



Program	Bachelor of Pharmacy (BPharm)	Semester - 2
Type of Course	-	
Prerequisite		
Course Objective	-	
Effective From A.Y.	2024-25	

Teaching Scheme (Contact Hours)				Examination Scheme				
Lecture	Tutorial	Lab	Credit	Theory Marks		Practical Marks		Total Marks
				External Marks (T)	Internal Marks (T)	External Marks (P)	Internal Marks (P)	
3	-	2	4	50	25	15	10	100

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Content		T - Teaching Hours W - Weightage	
Sr.	Topics	T	W
1	UNIT-I 1. Number System: Binary number system, Decimal number system, Octal number system, Hexadecimal number system, conversion decimal to binary, binary to decimal, octal to binary etc, binary addition, binary subtraction – One's complement, Two's complement method, binary multiplication, binary division 2. Concept of Information Systems and Software: Information gathering, requirement and feasibility analysis, data flow diagrams, process	6	20
2	UNIT-II 3. Web Technologies: Introduction to HTML, XML, CSS and Programming languages, Introduction to Web Servers and Server Products Introduction to databases, MYSQL, MS ACCESS, Pharmacy Drug database	6	20
3	UNIT-III 4. Application of Computer in Pharmacy – Drug information storage and retrieval, Pharmacokinetics, Mathematical model in Drug design, Hospital and Clinical Pharmacy, Electronic Prescribing and discharge (EP) systems, barcode medicine identification and automated dispensing of drugs, mobile technology and adherence monitoring Diagnostic System, Lab-diagnostic System, Patient Monitoring System, Pharma Information System	6	20
4	UNIT-IV 5. Bioinformatics: Introduction, Objective of Bioinformatics, Bioinformatics Databases, Concept of Bioinformatics, Impact of Bioinformatics in Vaccine Discovery	6	20
5	UNIT-V 6. Computers as data analysis in Preclinical development: Chromatographic Data Analysis (CDS), Laboratory Information Management System (LIMS) and Text Information Management System (TIMS)	6	20
Total		30	100



Suggested Distribution Of Theory Marks Using Bloom's Taxonomy

Level	Remembrance	Understanding	Application	Analyze	Evaluate	Create
Weightage	30	30	20	10	5	5

NOTE : This specification table shall be treated as a general guideline for the students and the teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Course Outcomes

At the end of this course, students will be able to:

C01	Basic knowledge of computer number system and information management system
C02	Knowledge and ability to work with currently used web technologies and pharmacy drug database
C03	Knowledge of various computerised systems in pharmacy & bioinformatics
C04	Knowledge of computer data analysis tools in preclinical development
C05	Ability to perform applications of databases in pharmacy

Reference Books

1.	Computer Application in Pharmacy By William E. Fassett-Lea and Febiger 600 South Washington Square, USA, (215) 922-1330
2.	Computer Application in Pharmaceutical Research and Development By Sean Ekins-Wiley-Interscience A John Wiley and Sons, INC., Publication, USA
3.	Bioinformatics (Concept, Skills and Applications) By S. C. Rastogi CBS Publishers and Distributors, 4596/1- A, 11 Darya Gani, New Delhi – 110 002(INDIA)
4.	Application Development Using VBA, SQL Server, DAP and Infopath By Cary N. Prague Wiley Dreamtech India (P) Ltd., 4435/7, Ansari Road, Daryagani, New Delhi – 110002 Microsoft office Access - 2003

List of Practical

1.	Design a questionnaire using a word processing package to gather information about a particular disease
2.	Create a HTML web page to show personal information
3.	Retrieve the information of a drug and its adverse effects using online tools
4.	Creating mailing labels Using Label Wizard, generating label in MS WORD
5.	Create a database in MS Access to store the patient information with the required fields Using access
6.	Design a form in MS Access to view, add, delete and modify the patient record in the database
7.	Generating report and printing the report from patient database
8.	Creating invoice table using – MS Access
9.	Drug information storage and retrieval using MS Access
10.	Creating and working with queries in MS Access
11.	Exporting Tables, Queries, Forms and Reports to web pages
12.	Exporting Tables, Queries, Forms and Reports to XML pages