <p>Integration of CDSS into clinical workflows</p> <p>Evaluating the effectiveness and limitations of CDSS</p>	1	2
5	5. Health Information Technology (HIT) and Innovation	<ul style="list-style-type: none"> <input type="checkbox"/> Emerging trends in HIT (e.g., telehealth, mobile health, AI in healthcare) <input type="checkbox"/> The role of technology in improving patient safety and care quality <input type="checkbox"/> Wearable devices and patient monitoring systems <input type="checkbox"/> Mobile health applications for self-management of diseases 	1	2
6	6. Legal and Ethical Aspects of Health Informatics	<ul style="list-style-type: none"> <input type="checkbox"/> HIPAA and patient privacy regulations <input type="checkbox"/> Confidentiality, security, and data protection measures <input type="checkbox"/> Ethical dilemmas in nursing informatics 	1	2

		<input type="checkbox"/> Legal responsibilities when using health informatics systems		
7	7. Nursing Workflow and Process Improvement	<input type="checkbox"/> Workflow analysis and redesign using informatics tools <input type="checkbox"/> Streamlining nursing documentation and reducing errors <input type="checkbox"/> Optimizing patient care processes using informatics solutions	1	2
		– Mid-Term Theoretical Exam	1	2
8	. System Design and User Interface (UI)	<input type="checkbox"/> Principles of system design for healthcare applications <input type="checkbox"/> Best practices in user interface (UI) design to ensure usability for clinicians <input type="checkbox"/> Engaging healthcare providers in system design and implementation	1	2
9	Project Management in Informatics	<input type="checkbox"/> Fundamentals of project management for informatics projects <input type="checkbox"/> Planning, executing, and evaluating informatics interventions <input type="checkbox"/> Stakeholder engagement, change management, and overcoming resistance	1	2
10.	Health Informatics Standards and Policies	<input type="checkbox"/> International and national health informatics standards (e.g., HL7, SNOMED, ICD-10) <input type="checkbox"/> Role of government policies in health IT adoption	1	2

		<input type="checkbox"/> Policy implications for the future of nursing informatics		
11	. Telehealth and Remote Patient Monitoring	<input type="checkbox"/> Implementation and management of telehealth services <input type="checkbox"/> Benefits and challenges of remote patient monitoring <input type="checkbox"/> Ensuring quality and continuity of care through telehealth technologies	1	2
12	. Informatics in Nursing Research and Education	<input type="checkbox"/> Using informatics to support nursing research <input type="checkbox"/> Teaching informatics competencies to future nurses <input type="checkbox"/> Accessing online resources and databases for nursing research	1	2
13	Current Trends and Future Directions in Nursing Informatic	<input type="checkbox"/> The evolving role of informatics in personalized medicine and genomics <input type="checkbox"/> Future innovations: artificial intelligence, machine learning, and robotics in healthcare <input type="checkbox"/> Preparing for the future of informatics in nursing practice	1	2
14	Assessment Components	<input type="checkbox"/> Practical assignments with EHRs or simulated clinical environments <input type="checkbox"/> Case studies involving ethical dilemmas in health informatics <input type="checkbox"/> Group projects on system implementation or process redesign <input type="checkbox"/> Examinations covering	1	2




		theoretical concepts and practical applications		
15		Final Theoretical Exam	1	2
Number of Weeks /and Units Per Semester			16	32

