



CLUSTER UNIVERSITY SRINAGAR

SYLLABUS (FYUP UNDER NEP 2020)

Offered By Department Of BIO-CHEMISTRY

Semester 1st Skill Enhancement Course (SEC)

Course Title: Clinical Testing-I

Course Code: UGBCH22S101

Credits: 4 (Theory: 1, Practical: 3)

Contact Hrs: 105 (Theory: 15, Practical: 90)

Max. Marks 100

Theory External: 15; Min Marks: 06

Theory Internal (Continuous Assessment): 10 Marks, Min Marks: 04

Practical Experimental Basis= 45 Marks, Min. Marks: 18

Practical Internal (Continuous Assessment): 30 Marks, Min. Marks: 12

Objectives

The clinical approach of the course implies studying clinical diagnostics methods and sample collection and preservation.

Learning Outcome

Upon completion of this course, students will be able to explain the rationale for choice of tests and treatments in clinical practice, copy basic manual skills and give a basic explanation of the techniques.

THEORY

Unit-1:

General Health and common diseases like Diabetes mellitus, Thyroid disorders, Common Cold, Sample Collection, transportation and preservation

Liver and its function, normal physiology and dysfunction, Liver function tests

PRACTICALS

Unit-2:

Introduction to various instruments in a biochemistry laboratory

General Safety in the laboratory

Pipetting, calibrated pipetting, automated pipetting

Unit-3

Preparation of solutions

Molarity, Molality, Normality and Percent solutions, solution dilutions

Buffer preparation and measurement of pH

Unit-4:

Blood and its components, collection and preservation of blood.

Separation of serum and plasma, blood grouping

Suggested Readings

1. *Medical Laboratory Technology - a Procedure Manual for Routine Diagnostic Tests Vol. I* (2010), Mukherjee, K.L., Tata Mc Graw-Hill Publishing Company Limited (New Delhi). ISBN:9780070076594 / ISBN:9780070076631
2. *Medical Biochemistry* (2005) 2nd ed., Baynes, J.W. and Dominiczak, M.H., Elsevier Mosby Ltd. (Philadelphia), ISBN:0-7234-3341-0.
3. *Experimental Biochemistry: A Student Companion*