NORTH SOUTH UNIVERSITY
Department of Biochemistry & Microbiology

Course outline

BBT314 L: Proteins & Enzymes Lab

Total Credits: 01

Course instructor: Abhinandan Chowdhury (ACh)
Semester: Summer 2018
Website: http://abhinandanchowdhury.weebly.com/
Email: abcnsuedu@gmail.com
Class Hours: ST 9.40 am- 11.10 am
Class Room: Lab at SAC 414

1. DISCLAIMER

The instructor holds the right to make necessary changes to the course content or timeline and the grading policies outlined here to best accommodate the interest of the class.

2. RATIONALE

This course is designed to give students sufficient exposure to laboratory conditions to carry out experiments related with analysis of proteins and enzymes independently after graduation.

3. OBJECTIVES

The course aims to give the students
- Hands on training in solving practical problems in protein analysis
- Applicable skills to derive conclusions from experiments.

4. LEARNING OUTCOMES

By attending classes regularly and participating in the assessment exams, students of this course should be able to:
(i) Estimate protein concentration in unknown sample using excel and graph paper;
(ii) Estimate protein concentration in unknown sample using a semi-automated bio-analyzer
(iii) Determination of the enzyme ALT activity in serum by enzymatic method using Semi automated Biochemistry Analyzer.
(iv) Using SDS PAGE as a method of protein separation and detection

5. GRADING POLICY

NSU grading policy will be followed.

6. COURSE CONTENT

6.1 COURSE DESCRIPTION

1. Estimation protein concentration in unknown sample using excel and graph paper;
2. Estimation of protein concentration in unknown sample using a semi-automated bio-analyzer
3. Determination of the enzyme ALT activity in serum by enzymatic method using Semi automated Biochemistry Analyzer.
4. Using SDS PAGE as a method of protein separation and detection

6.2 TIMELINE

Class	Date	Time	Room	Experiment	Duration
1	15-07-18	9.40-11.10 AM	SAC 414	*Lecture* on the "Estimation protein concentration in unknown sample using excel and graph paper. *Lecture* on the "Estimation of protein level in a sample". \	90 min
2	17-07-18	9.40-11.10 AM	SAC 414	**Practical** on the "Estimation protein concentration in unknown sample using spectrophotometer **Practical** on "Estimation of protein level in SERUM".	90 min
3	22-07-18	9.40-11.10 AM	SAC 414	*Lecture* on the "Determination of the enzyme ALT activity in serum by enzymatic method using Semi automated Biochemistry Analyzer"	90 min
4	24-07-18	9.40-11.10 AM	SAC 414	**Practical** on "Determination of the enzyme ALT activity in serum by enzymatic method using Semi automated Biochemistry Analyzer"	90 min
5	29-07-18	9.40-11.10 AM	SAC 414	*Lecture* on "Using SDS PAGE as a method of protein separation and detection	90 min
6	31-07-18	9.40-11.10 AM & Whole day	SAC 414	**Practical** on "Using SDS PAGE as a method of protein separation and detection" *will need two consecutive days*	90 min *******
Assessment Exam	TBA	TBA	TBA		60 min

******* *Tentative*

7. EVALUATION STRATEGIES

Topic	Marks	Remarks
Lab report	20%	Lab reports /Class work based on experimental results and discussion (1 lab reports).
Class Attendance & Performance evaluation	20%	100% attendance is desired. Evaluation of class attire and carrying out experiments with minimum mistakes.
Poster Presentation	20%	Poster Presentation on SDS PAGE – *soft copy only*
Assessment Exam	40%	20%- Written exam 20 % - Lab Exam