

EPIC Course Outline

Chem 9844U – Experiential Learning and Professionalism in Chemistry 1 (EPIC- 1) (0.25 Credits)

Chem 9855Y – Experiential Learning and Professionalism in Chemistry 2 (EPIC- 2) (0.5 Credits)

This optional course is designed to encourage graduate student participation in experiential learning in chemistry outside of traditional graduate courses. It is meant to provide graduate students with exposure and skills that will be required as a chemical professional or Accredited Professional Chemist. It will also acknowledge this additional experience on their transcript.

Learning outcomes

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

1. Become proficient in the oral and written communication of chemistry to expert and non-expert audiences through both teaching experiences and highly technical activities.
2. Have the opportunity to obtain skill sets specific to the chemical industry in order to enhance their career and professional readiness.
3. Acquire the necessary collaborative and interpersonal communication skills necessary to be an effective professional chemist in academia, government or private sector.
4. Promote chemistry as a cornerstone of every day societal life through teaching and outreach activities.

A key aim of this course is to actively address the 8 core competencies of the Western Scholar (see: <http://www.gradpath.uwo.ca>).

MSc. students are eligible for enrolment in EPIC-1 (0.25 Credits) and PhD. students in EPIC-2 (0.5 credits).

The student will normally enroll in this course (9844U (0.25 credits) or 9855Y (0.5 credits)) in the term that they are expecting to complete the requirements. Evidence of completion of the requirements will be presented to the Chair of GEC as a single portfolio once all units are completed.

Students will be required to successfully complete the following items:

1. In the year they enroll in EPIC, to complete the workshop led by the Teaching Support Centre on establishing, building and maintaining a portfolio. This workshop will normally be held in the fall September/October as scheduling permits. At the end of this workshop, students are expected to draft a one page “preassessment piece”, that honestly benchmarks their skill level across the three EPIC competencies and detail a distinct set of goals one hopes to achieve over the course of EPIC.
2. Upon completion of individual components, a brief reflection piece should be drafted to contextualize the experience. The reflection should address questions such as where one might apply the new knowledge, how might they use the new skill in their future endeavors and why the skill is relevant to them personally or more generally, to the Professional Chemist.

3. Provide a yearly reflection essay outlining progress towards achieving their goals throughout EPIC. The timing of this reflection should be done in conjunction with the yearly report. The reflection essay should be a summary of their progress over the last year, pinpointing their skill development level, summarizes their key skills that have been gained and details further skill development targets for the coming year.
4. Upon completion of the individual course components and portfolio submission, students are required to give a brief (15-20 minute) presentation on their EPIC experience. This will be delivered to either their supervisory committee or to the coordinator of EPIC (or designate) and the audience may include the cohort of students that are expected to complete EPIC in the same year.

Formatting requirements for written work is 1.5 spacing, 2.5 cm margins, Times font, size 12.

The elements in the portfolio will be subject to verification by the Chair of the GEC (or designate) as required.

Once complete the course will appear as a PASS. Students are strongly advised to submit their portfolio at the start of the term in which they register for the course and preferably two terms before their thesis submission date. It is the student's responsibility to ensure there is enough and appropriate documentation verifying their participation in selected activities.

Each of the following can be used as a component of EPIC. Bear in mind that this list **is not exclusive** and other experiential/professional development activities can also be used with approval of the Chair of the GEC. Chem 9844U requires **25 units total** and they should normally come from each of the 3 categories listed below, with a minimum of 5 units from each category. Chem 9855Y requires **50 units total** and should normally come from each of the 3 categories listed below with a minimum of 10 units from each category. Shifting of the category weights will be permitted provided they align with the preassessment piece drafted at the outset of the course after participating in the portfolio workshop. Assessment of each activity will be conducted by members of the GEC or designate as appropriate. The weighting of each activity is noted in parentheses as well as guidelines for what students should include in their portfolio, which will serve as verification of completing the activity.

Note: The columns on the right denote the Graduate Degree Level Outcomes that are pertinent to each activity. Not that the GDLO are fully satisfied, but rather the activities make a contribution to each of these goals.

Legend: 1 – Depth and breadth of knowledge; 2 – Research and scholarship; 3 – Level of application of knowledge; 4 – Professional capacity/autonomy; 5 – Level of communication skills; 6 – Awareness of limits of knowledge.

Category 1 - Professionalism						
Activity	Graduate Degree level Outcomes					
	1	2	3	4	5	6
Participation in an approved chemical industry or chemical professional society based course/training program consisting of at least 3 hours of instruction (5 units). NOTE – depending on the subject matter of the course/training, this activity could count as a contribution to a different category.			X	X		X

<p><u>Requirement:</u> Proof of registration from the course as well as a copy of any certificate obtained. If no certificate offered then a signed participation form by the presenter (or equivalent) of the course is required (see form attached).</p>						
<p>Participation in a "Mock Interview Day". The student will prepare and submit a CV and participate in a formal mock interview with a representative from industry. This can be coordinated with the Chem 4491 Mock Interview Day, provided there is availability and with permission of the 4491 coordinator(s) (5 units). <u>Requirement:</u> Signed participation form by 4491 coordinator or coordinator of MID (see attached).</p>				X	X	
<p>Participation in multi-disciplinary scientific journal club that includes being a presenter (5 units). <u>Requirement:</u> A reference list of papers discussed with the club.</p>	X	X			X	
<p>Participation in a regularly scheduled scientific seminar program beyond Chem 9658 that includes presenting at least once during the year (10 units). <u>Requirement:</u> Copy of abstract and slides.</p>	X	X			X	X
<p>Participation for at least a year as a member of an active SOGS executive committee (See attached SOGS list, that lists appropriate weightings). <u>Requirement:</u> Letter from President of SOGS (or designate) confirming participation.</p>			X	X	X	
<p>Participation as a student representative on one of the University's Senate Committees for at least one year (10 units). <u>Requirement:</u> Arrange for copies of attendance records from minutes that includes your name from University Secretariat's Office.</p>			X	X	X	
<p>A minimum of 10 hours of chemistry outreach activities (10 units). <u>Requirement:</u> Verification form signed by Department Outreach Coordinator or Faculty member who is part of the Chemistry outreach committee (See attached).</p>			X	X	X	
<p>Participation of at least 10 hours in organizing an Alumni event (such as an Alumni reception) (5-10 units depending on event). <u>Requirement:</u> Verification form signed by event organizer/Alumni Western.</p>				X	X	
<p>Participation with the Development and Alumni Relations team (5-10 units). This could include participating in a Development with Director of Development, or event organized by their office; participate in an Advisory Council; provide support and volunteer hours for alumni events; Participation of at least 10 hours required. <u>Requirement:</u> Verification form signed by event organizer.</p>				X	X	
<p>Completion of the remaining courses offered through OHS beyond those required for your research (5 maximum). <u>Requirement:</u> Include certificates indicating successful</p>	X		X	X		X

completion.						
Category 2 – Communication						
Participation, by delivering a poster presentation or lecture, at a national/international conference. You may only use the activity once in your portfolio (10 units) <u>Requirement:</u> Copy of your abstract from the conference program, conference name tag and a copy of the presentation slides. Deliver the lecture to members of the GEC or thesis supervisory committee.	X	X			X	X
Participation in the 3 Minute Thesis (3MT) competition (10 units). <u>Requirement:</u> Copy of 3MT slide and presentation docket showing your name.		X	X		X	
Participation in Industrial Problem Solving Week: http://ipsw.uwo.ca/ (15 Units) <u>Requirement:</u> Certificate of completion		X	X		X	X
Participation in a chemical industry related plant tour with written report (10 units). <u>Requirement:</u> Report (maximum 5 pages) including a description of the tour with related professional issues (e.g. process flow diagram; chemistry involved; possible roles for chemists in the operation; etc.).	X		X	X		X
Conducting an information interview(s) of a non-academic chemist with a 5 page written report (10 units). Please see: http://www.success.uwo.ca/careers/research_your_career/informational_interview.html <u>Requirement:</u> Transcript/report will be reviewed by the GEC or designate.	X		X	X	X	
Completion of Mitacs STEPS workshops (5-10 units). http://www.mitacs.ca/step/ <u>Requirement:</u> Description of the workshop and total hours and Certificate of completion by workshop organizer.	X	X	X	X	X	X
Academic and professional communication series - TSC (10 units). <u>Requirement:</u> Notation in your TSC "Discipline-Specific Training Progress Tracker" (see attached for sample form).	X				X	X
Category 3 – Teaching						
Future Professor: Path to Teaching Excellence Workshops (5 units each). * <u>Requirement:</u> As noted in your TSC "Discipline-Specific Training Progress Tracker" (see attached for sample form).	X	X	X	X	X	X
Teaching Master Classes (5 Units each). * <u>Requirement:</u> As noted in your TSC "Discipline-Specific Training Progress Tracker" (see attached for sample form).	X	X	X	X	X	X
Participation in TA Day: Graduate Student Conference on Teaching (10 units). <u>Requirement:</u> Confirmation of registration, copy of conference			X	X	X	X

name tag, as well as a list of sessions attended.						
Teaching Mentor Program for Graduate Students (10 units). * Note: Attendance mandatory once enrolled. Successful completion of this activity relies on consistent participation of all team members. <u>Requirement:</u> Completed mentor program form with signatures from group members and TSC facilitator.	X		X	X	X	X
Significant contribution to the development of a new undergraduate laboratory experiment in our undergraduate program, outside of a TA duty (20 units). <u>Requirement:</u> Copy of the final lab instruction as well as a mock write up expected by undergraduate performing the lab.	X		X	X	X	X
Publication as a co-author in J. Chem. Education, Chemical Education Research Practise or similar (e.g. Teaching Innovation Projects Journal (TIPS) (25 Units). <u>Requirement:</u> Copy of the manuscript.	X		X	X	X	X
Advanced teaching program (ATP) – TSC (30 units). * <u>Portfolio inclusion guideline:</u> will require copy of Capstone project.	X		X	X	X	X
International Student Programs: (i) CCC – Communication in the Canadian Classroom (25 units) (ii) TCC – Teaching in the Canadian Classroom (25 units). <u>Requirement:</u> Copy of CCC or TCC certificate.	X		X	X	X	X
TATP – Teaching Assistant Training Program (30 units). Note: NOT eligible if you have been resident in the graduate program for 3 or more terms. Designed for new graduate students. <u>Requirement:</u> Copy of TATP certificate.	X		X	X	X	X
Certificate in University Teaching and Learning (50 units). Note: this encompasses many of the components listed above many among others.** <u>Requirement:</u> Copy of UTL certificate.	X	X	X	X	X	X

* Note: completion of any teaching workshop must include, if not already a part of the workshop/course, teaching an undergraduate/graduate lecture on a topic directed from the course coordinator. The lecture will be attended by the course coordinator and member of the GEC or designate.

**With permission of the Chair of the GEC.

SOGS Participation list:

- The following duties are considered to contribute 10 units to EPIC.
Graduate education Council Member
Senate Committee on University Planning Member
Senator
Councilor (Department Specific availability of positions)

- Committee Member (5 units):

Policy	GradCast Radio show	Bursaries and Subsidies
Academic	Equity Issues	Graduate Student Issues
Graduate student teaching awards	Grad Club	Sustainability
Health Plan	International Graduate student Issues	Orientation and Socials
Bylaws and Constitution		