

<b>COURSE TITLE</b>	<b>HEALTH/NURSING INFORMATICS AND TECHNOLOGY</b>
<b>COURSE CODE</b>	<b>20BN0203</b>
<b>COURSE CREDITS</b>	<b>3</b>

**Objective:**

- 1 Develop a foundational understanding of computer applications in patient care and nursing practice, enabling effective utilization of computer and information technology across various nursing domains such as education, practice, administration, and research.
- 2 Describe the principles of health informatics and demonstrate proficiency in utilizing information systems within healthcare contexts to enhance patient care delivery and optimize the utilization of nursing data.
- 3 Demonstrate competence in using Electronic Health Records (EHR) systems in clinical practice, while applying knowledge of interoperability standards to ensure seamless data exchange within clinical settings.
- 4 Apply knowledge of information and communication technology to promote public health initiatives, while effectively utilizing Nursing Information System (NIS) functionalities to enhance nursing practice and patient care outcomes.
- 5 Demonstrate proficiency in utilizing data for health care management, while applying knowledge of digital ethical and legal principles to ensure ethical and compliant practices in clinical settings.
- 6 Utilize evidence-based practices in informatics and technology to deliver quality patient care, and actively engage in updating and applying evidence-based practices across nursing education, administration, and practice to enhance overall healthcare delivery.

**Course Outcomes:** After completion of this course, student will be able to:

- 1 Develop a basic understanding of computer application in patient care and nursing practice. Apply the knowledge of computer and information technology in patient care and nursing education, practice, administration and research.
- 2 Describe the principles of health informatics and its use in developing efficient healthcare. Demonstrate the use of information system in healthcare for patient care and utilization of nursing data.
- 3 Demonstrate the knowledge of using Electronic Health Records (EHR) system in clinical practice. Apply the knowledge of interoperability standards in clinical setting.
- 4 Apply the knowledge of information and communication technology in public health promotion. Utilize the functionalities of Nursing Information System (NIS) system in nursing.
- 5 Demonstrate the skills of using data in management of health care. Apply the knowledge of the principles of digital ethical and legal issues in clinical practice.
- 6 Utilize evidence-based practices in informatics and technology for providing quality patient care. Update and utilize evidence-based practices in nursing education, administration, and practice.

**Pre-requisite of course:** understanding of basic computer skills and nursing fundamentals to effectively apply informatics-led healthcare principles and practices for patient care.

### Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
2	0	2	25	15	10	0	0

Contents : Unit	Topics	Contact Hours
1	<b>Introduction to computer applications for patient care delivery system and nursing practice</b> Use of computers in teaching, learning, research and nursing practice	10
2	<b>Principles of Health Informatics</b> Health informatics – needs, objectives and limitations	4
3	<b>Information Systems in Healthcare</b> Introduction to the role and architecture of information systems in modern healthcare environments	3
4	<b>Shared Care &amp; Electronic Health Records</b> Challenges of capturing rich patient histories in a computable form	4
5	<b>Patient Safety &amp; Clinical Risk</b> Relationship between patient safety and informatics, Function and application of the risk management process	3
6	<b>Clinical Knowledge &amp; Decision Making</b> Role of knowledge management in improving decision-making in both the clinical and policy contexts	3
7	<b>eHealth: Patients and the Internet</b> Use of information and communication technology to improve or enable personal and public healthcare, Introduction to public health informatics and role of nurses	3
8	<b>Using Information in Healthcare Management</b> Components of Nursing Information system(NIS)	3
9	<b>Information Law &amp; Governance in Clinical Practice</b> Ethical-legal issues pertaining to healthcare information in contemporary clinical practice, Ethical-legal issues related to digital health applied to nursing	4
10	<b>Healthcare Quality &amp; Evidence Based Practice</b> Use of scientific evidence in improving the quality of healthcare and technical and professional informatics standards	3
<b>Total Hours</b>		<b>40</b>

### Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
1	<b>Introduction to computer applications for patient care delivery system and nursing practice</b> Windows, MS office: Word, Excel, Power Point, Internet, Literature search, Statistical packages, Hospital management information system	15
2	<b>Principles of Health Informatics</b> Use of data, information and knowledge for more effective healthcare and better health	5
3	<b>Information Systems in Healthcare</b> Clinical Information System (CIS)/Hospital information System (HIS)	5
4	<b>Shared Care &amp; Electronic Health Records</b> Latest global developments and standards to enable lifelong electronic health records to be integrated from disparate systems	4
5	<b>Clinical Knowledge &amp; Decision Making</b> Systematized Nomenclature of Medicine, Clinical Terms, SNOMED CT to ICD-10-CM Map, standardized nursing terminologies (NANDA, NOC), Omaha system.	6
6	<b>Using Information in Healthcare Management</b> Evaluation, analysis and presentation of healthcare data to inform decisions in the management of health-care organizations	5
<b>Total Hours</b>		<b>40</b>

### Textbook :

- 1 Textbook of Health / Nursing Informatics and Technology, Kaur, Arashgeet | Kaur, Taranpreet, Vision Health Sciences Publishers, 2022
- 2 Textbook of Health / Nursing Informatics and Technology for BSc Nursing Students,, Randhir, Priyanka, CBS Publishers & Distributors Pvt. Ltd., 2022

### References:

- 1 Health / Nursing Informatics and Technology (Computer for Nurses), Health / Nursing Informatics and Technology (Computer for Nurses), Sreevani, R., Jaypee Brothers Medical Publishers (P) Ltd., 2023

### Suggested Theory Distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery					
Remember / Knowledge	Understand	Apply	Analyze	Evaluate	Higher order Thinking / Creative
20.00	30.00	25.00	15.00	10.00	0.00

**Instructional Method:**

- 1 Classroom+practical

**Supplementary Resources:**

- 1 NA