

# LJ UNIVERSITY

## LJ INSTITUTE OF PHARMACY

### SEMESTER: I

**Subject Name:** Computer Applications in Pharmacy  
**Subject Code:** BP105TP

**Scope:** 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. Explain types of application of computers in pharmacy.
2. Acquire the knowledge on various types of databases.
3. Familiarize with the various applications of databases in pharmacy.

**Teaching scheme and examination scheme:**

Teaching Scheme				Evaluation Scheme			
Theory	Tutorial	Practical	Total	Theory		Practical	
				External	Internal	External	Internal
3	-	2	5	35	15	35	15

Sr. No.	Course Contents	Hours
1	<b>1.1 Number system:</b> 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 <b>1.2 Concept of Information Systems and Software :</b> Information gathering, requirement and feasibility analysis, data flow diagrams, process specifications, input/output design, process life cycle, planning and managing the project	06
2	<b>Web technologies:</b> Introduction to HTML, XML, CSS and Programming languages, introduction to web servers and Server Products. Introduction to databases, MYSQL, MS ACCESS, Pharmacy Drug database	06
3	<b>Application of computers in Pharmacy –</b> 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
4	<b>Bioinformatics:</b> Introduction, Objective of Bioinformatics, Bioinformatics Databases, Concept of Bioinformatics, Impact of Bioinformatics in Vaccine Discovery	06
5	<b>Computers as data analysis in Preclinical development:</b> Chromatographic data analysis(CDS), Laboratory Information management System (LIMS) and Text Information Management System(TIMs)	06

# **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/ To understand concept of Mail merge.
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 Perform the different key functions of Microsoft PowerPoint

## **Recommended Books (Latest Editions)**

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, Daryagani, New Delhi - 110002