MOLECULAR BIOLOGY AND BIOCHEMISTRY

MBB 222 - 3

Molecular Biology & Biochemistry
Summer 2016

Instructor: Dr. E.C. Young
Office: SSB 7155

Description/objectives/ Format: The structure, function and synthesis of proteins, RNA and DNA and their interrelated biological functions within the cell. An introduction to molecular biology techniques and methods of protein purification and analysis.

TOPICS:

- Introductory Organic Chemistry
- Weak chemical interactions
- Thermodynamics and catalysis
- Amino acids, polypeptides
- Protein structure, folding
- Enzyme catalysis, protein function
- DNA structure
- DNA replication
- DNA repair and mutagenesis
- Mobile genetic elements
- Chromosome structure, chromatin
- Prokaryotic transcription
- Eukaryotic transcription
- RNA processing
- Protein synthesis
- Recombinant DNA and protein techniques

Grading: Evaluation is based on pre-reading quizzes, problem sets, and written exams. Course structure and grading are subject to change depending on enrolment.

Required texts: Nelson, David L. and Michael M. Cox, *Lehninger Principles of Biochemistry*, 6th ed., 2012. W.H. Freeman & Company.

Required materials: iClicker transmitter required during lectures (available from SFU Bookstore).

Prerequisites: Prerequisite/Co-requisite: CHEM 281

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