

Contemporary Methods In Biochemistry – Bchm 4000 Fall 2010

Drs. Kothe, Mosimann & Wieden

Credit hours: 3.0 Contact hours: 3-3-0 Classroom: TBA

Prerequisites: One of Biochemistry 3100 or Biochemistry 3300

Lecture Time: 1000-1050 MWF from September 8th through December 8th

Current biochemical and biophysical techniques with an emphasis on experimental design. Application of these techniques to medicine, biology and molecular machines (nanotechnology).

Note – this class is substantially similar to Bchm 4850 offered in Fall 2008 and credit will not be given for both classes

Contact Information

There will be three instructors for this course (Subject to change):

Lectures 1-9 September 8th through October 4th

Instructor:	Steven Mosimann, PhD	E-mail:	steven.mosimann@uleth.ca
Office:	EP1276, CCBN	Office Phone:	329 2283
Lab:	EP1287, EP1303 CCBN	Lab Phone:	329 2746
Office Hours:			

Lectures 10-18 October 6th through November 3rd

Instructor:	Hans-Joachim Wieden, PhD	E-mail:	hj.wieden@uleth.ca
Office:	E868	Office Phone:	329 2303
Lab:	E772	Lab Phone:	329 2307
Office Hours:			

Lectures 19-26 November 5th through December 8th

Instructor:	Ute Kothe, PhD	E-mail:	ute.kothe@uleth.ca
Office:	E856	Office Phone:	332 5274
Lab:	D838	Lab Phone:	317 2802
Office Hours:			

Course Material

Textbook: Biochemistry, Voet & Voet, 3rd Edition
Articles: Selected research publications

Lectures 1-9
Bioinformatics
Structure determination
Scattering
Calorimetry

Lectures 10-18

Rapid Kinetics

Cryoelectron microscopy

Atomic force microscopy and 'optical tweezers'

Mass spectroscopy

"Pull downs"

Lectures 19-26

Plasmon Resonance

Fluorescence based methods

Single molecule spectroscopy

Electrophoresis

Cross-linking and footprinting