

BP205T. COMPUTER APPLICATIONS IN PHARMACY (Theory)

30 Hours (2 Hours/Week)

Course content:

Unit-I **06 hours**
Number system: Binary number system, Decimal number system, Octal number system, Hexadecimal number systems, conversion decimal to binary, binary to decimal, octal to binary, binary addition, binary subtraction – One's complement, Two's complement method, binary multiplication, binary division.
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.

Unit-II **06 hours**
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.

Unit-III **06 hours**
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.

Unit-IV **06 hours**
Bioinformatics: Introduction, Objective of Bioinformatics, Bioinformatics Databases, Concept of Bioinformatics, Impact of Bioinformatics in Vaccine Discovery.

Unit-V **06 hours**
Computers as data analysis in Preclinical development:
Chromatographic data analysis (CDS), Laboratory Information management System (LIMS) and Text Information Management System (TIMS).

BP210P. COMPUTER APPLICATIONS IN PHARMACY (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.

Recommended books (Latest edition):

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