



Contents

<i>Preface to the Third Edition</i>	<i>vii</i>
<i>Acknowledgments</i>	<i>ix</i>
<i>Reviewers</i>	<i>xi</i>
<i>Special Features of the Book</i>	<i>xv</i>
<i>Syllabus</i>	<i>xvii</i>

UNIT I INTRODUCTION TO COMPUTER APPLICATIONS FOR PATIENT CARE DELIVERY SYSTEM AND NURSING PRACTICE

Chapter 1	Use of Computers in Nursing	1-6
	• Introduction	2
	• Use of Computer in Teaching-Learning/Nursing Education	2
	• Use of Computer in Nursing Practice	3
	• Use of Computer in Nursing Administration	4
	• Use of Computer in Nursing Research	5
Chapter 2	Operating System	7-42
	• Disk Operating System (DOS) and Windows (All Versions)	7
	• Latest Windows Available: Windows 11	40
Chapter 3	Microsoft Office Word	43-73
	• Introduction	44
	• Office Packages	44
	• MS Word	46
	• Basic Features of MS Word	46
	• Creating a New Document in MS Word 2007	64

- Saving a Document 65
- Closing a Document 66
- Opening a Document 68
- Formatting/Editing a Document 68
- Printing a Document 68
- Latest Updates in Microsoft Word (Microsoft 365) 70

Chapter 4 Microsoft Office Excel 74–92

- Introduction 75
- Let us Begin 75
- Basic Features of MS Excel 75
- Creating a Workbook 76
- Saving a Workbook 78
- Closing a Workbook 79
- Opening a Workbook 79
- Formatting/Editing a Workbook 79
- Pictorial Presentation 85
- Printing a Workbook 86
- Microsoft Excel 2019 87
- Latest Updates in Microsoft Excel (Microsoft 365) 89

Chapter 5 Microsoft Office PowerPoint 93–112

- Introduction 94
- Let us Begin 94
- Basic Features of MS PowerPoint 94
- Creating a PowerPoint Presentation 95
- Saving a PowerPoint Presentation 95
- Closing a PowerPoint Presentation 98
- Opening a PowerPoint Presentation 99
- Formatting/Editing a PowerPoint Presentation 99
- Printing a PowerPoint Presentation 109
- Latest Updates in Microsoft PowerPoint (Microsoft 365) 109

Chapter 6 Use of Internet and E-mail 113–143

- Accessing the Website 114
- Set Up an Internet Connection 114
- Learn about URL 116
- Learn about Web 118
- Learn about Working of Internet 119
- Searching the Internet for Content 119
- Browsing History 120
- Default Page 123
- Social Media 124
- Accessing the E-mail and Communicating Through It 125

	• Use of Internet Communication Programs—Skype 139 • Use of Skype/Zoom/Google Meet in Nursing 140 • Latest Trends in the Use of Internet and E-mail 140	
Chapter 7	Literature Search	144–158
	• Introduction 145 • Need of Literature Search 145 • Sources of Literature 145 • Boolean Operators 151 • Wildcard Characters 154 • Medical Subject Heading 154 • Latest Trends in Literature Search 155	
Chapter 8	Statistical Packages	159–172
	• Introduction 160 • Types of Statistical Packages 160 • Features of Statistical Packages 169 • Latest Trends in Statistical Packages 169	
Chapter 9	Hospital Management Information System	173–184
	• Introduction 174 • Definition of Hospital Management System 174 • Objectives of Hospital Management System 174 • Core Concept of Hospital Management System 175 • Benefits of Hospital Management System 180 • Applications of Hospital Management System 180 • Latest Trends in Hospital Management Information System 181 • Advantages and Limitations of Hospital Management Information System 183	
UNIT II PRINCIPLES OF HEALTH INFORMATICS		
Chapter 10	Health Informatics	185–194
	• Introduction 185 • Health Informatics as a Tool 186 • Need of Health Informatics 187 • Objectives of Health Informatics 187 • Advantages of Health Informatics 188 • Limitations of Health Informatics 191 • Latest Trends in Health Informatics 192	
Chapter 11	Use of Data, Information and Knowledge in Healthcare	195–203
	• Introduction 195 • Data, Information, Knowledge and Wisdom 196	

- Informatics Pyramid 199
- Latest Trends in the Use of Data, Information, and Knowledge in Healthcare 200

UNIT III INFORMATION SYSTEMS IN HEALTHCARE

Chapter 12 Role and Architecture of Information Systems205–223

- Introduction 206
- Definition of Healthcare Information Systems 206
- Structure/Architecture of Health Information System 206
- Latest Trends in Health Information System Architecture 218

Chapter 13 Clinical Information System/Hospital Information System224–252

- Introduction 225
- Definition 225
- Objectives of Hospital Information System 225
- Integrated Hospital Information System 225
- Need for Hospital Information System 227
- Forms of Hospital Information System 227
- Ayushman Bharat Digital Mission 231
- Other Initiatives 231
- Latest Trends in Information Systems in Healthcare 248

UNIT IV SHARED CARE AND ELECTRONIC HEALTH RECORDS

Chapter 14 Challenges of Capturing Rich Patient Histories in a Computable Form.....253–260

- Introduction 254
- Challenges of Capturing Rich Patient Histories in a Computable Form 254
- Latest Trends and Challenges in Capturing Rich Patient History in Computable Form 258

Chapter 15 Latest Global Developments and Standards261–265

- Introduction 262
- Global Developments and Standards to Enable Lifelong Electronic Health Records to be Integrated from Disparate Systems 262
- Latest Global Developments and Standards in Electronic Health Records 264

UNIT V PATIENT SAFETY AND CLINICAL RISK

Chapter 16 Patient Safety and Informatics267–276

- Introduction 268
- Relationship between Patient Safety and Informatics 268
- Organizations Working for Patient's Safety 275
- Informatics and Patient's Safety 275

Chapter 17	Risk Management Process	277–283
	• Introduction 278	
	• Definitions 278	
	• Purposes of Risk Management Process 278	
	• Functions of Risk Management Process 278	
	• Risk Management Process and its Application 280	
	• Latest Trends in Risk Management Process 281	

UNIT VI CLINICAL KNOWLEDGE AND DECISION MAKING

Chapter 18	Knowledge Management	285–291
	• Introduction 286	
	• Definitions 286	
	• Concept of Knowledge Management 286	
	• Objectives of Knowledge Management 290	
	• Purposes of Knowledge Management 290	
	• Advantages of Knowledge Management 290	
	• Challenges Related to Knowledge Management 291	
Chapter 19	Systematized Nomenclature of Medicine and Standardized Nursing Terminologies	292–308
	• Introduction 293	
	• SNOMED CT 293	
	• SNOMED versus ICD 295	
	• SNOMED CT to ICD-10-CM Map 297	
	• Let's Do Mapping 298	
	• Standardized Nursing Terminologies 302	
	• NANDA International (NANDA-I) 302	
	• Nursing Outcomes Classification 305	
	• Omaha System 306	

UNIT VII eHEALTH: PATIENTS AND THE INTERNET

Chapter 20	Use of Information and Communication Technology in Public Healthcare	309–320
	• Introduction 310	
	• Use of Information and Communication Technology to Improve or Enable Personal and Public Healthcare 311	
	• Information and Communication Technology in Public Healthcare 313	
	• Latest Trends: Use of Information and Communication Technology in Public Healthcare 318	
Chapter 21	Public Health Informatics and Role of Nurses	321–330
	• Introduction 322	
	• DISC: Data, Information System and Context 322	
	• Public Health Informatics 323	

- Advantages of Public Health Informatics 329
- Disadvantages of Public Health Informatics 329
- Role of Nurse in Public Health Informatics 329

UNIT VIII USING INFORMATION IN HEALTHCARE MANAGEMENT

Chapter 22 Nursing Information System331–338

- Introduction 332
- Definitions 332
- Purposes of Nursing Informatics 332
- Components of Nursing Informatics 333
- Advantages of Nursing Information System 335
- Disadvantages of Nursing Informatics 335
- Nursing Information System 336

Chapter 23 Evaluation, Analysis and Presentation of Healthcare Data339–349

- Introduction 340
- Healthcare Data Analytics 340
- Data Management 340
- Data Models 341
- Data Analytics 343

UNIT IX INFORMATION LAW AND GOVERNANCE IN CLINICAL PRACTICE

Chapter 24 Ethical-Legal Issues in Healthcare351–355

- Introduction 352
- Health Informatics-Related Laws 353

Chapter 25 Ethical-Legal Issues Related to Digital Health Applied to Nursing356–360

- Introduction 357
- Ethical-Legal Issues Related to Digital Health Applied to Nursing 357

UNIT X HEALTHCARE QUALITY AND EVIDENCE-BASED PRACTICE

Chapter 26 Use of Scientific Evidence Professional Standards361–369

- Introduction 362
- Use of Scientific Evidence in Improving the Quality of Healthcare 362
- Definitions 363
- Concept of Evidence-Based Health Informatics 363
- ACE Star Model of Evidence-Based Practice 365
- PICO Framework in Evidence-Based Health Informatics 366
- Advantages of Evidence-Based Health Informatics 367
- Disadvantages of Evidence-Based Health Informatics 368
- Barriers to Evidence-Based Health Informatics 368

Index 371