

CHEM 3143 (Fall 2017)
Surface Chemistry for Life Sciences.

<u>INSTRUCTOR</u>	Dr. Vlad Zamlynny
<u>OFFICE:</u>	ELL 118 (Temporary Willett 10)
<u>LECTURE TIME:</u>	Slot 4 (MWF) 11:30 – 12:30 am ELL303
<u>LAB:</u>	Slot 28, Wed, 1:30 – 4:30 pm ELL317
<u>TEXT:</u>	<u>Introduction to Colloid and Surface Chemistry</u> by D.J. Shaw
<u>PREREQUISITE:</u>	CHEM 2713 with a C- or better.

COURSE OUTLINE

CHEM 3143 is an introduction to colloid and surface chemistry relevant to biological and industrial applications. This course is designed to be suitable for students from chemistry and life sciences departments who have basic background in physical and bio chemistry. Following topics are included in this course: (i) preparation and characterization of colloidal systems; (ii) properties of liquid-gas, solid-gas and solid-liquid interfaces as well as the effect of electric charge on stability of colloidal systems; (iii) rheology of colloidal systems and properties of emulsion and foams. The knowledge gained in this course will be supplemented with a laboratory practicum that is aimed on the development of hands on experience in this field. In addition, the students will perform literature search and prepare an oral 10 min power point presentation about the preparation, application or investigation of a selected colloidal system.

Students are expected to extensively use computers during their course work, hence all the laboratory reports as well as written assignments are to be handed in as computer-generated print-outs. The instructions regarding the deadlines of specific tasks will be given together with the assignments and the penalty for late reports will be a deduction of 20 % of the particular maximum grade for every extra day (i.e., the grade of zero will be automatically assigned if the report is not turned in within 5 days from the due date). The only exceptions from this rule will be delays due to illness, compassionate reasons or special events promoted by Acadia University.

The progress of students in CHEM 3143 will be evaluated based on their performance in take-home assignments, two in-class written mid-term tests, a 3 hour written final exam and laboratory projects (including an oral presentation). NOTE: that according to the Departmental policy, the final grade for the course will be assigned only if the passing grade (50%) for the laboratory part of the course is received

The final grade will be calculated according to the following schedule:

Final exam	40 %
Mid-term tests (<u>Tentative</u> dates Oct 4, Nov 20)	32 % = 2 *16 %
Laboratory	18 % (+2Bonus)=
a. Written Lab Reports	5*3% = 15%
b. Oral presentation	+3 % (+2Bonus)
Assignments (total)	10%
Final grade	100 % (+2Bonus)

Students with disabilities that affect learning:

If you are a student with a documented disability who anticipates needing supports or accommodations, please contact Dr. Abu Kamara, Coordinator, Accessible Learning Services at 902-585-1291, abu.kamara@acadiau.ca or Kathy O'Rourke, Disability Resource Facilitator at 902-585-1823, disability.access@acadiau.ca. Accessible Learning Services is located in Rhodes Hall.