Gandhinagar Institute of Pharmacy

Bachelor of Pharmacy (Undergraduate)
Semester 2

Subject Code: BP204T	Subject Title: Computer Applications in Pharmacy (Theory)
Pre-requisite: --	

Course Objective: Upon completion of the course student shall be able to

1. Apply knowledge of computer in pharmacy.

2. Classify and explain various types of databases.

3. Enlist and describe various applications of databases in pharmacy.

4. Write advantages and disadvantages of computers in pharmacy management system.

5. Explain various software's of computers used in pharmacy.

Teaching Scheme (Hours per week)			Evaluation Scheme (Marks)			
			Theory			Total
Lecture	Tutorial	Credit	University Assessment	Continuous Assessment	Internal Assessment	
3	-	3	50	10	15	75

Detailed Syllabus:

Sr. No.	UNIT	Hours	Weightage (%)
1.	**Number system, Concept of Information Systems and Software** Binary number system, Decimal number system, Octal number system, Hexadecimal number systems, 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. Information gathering, requirement and feasibility analysis, data flow diagrams, process specifications, input/output design, process life cycle, planning and managing the project.	6 Hours	20%
2.	**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	6 Hours	20%

	database		
3.	**Application of computers 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 Hours**	**20%**
4.	**Bioinformatics** Introduction, Objective of Bioinformatics, Bioinformatics Databases, Concept of Bioinformatics, Impact of Bioinformatics in Vaccine Discovery	**6 Hours**	**20%**
5.	**Computers as data analysis in Preclinical development:** Chromatographic dada analysis(CDS), Laboratory Information management System (LIMS) and Text Information Management System(TIMS)	**6 Hours**	**20%**

Subject Code: BP204P	Subject Title: Computer Applications in Pharmacy (Practical)
Pre-requisite: --	

Course Objective: Upon completion of the course student shall be able to

1. Generate database using various tools.

2. Program to retrieve data from database.

3. Apply MS of access for storage and retrieving drug information

4. Export contents to web and xml pages

5. Analyze the problem, communicate suggested solution and interpret the results.

Teaching Scheme (Hours per week)		Evaluation Scheme (Marks)			
		Theory			
Practical	Credit	University Assessment	Continuous Assessment	Internal Assessment	Total
2	2	15	5	5	25

List of Practical:

Sr. No.	Title
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

Recommended Study Material:

1. Computer Application in Pharmacy – William E. Fassett –Lea and Febiger, 600 South Washington Square, USA, (215) 922-1330.

2. Computer Application in Pharmaceutical Research and Development –Sean Ekins –

    Wiley-Interscience, A John Willey and Sons, INC., Publication, USA

3. Bioinformatics (Concept, Skills and Applications) – S. C. Rastogi-CBS Publishers and Distributors, 4596/1- A, 11 Darya Gani, New Delhi – 110 002(INDIA)

4. Microsoft office Access - 2003, Application Development Using VBA, SQL Server,DAP and Infopath – Cary N. Prague – Wiley Dreamtech India (P) Ltd., 4435/7, Ansari Road, Darya Ganj, New Delhi - 110002