

**Section of Biochemistry and Cell Biology
Division of Life Science
The Hong Kong University of Science and Technology**

LIFS 2720
Fall semester, 2016-2017
Instructor: Dr. Helen Cheung
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Course goals

To provide hand-on experience in basic biochemical laboratory techniques

Learning Outcomes

By the end of this course, you will be able to:

1. *Realize* what biochemistry is all about.
2. *Understand* how biochemical knowledge can be derived from experiments.
3. *Acknowledge* the background aims and principles of designated experiments
4. *Expose* to basic mechanistic functions of common biochemical equipments.
5. *Recognize* the potential application(s) of various common biochemical equipments.

Course description

The course is designed to enable students to acquire strong practical skills in biochemical techniques commonly used in the field of biochemistry. It is designed to introduce students to the underlying principles of essential biochemical techniques that have remained indispensable in experimental biochemistry.

Teaching approach

This course is delivered through practical sessions.

Assessment scheme

Laboratory Logbook and Practical Performance: 10%

Worksheets: 20%

Lab Report: 20%

Final Examination: 50%

Class outline

- 15-09-2016 Introduction (To be held in Room 4160)
- 22-09-2016 Acidity and Alkalinity
- 29-09-2016 Ion exchange and thin layer chromatography
- 06-10-2016 Gel filtration chromatography
- 13-10-2016 Electrophoresis
- 20-10-2016 Enzyme kinetics
- 27-10-2016 Centrifugation
- 03-10-2016 DNA melting curve
- 10-10-2016 Metabolic syndrome I
- 17-10-2016 Metabolic syndrome II

Reference books

No standard textbook required.