



SILVER OAK UNIVERSITY
SILVER OAK COLLEGE OF PHARMACY (067)
Programme Name: B. Pharm (18)
Subject Name: COMPUTER APPLICATIONS IN PHARMACY
Subject Code: 1180673182
Semester: II

Prerequisite:

This subject deals with the introduction Database, Database Management system, computer application in clinical studies and use of databases.

Objectives: Upon completion of the course the student shall be able to

1. know the various types of application of computers in pharmacy
2. know the various types of databases
3. know the various applications of databases in pharmacy

Teaching Scheme:

Teaching Scheme				
L	T	P	Contact Hours	Credit
3	0	2	5	4

Content:

Unit No.	Contents	Teaching Hours	Weightage %
1	<p>Number system: 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</p> <p>Concept of Information Systems and Software: Information gathering, requirement and feasibility analysis, data flow diagrams, process specifications, input/output design, process life cycle, planning and managing the project</p>	06	20%
2	<p>Web technologies:</p> <p>Introduction to HTML, XML, CSS and Programming languages, introduction to web servers and Server Products</p>	06	20%

	Introduction to databases, MYSQL, MS ACCESS, Pharmacy Drug 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	06	20%
4	Bioinformatics: Introduction, Objective of Bioinformatics, Bioinformatics Databases, Concept of Bioinformatics, Impact of Bioinformatics in Vaccine Discovery	06	20%
5	Computers as data analysis in Preclinical development: Chromatographic data analysis (CDS), Laboratory Information management System (LIMS) and Text Information Management System (TIMS)	06	20%

Course Outcome:

Sr. No.	CO statement	Unit No
CO-1	To know about binary systems and concept of software.	1
CO-2	Detail understanding of web technologies.	2
CO-3	To have been introduced to application of computer applications in pharmacy.	3
CO-4	To gain knowledge about concept of bioinformatics.	4
CO-5	To understand data analysis using computer in preclinical development.	5

Teaching & Learning Methodology: -

The various methods or tools follows by the faculties to teach the above subject are:

1. Chalk and board method
2. Experiential learning.
3. Power point presentation and slide show method

Experiments:

Students will perform following Experiments.

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

Books Recommended:

1. William E.Fassett –Lea and Febiger, Computer Application in Pharmacy, 600 South Washington Square, USA, (215) 922-1330.
2. A John Wiley and Sons, Computer Application in Pharmaceutical Research and Development –Sean Ekins – Wiley-Interscience INC., Publication, USA
3. S.C.Rastogi, Bioinformatics (Concept, Skills and Applications) -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, Daryagani, New Delhi - 110002

CO-PO-PSO Matrix:

Co. No.	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
CO-1	2	2	3	2	-	3	2	3	2	2	3	2	3
CO-2	2	3	3	3	-	2	-	3	3	3	3	2	3
CO-3	3	2	2	2	2	2	-	2	2	2	2	3	2
CO-4	3	2	2	2	2	2	-	2	2	3	2	3	2
CO-5	3	2	3	2	-	2	-	2	3	.	2	3	2