



UNIVERSITY OF CALGARY

DEPARTMENT OF CHEMISTRY COURSE OUTLINE

1. **Course: Chemistry 613** Electrochemical Fundamentals and Methodologies

L01

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2. **Prerequisites:** Enrolment in a graduate program in the Department of Chemistry or consent of the Department (<http://www.ucalgary.ca/pubs/calendar/current/chemistry.html#6539>).

Note: The calendar description and the Faculty of Science policy on prerequisites/antirequisites are described in section 3.5 C. of the online University Calendar (<http://www.ucalgary.ca/pubs/calendar/current/sc-3-5.html>). Students are responsible to ensure that they meet all prerequisite requirements for each course in which they are registered. Students who do not meet these requirements will be deleted from the course

3. **Grading:** The University policy on grading and related matters is described sections F.1 and F.2 of the online University Calendar. In determining the overall grade in the course the following weights will be used:

:	Assignments	40%
	Technical Paper	15%
	Oral Presentation	10%
	Final Examination	35%

Grading Scale: The conversion between course percentage and letter grade is given below:

A+	A	A-	B+	B	B-
100% - 95%	94% - 85%	84% - 80%	79% - 75%	74% - 70%	69% - 65%
C+	C	C-	D+	D	F
64% - 60%	59% - 55%	54% - 50%	49% - 45%	44% - 40%	< 40%

4. **Missed Components of Term Work:** The regulations of the Faculty of Science pertaining to this matter are found in the Faculty of Science area of the Calendar in [Section 3.6](#). It is the student's responsibility to familiarize himself/herself with these regulations. See also [Section E.6](#) of the University Calendar

Recommended Course Material: *Text books, reviews, and scientific papers will be available for students to consult.*

6. **Examination Policy:** Calculators will be allowed in examinations. Students should also read the Calendar, Section G, on Examinations.

7. **Writing across the curriculum statement:** In this course, the quality of the student's writing in assignments and in term paper/poster will be a factor in the evaluation of those reports. See also [Section E.2](#) of the University Calendar.

8. **OTHER IMPORTANT INFORMATION FOR STUDENTS:**

(a) **Academic Misconduct:** (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University Calendar under [Section K](#). Student Misconduct to inform yourself of definitions, processes and penalties

- (b) **Assembly Points:** In case of emergency during class time, be sure to FAMILIARIZE YOURSELF with the information on [assembly points](#).
- (c) **Academic Accommodation Policy:** Students with documentable disabilities are referred to the following links:
[Calendar entry on students with disabilities](#) and [Student Accessibility Services](#).
- (d) **Safewalk:** Campus Security will escort individuals day or night (<http://www.ucalgary.ca/security/safewalk/>). Call 220-5333 for assistance. Use any campus phone, emergency phone or the yellow phones located at most parking lot pay booths.
- (e) **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPPA). As one consequence, students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information see also
- (f) <http://www.ucalgary.ca/secretariat/privacy>.
- (g) **Student Union Information:** VP Academic Phone: 220-3911 Email: suvpaca@ucalgary.ca.
SU Faculty Rep. Phone: 220-3913 Email: sciencerep@su.ucalgary.ca; [Student Ombudsman](#)
- (h) **Internet and Electronic Device Information:** You can assume that in all classes that you attend, your cell phone should be turned off unless instructed otherwise. Also, communication with other individuals, via laptop computers, Blackberries or other devices connectable to the Internet is not allowed in class time unless specifically permitted by the instructor. If you violate this policy you may be asked to leave the classroom. Repeated abuse may result in a charge of misconduct.
- (i) At the University of Calgary, feedback provided by students through the Universal Student Ratings of Instruction (USRI) survey provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses (www.ucalgary.ca/usri). Your responses make a difference - please participate in USRI Surveys.

Chemistry 613
Electrochemical Fundamentals and Methodologies
Winter 2015

OUTLINE

1. Introduction – History, Useful Terms, Applications of Electrochemistry
2. Origin, Meaning and Measurement of Electrode Potentials
3. Current-Voltage Relationships (activation, diffusion, migration, surface controlled reactions)
4. Electrochemical Techniques
5. Case Studies

Department Approval: Approved by Department Head

Date: Jan 5, 2015

Associate Dean's Approval for

Alternate final examination arrangements: Approved by Associate Dean

Date: Jan 5, 2015