

## OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

Note: The University reserves the right to amend course outlines as needed without notice.

<b>Course Code and Number:</b> CHEM 408		<b>Number of Credits:</b> 3 <a href="#">Course credit policy (105)</a>															
<b>Course Full Title:</b> Directed Studies in Chemistry <b>Course Short Title:</b> <i>(Transcripts only display 30 characters. Departments may recommend a short title if one is needed. If left blank, one will be assigned.)</i>																	
<b>Faculty:</b> Faculty of Science		<b>Department (or program if no department):</b> Chemistry															
<b>Calendar Description:</b> Students will undertake one of the following: directed readings, literature research, or a laboratory research project in an area of chemistry under faculty supervision.  Note: This course is intended to be completed during the fourth year of study.																	
<b>Prerequisites (or NONE):</b>		B or better in three chemistry courses numbered 300 or above and permission of the department head.															
<b>Corequisites (if applicable, or NONE):</b>		NONE.															
<b>Pre/corequisites (if applicable, or NONE):</b>		NONE.															
<b>Antirequisite Courses</b> <i>(Cannot be taken for additional credit.)</i> Former course code/number: Cross-listed with: Dual-listed with: Equivalent course(s): <i>(If offered in the previous five years, antirequisite course(s) will be included in the calendar description as a note that students with credit for the antirequisite course(s) cannot take this course for further credit.)</i>		<b>Special Topics</b> This course is offered with different topics: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <i>(Double-click on box to select it as checked.)</i> If yes, different lettered courses may be taken for credit: <input type="checkbox"/> No <input type="checkbox"/> Yes, repeat(s) <input type="checkbox"/> Yes, no limit <i>(The specific topic will be recorded when offered.)</i>															
<b>Typical Structure of Instructional Hours</b> <table border="1"> <tr><td>Lecture/seminar hours</td><td></td></tr> <tr><td>Tutorials/workshops</td><td></td></tr> <tr><td>Supervised laboratory hours</td><td></td></tr> <tr><td>Experiential (field experience, practicum, internship, etc.)</td><td></td></tr> <tr><td>Supervised online activities</td><td></td></tr> <tr><td>Other contact hours: Self-directed learning</td><td>90</td></tr> <tr><td><b>Total hours</b></td><td><b>90</b></td></tr> </table>		Lecture/seminar hours		Tutorials/workshops		Supervised laboratory hours		Experiential (field experience, practicum, internship, etc.)		Supervised online activities		Other contact hours: Self-directed learning	90	<b>Total hours</b>	<b>90</b>	<b>Transfer Credit</b> Transfer credit already exists: (See <a href="#">bctransferguide.ca</a> .) <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Submit outline for (re)articulation: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <i>(If yes, fill in transfer credit form.)</i>	
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Labs to be scheduled independent of lecture hours: <input type="checkbox"/> No <input type="checkbox"/> Yes		<b>Grading System</b> <input checked="" type="checkbox"/> Letter Grades <input type="checkbox"/> Credit/No Credit															
		<b>Expected Frequency of Course Offerings:</b> Every semester <i>(Every semester, Fall only, annually, every other Fall, etc.)</i>															
<b>Department / Program Head or Director:</b> Dr. Cory Beshara		<b>Date approved:</b> May 18, 2018															
<b>Faculty Council approval</b>		<b>Date approved:</b> September 7, 2018															
<b>Dean/Associate VP:</b> Dr. Lucy Lee		<b>Date approved:</b> September 7, 2018															
<b>Campus-Wide Consultation (CWC)</b>		<b>Date of posting:</b> n/a															
<b>Undergraduate Education Committee (UEC) approval</b>		<b>Date of meeting:</b> October 26, 2018															

**Learning Outcomes:**

Upon successful completion of this course, students will be able to:

- Formulate a written proposal in which the rationale for their choice of topic is presented.
- Perform an in-depth literature search.\*
- Summarize in a written survey of the chosen topic, presented in a clear and scholarly way, and in the style of a major scientific journal.
- Perform the necessary experimental work and/or use the relevant computer software in order to complete the project in a timely, safe, and effective manner.
- Handle all necessary equipment and chemicals safely and effectively.
- Present the results of their research by means of an oral seminar or other form of presentation approved by the supervisor and department head.

\* Not required in the case of a directed reading situation.

**Prior Learning Assessment and Recognition (PLAR)**

☐ Yes      ☒ No, PLAR cannot be awarded for this course because there is no way to standardize the content of the course.

**Typical Instructional Methods** (*Guest lecturers, presentations, online instruction, field trips, etc.; may vary at department's discretion.*)

Systematic and in-depth study of the literature pertaining to the chosen topic. This study may include the use of journals, databases, abstracts, and online resources.

**NOTE: The following sections may vary by instructor. Please see course syllabus available from the instructor.**

**Typical Text(s) and Resource Materials** (*If more space is required, download Supplemental Texts and Resource Materials form.*)

Original journal articles, reviews, etc. These are available in the UFV library, online (e.g., through CRKN), or through inter-library loan. Monographs, etc. selected by the supervisor.

Author (surname, initials)	Title (article, book, journal, etc.)	Current ed.	Publisher	Year
1. Various	All relevant chemical journals	<input type="checkbox"/>	Various	
2.		<input type="checkbox"/>		
3.		<input type="checkbox"/>		
4.		<input type="checkbox"/>		
5.		<input type="checkbox"/>		

**Required Additional Supplies and Materials** (*Software, hardware, tools, specialized clothing, etc.*)

Library facilities. Internet access.

**Typical Evaluation Methods and Weighting**

Final report:	35%	Assignments:	%	Field experience:	%	Portfolio:	%
Midterm exam:	%	Oral presentation	40%	Lab work:	%	Student proposal	10%
Quizzes:	%	Intermediate report	15%	Shop work:	%	Total:	100%

**Details (if necessary):****Typical Course Content and Topics**

Course content varies by research project. The requirements of the individual project will be devised in consultation with the student's supervisor.